LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: Chemical Technology **Class & Section: DCT** **Course Code: CT21602**

Name of the Faculty Member: Dr.G. Vani **Course Title: Chemical Technology-III**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Petroleum refinery product classification, flow chart of refinery operations Petrochemicals: Raw materials, Pyrolysis & Cracking; Chemicals from C1 compounds: Methanol, Chloro Methanes, Chemicals from C2 compounds: Acetylene and Ethylene by steam cracking of hydrocarbons, Vinyl chloride, Ethanolamine.	Lecture Method using power point presentation, google forms, white board	To Learn about basic refinery operations and manufacturing of Methanol, Vinyl chloride	Seminar, viva and weekly test
II.	Chemicals from C3 compounds: Acetone Acrylonitrile, Isoprene; Chemicals from C4 compounds: Butadiene by dehydrogenation of Butane by Oxyde hydrogenation.	Lecture Method using power point presentation, google forms, white board	To Learn about the manufacturing of Acetone, Acrylonitrile. Explain the manufacture of Isoprene, Butadiene.	Seminar, viva and weekly test
III.	CHEMICALS FROM AROMATES: Hydro dealkylation, Phenol from cumene, Phenol from Toluene oxidation, Phenol from Raschig processes, Styrene from Benzene and Ethylene, Phthalic Anhydride and Maleic anhydride production.	Lecture Method using power point presentation, google forms, white board	To Learn about the manufacture of aromatic hydrocarbons	Seminar, viva and weekly test
IV.	Production details pesticides, Parathion manufacturing, 2,4-D manufacture, Chemicals from Alcohol : Ethylene, Acetone, Acetic	Lecture Method using power point presentation, google forms, white board	To Learn about the manufacture of pesticides.	Seminar, viva and weekly test

	acid and acetaldehyde.			
V.	polymers, Poly Vinyl chloride and copolymers, Poly condensation, Phenol Formaldehyde, Butadiene - styrene copolymers,Viscose Rayon production and 6.6 Nylon polyester.	Lecture Method using power point presentation, google forms, white board	To Learn about the manufacture of polymers.	Seminar, viva and weekly test

List of References (Book / ICT / Weblinks):

1. Charles E. Dryden. 1997. Outlines of Chemical Technology. 3rd ed.
2. R. Norris Shreeve. 1986. Chemical process Industries. 3rd ed.

Name of the faculty member & Signature: Dr. G. Vani - G. Vani

Approved by Head of the Department: SK. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- VI

Department: Chemical Technology **Class & Section: DCT** **Course Code: CT18604**

Name of the Faculty Member: Dr. G. Vani **Course Title: Environmental Engineering & Safety**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Types of emissions from Chemical Industries and their effects on environment, Characterization of effluent streams, Processes affecting dissolved oxygen (DO) content of aquatic systems, oxygen sag curve, Oxygen demands and their determination (BOD, COD and TOC) Management of waste generation.	Lecture Method using power point presentation, google forms, white board	To Learn about the industrial effluents and Oxygen Demands.	Seminar, viva and weekly test
II.	Liquid effluents : Primary Treatment byScreening, Sedimentation, Floatation and Neutralization; Secondary Treatment :by Activated sludge process, Tricking filters, stabilization ponds and anaerobic digestion; Tertiary Treatment by Chemical coagulation, Carbon adsorption, Ion exchange, Reverse Osmosis, Electrodyalisis, Chlorination and Ozonation.	Lecture Method using power point presentation, google forms, white board	To Learn about selecting a suitable equipment and treatment process to control pollution caused by industrial liquid wastes.	Seminar, viva and weekly test
III.	Equipment for removal of particulate matter, Methods of control and removal of Sulfur dioxide, Oxides of nitrogen and Organic vapours.	Lecture Method using power point presentation, google forms, white board	To Learn about selecting a suitable equipment and treatment process to control pollution caused by industrial	Seminar, viva and weekly test

	Sources, Disposal methods for solid waste and Recycling Techniques		gaseous effluents and solid waste	
IV.	Industrial safety and general hazards, Hazards of commercial chemical plant operations: Petrochemicals and Fertilizer Industries, Safety education and training.	Lecture Method using power point presentation, google forms, white board	To learn about the safety aspects of a chemical industry such as hazards involved in the chemical industry and preventive measures to be taken.	Seminar, viva and weekly test
V.	Effect of toxic agents on human health, Flammable materials, flammable limits, fire triangle, Precautions to be taken with flammable materials, Fire detection system, Health hazards of commercial chemical plant operations	Lecture Method using power point presentation, google forms, white board	To learn about the effects of toxic agents on human health and will be able to understand how to handle flammable materials in chemical industries	Seminar, viva and weekly test

List of References (Book / ICT / Weblinks):

1. Fawcett H.H. and W.S. Wood. 1965. “Safety and Accident prevention in Chemical Operations”.
2. S.P. Mahajan. 1985. “Pollution Control in Process Industries”. First Edition.
3. C.S. Rao. 1999. “Environmental Pollution Control Engineering”. First Edition.
4. Metcalf and Eddy, Inc. 2003. “Waste Water Engineering, Treatment and Reuse”, Fourth Edition.

Name of the faculty member & Signature: : Dr.G.Vani - G.Vani

Approved by Head of the Department: SK. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

III SEMESTER

Department: CHEMICAL TECHNOLOGY **Class&Section:BSC(NCT)** **Course Code:CT18301**

Name of the Faculty Member : Pathri Shirisha **Course Title:Mathematics III**
Numerical Analysis

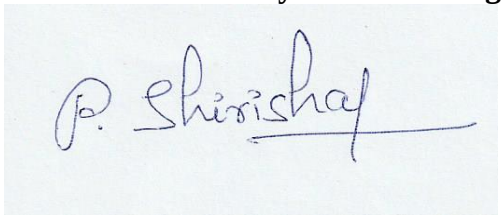
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**The Calculus of finite Differences** 1.Finite Differences. Forward and Backward Differences (1) 2. The Difference Table. (1) 3. Fundamental Theorem of Difference Calculus (1) 4. To Express any value of the Function in terms of leading term leading differences of difference (1) 5. The operator E. Properties of E , Δ and ∇ (1) 6. Problems Solving (1) 7 .Methods of Representing any given polynomial in Factorial Notation(1) 8. Missing Terms. Problems. (1) 9. Differences of Zero.(1)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Categories the theoretical and practical aspects of the use of numerical methods	Online Quiz ,Written test, Case Study
II.	**Interpolation** 10. Newton-Gregory forward and backward interpolation formulas for equal intervals. (2) 11. Problems (1) 12. Divided difference definition. Newton's divided difference interpolation formula for unequal intervals.(1)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Explain how the common numerical methods and are used to obtain the approximate solutions	Computer Based Test

	13. Lagrange's interpolation formula for unequal intervals. (1) 14. Central difference interpolation. Gauss Forward and Backward interpolation formula.(1) 15. Problem (1) 16. Sterling's formula. Bessel's formula. (1) 17 . Problems (1)			
III.	**Numerical Differentiation** 18.Determination of first, second and third derivatives of tabulated functions by using Newton's (2) Forward interpolation formula 19.Newton's Backward interpolation formula.(1) 20. Problems (2) 21.Differentiation using central difference formula.(2) 22. Problems (2)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Develop numerical methods for various mathematical operations and tasks such as interpolation ,differentiation , integration the solution of linear and non linear equations and the solutions of differential equations	Online Test,Case Study
IV.	**The Numerical Solutions of Algebraic and Transcendental Equations** 23.Bisection Method (2) 24. Problems (1) 25. Regular - False method (2) 26 .Problems (2) 27. Newton-Rap son method (1) 28 .Problems (1)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Analyze and evaluate the numerical solution of algebraic equations	Written Test, Group Discussion
V.	**Curve Fitting** 29.Fitting a straight line y=a+bx.(2) 30. Fitting a parabola y =a+ bx + cx . 31.Problems.(3) 32.Fitting Curves.(4) (a) $y=ax^b$ (b) $y =ae^{bx}$ (c) y = ax + (b/x).	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Develop numerical methods to fit a curve within the given points	Online quiz, Oral Test

Listof References (Book/ICT/ Weblinks):

1. Dr Gupta P and Malik C.S. **Calculus of the Finite Differences and Numerical Analysis**
2. Goel and Mittal **Numerical Analysis** Meerut Pragati Prakashan
3. Dr.Iyengar T K V ,Dr Krishna Gandhi B, Ranganadhan S,Prasad M V S S N **Mathematical Methods** . New Delhi S. Chand and Company Ltd
4. Shankera Rao G **Numerical Analysis** New Age International (P) Ltd Publication

Name of the faculty member & Signature: Pathri Shirisha



Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: Chemical technology **Class & Section: NCT** **Course Code:** CT18304

Name of the Faculty Member: Dr. G. Vani **Course Title:** CHEMICAL PROCESS PRINCIPLES

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Conversion of physical quantities and conversion of equations, Calculation of mole %, weight %, molarity and molality for solids& liquids. Calculation of mole % and weight %, average molecular weight, density and specific gravity of gaseous mixtures.	Lecture Method using power point presentation, google forms, white board	To Learn about Solving problems related to composition of solids and fluids and density of gaseous mixtures.	Seminar, viva and weekly test
II.	Effect of temperature on vapour pressure using clasius-clapeyron equation, Application of Roult's law and Dalton's law, Calculation of total pressure and vapour composition , relative saturation and percentage saturation. Calculation of absolute humidity and molal humidity, Vapourization process and Condensation process	Lecture Method using power point presentation, google forms, white board	To Learn about applying Raoult's Law and Dalton's Law to solve problems in gaseous mixtures.	Seminar, viva and weekly test
III.	Material Balance without chemical reactions: Mixing, Evaporation without crystallization and Binary distillation. Material Balance involving chemical reaction-recycling and purging.	Lecture Method using power point presentation, google forms, white board	To learn about solving material balance problems with and without chemical reactions.	Seminar, viva and weekly test
IV.	Energy Balance: Heat capacity, Heat capacity of gases at constant pressure. Calculation of mean heat capacity of	Lecture Method using power point presentation, google	To learn about applying energy balance to calculate enthalpy changes.	Seminar, viva and weekly test

	gases, Sensible heat changes in liquids. Enthalpy changes during phase transfer accompanied by sensible heat changes.	forms, white board		
V.	Calculation of Standard heat of formation, standard heat of combustion and standard heat of reaction from heat of formation data. Effect of temperature on heat of reaction	Lecture Method using power point presentation, google forms, white board	To learn about energy balance to calculate enthalpy changes accompanying chemical reactions.	Seminar, viva and weekly test

List of References (Book / ICT / Weblinks):

1. B.I. Bhatt and S.M. Vora. 1997. Stoichiometry. 3rd Edition.
2. A. Hougen, Kenneth M. Watson and Roland A Ragatz. 1954. Chemical Process Principles. Part-I, 2nd Edition.
3. David, Himmelblau M. 1992. Basic Principles & Calculations in Chemical Engineering. 5th Edition.

Name of the faculty member & Signature: Dr.G.Vani - G. Vani

Approved by Head of the Department: Dr. Zakir Hussain SK. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: Chemical Technology **Class & Section: NCT** **Course Code:** CT18305

Name of the Faculty Member: Dr. G. Vani **Course Title:** CHEMICAL TECHNOLOGY - I

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	General introduction for establishing a chemical industry.Unit operation and unit process concepts. Sulphur production: Frasch process & By oxidation-reduction of hydrogen sulphide from pyrites. Sulphuric acid: Contact process and Double Contact Double Absorption process.	Lecture Method using power point presentation, google forms, white board	To Learn about chemical industry and manufacturing of sulphur and sulphuric acid	Seminar, viva and weekly test
II.	Fuel and industrial gases: Producer gas Coke oven gas, Production synthesis gas: Partial combustion process. Acetylene: Pyrolysis process, and from calcium carbide. Utilization of solar energy. Cryogenics: Linde cycle, Claude cycle. Oxygen, Nitrogen production from air by Kellogg process.	Lecture Method using power point presentation, google forms, white board	To Learn about manufacturing of industrial fuel gases and oxygen	Seminar, viva and weekly test
III.	Nitrogen Industries: Ammonia, Nitric acid production. Nitrogeneous Fertilizers: Urea, Ammonium nitrate. Phosporous Industries: S.S.P. & T.S.P. Production.	Lecture Method using power point presentation, google forms, white board	To Learn about manufacturing of ammonia, urea, Nitric acid & Ammonium nitrate	Seminar, viva and weekly test
IV.	Electro chemical industries: Classification, Tetra Ethyl Lead production. Chlor Alkali Industries: Soda Ash production by Solvay process, Dual process, advantage, and	Lecture Method using power point presentation, google forms, white board	To Learn about manufacturing of Chloro alkali industries	Seminar, viva and weekly test

	disadvantages. Chlorine–caustic soda production: Electrolytic process. Water: Types of hardness of water, municipal water conditioning, Boiler feed water treatment, Industrial and sewage water treatment.			
V.	Chemicals from sea water: Magnesium compound from sea water. Manufacture of special glasses; Rock or Mineral. Cement Production: Definition of Portland cement, production details, classification of Portland cement and other types of cement.	Lecture Method using power point presentation, google forms, white board	To Learn about manufacture of cement and manufacture of magnesium compounds from sea water	Seminar, viva and weekly test

List of References (Book / ICT / Weblinks):

1. Charles E. Dryden. 1997. Outlines of Chemical Technology. 3rd ed.
2. Norris Shreeve R. 1986. Chemical Process Industries. 3rd ed
3. Shukla & Pandey. 1997. Chemical Technology. Vol.1, 2nd ed

Name of the faculty member & Signature: Dr.G.Vani - G.Vani

Approved by Head of the Department: Dr. Zakir Hussain SK. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-V

Department: Chemical Technology **Class & Section: DCT** **Course Code: CT18503**

Name of the Faculty Member: Dr. Zakir Hussain **Course Title: Chemical Technology-II**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	PART-A Nuclear Raw materials: Introduction, Reasons for study of Nuclear Energy: Energy spectrum for India, Economic justification for nuclear power, Nuclear Agro Industrial Complex, Energy via Nuclear Fission Reaction. Role of Chemical Engineering in Nuclear Engineering, Important components of a nuclear fission Reactor: Fuels, Fertile fuels, structural components: Moderators, Absorbents, Coolant and Fuel cell, Methods of Nuclear Fuel Production: Concentration: Purification & conversion of ore, PART-B: Energy System for Air space Vehicles, Introduction: Propulsion fundamentals: classification of chemical, Energy Systems, Basic Chemicals reactants characteristic solid propellants, Liquid propellants, Hybrid propellant, Basic considerations in developing high	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion, revision / industrial visit (field or virtual)	Presentation of novel aspects in nuclear industry by students and latest trends with respect to DRDO, ISRO, heavy water board, heavy water plants	Assignment-1, weekly test, surprise test

	performance chemical propellant systems; Burning Rate control. Handling Storage and utilization of propellants: Safety requirements Nuclear Propulsion system & High-energy chemicals: Hydrazine and Boron Hydrogen compounds production details			
II.	PART-A Oils, Soaps, Detergents, glycerin, edible oils: Chemical compositions and physical properties: Fats & Oils: Consumption pattern: Types of fats and oils available, Vegetable source and Animal source, End uses: Methods of extracting vegetable oil. Mechanical and solvents extraction process, Hydrogenation of oils: Raw materials required for Hydrogenation of oils: Quantitative Requirements: Process Description: Major engineering problem. PART-B Introduction: Classification of cleaning compounds, Anionic: Cationic: nonionic surfactants, Detergent Builders: Use Pattern Methods of Soap production: Batch Process: continuous hydrolysis and saponification process, Reference flow chart: chemical reaction: Process description, Methods of Detergents manufacturing sulfated Fatty alcohol's sodium reduction of coconut oil, Sulfation of Fatty Alcohols: Alkyl aryl sulfonates Detergent Vs Soap, Natural and synthetic Glycerin Manufacturing	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion, revision / industrial visit (field or virtual)	Laboratory preparation of soap, acid value and saponification value estimation	Assignment-2, weekly test, surprise test

	methods			
III.	PART-A Diversity of Microorganisms: Eukaryotes versus prokaryotes, General Characteristics, and biotechnological applications of Protozoa, Algae, Fungi, Bacteria and Virus, General Characteristics, and biotechnological applications of Bacteria and Virus PART-B General methods of isolation and purification of micro-organisms, Aerobic and anaerobic cultivation of microorganisms, nutrition, and nutritional types of microbes Growth of micro-organisms- Growth curve and stages. Fermentation; production of Industrial Alcohol, Microorganism as Single cell protein and its production, Biogas production, The biochemical changes- taking place during methanation, microorganisms involved and the process details	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion, revision, showing laboratory setup of orbital shaking incubator, petri diches, striking etc.	Bacterial growth study by student during laboratory experiments, agar solution preparation	Assignment-3, weekly test, quiz
IV.	PART-A Introduction: Cellulose Raw Materials for Pulp Manufacturing, Pulp definitions: Methods of production of pulp, Production pattern: Sulphate pulp process description, Chemicals recovery from Black liquor, Bleaching of pulp PART-B Paper products: Definition, Types of paper products, Raw materials	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion, revision / industrial visit (field or virtual)	Presentation by student on various manufacturing technologies of pulp and location of various integrated pulp and paper mills	Assignment-4, weekly test, quiz

	required for paper manufacturing. Production details and Flow chart			
V.	PART-A Reasons to study and develop food industry, Food storage, Food processing, Food transport, Food preservation, Food storage and transport: Engineering aspects of Cold Storages, Dairy Industry: Pasteurization of milk, Food Irradiation: Application Food Additives. Types and application, PART-B General Introduction to Corrosion and its Preventive Measures Mechanism of Dry Corrosion and Wet Corrosion; Protective Measures against corrosion, Other Forms of Corrosion: Galvanic or Bimetallic, Concentration Cell or Differential Aeration, Waterline, Pitting, Crevice, Stress, Intragranular, Factors Affecting Corrosion: a) Proper Designing b) Use pure metal c) Using metal alloys: Alloys should be completely homogeneous Cathodic protection: a) Sacrificial anodic protection method b) Impressed current cathodic protection Modifying environment: a) Deaeration b) Deactivation c) Dehumidification d) Alkaline neutralization	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion, revision	Student presentation on any one food industry aspects considering their operations, unique selling point, profit margins etc. Student presentation on novel processes or coatings and metals to combat corrosion.	Assignment-5, weekly test, quiz, final viva-voce

	Use of inhibitors a) Anodic b) Cathodic Application of protective coatings a) Anodic b) Cathodic			

List of References (Book / ICT / Weblinks):

1. Charles E. Dryden: Outlines of Chemical Technology. Second Edition Edited by: M.Gopal Rao and Marshal Sitting.
2. SHREVE. R. NERVES and BRINKJOSEPH. A; Chemical Process Industries .
3. Pelzar, Reid and Chan., Microbiology; Tata-McGraw-Hill Publishing Company Ltd.1990
4. Casida, Industrial Microbiology; Tata-McGraw-Hill Publishing, 1990
5. C. Kuriacose and J. Rajaram. Chemistry in Engineering and Technology Vol. (2) McGraw- Hill, 1988.
6. https://www.youtube.com/watch?v=MmmVoXzPq00&list=PLPOztuy6v_2k8S7Um9bR0oHxm1fUWjZOx

Name of the faculty member & Signature: Dr. Zakir Hussain SK. Zakir Hussain

Approved by Head of the Department: SK. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: B.Sc (Chemical Technology) **Class & Section: NCT** **Course Code: CT18404**

Name of the Faculty Member: Dr.G.Vani **Course Title: Fluid mechanics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Dimensional Analysis, Fluid Statistics and its Application, Fluid Flow Phenomena- Newtonian and non-Newtonian fluids, Flow in boundary layer, Laminar and turbulent flow in boundary layer.	Lecture Method using power point presentation, google forms, white board	To Learn about basic unit and dimensions in fluid mechanics. To understand basic principles of fluid mechanics	Seminar, viva and weekly test
II.	Basic Equations of Fluid Flow-Mass Balance, Macroscopic momentum balance, Bernoulli equation with & without friction factor, Application of Bernoulli equation and Flow of Incompressible Fluids in Conduits.	Lecture Method using power point presentation, google forms, white board	To Learn about fluid flow problems with the application of the momentum and energy equations. Describing friction and losses in fluid flows.	Seminar, viva and weekly test
III.	Drag , Drag coefficient, Calculation of pressure drop using Ergun, Kozney-corman, Blake Plummer &terminal velocity, Conditions for fluidization and applications,	Lecture Method using power point presentation, google forms, white board	To Learn about pressure drops in packed bed. Knowledge of fluidization.	Seminar, viva and weekly test
IV.	Measurement of Flow By Venturimeter, Orificemeter, Rotameter and Pitot tube	Lecture Method using power point presentation, google forms, white board	To Learn about measuring flow and Knowledge of flow meters.	Seminar, viva and weekly test

V.	Screwed pipe fitting and flanged pipe fittings, gate, globe and check valves. positive displacement pumps, centrifugal pumps and vacuum pumps, Fans, blowers and compressors	Lecture Method using power point presentation, google forms, white board	To Learn about piping layout and Describing equipment's in transportation of fluids	Seminar, viva and weekly test

List of References (Book / ICT / Weblinks):

1. Warren L. McCabe, Julian C. Smith and Peter Hariott. 1993. Unit Operations of Chemical Engineering. 5th ed.
2. Badger W L and Julius Banchero T. 1993. Introduction to Chemical Engineering. 5th ed.

Name of the faculty member & Signature: Dr. G. Vani G. Vani

Approved by Head of the Department: SK. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-V

Department: Chemical Technology **Class & Section: DCT** **Course Code:** CT18505

Name of the Faculty Member: Dr.G.Vani **Course Title:** MECHANICAL UNIT OPERATIONS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Agitation equipment, flow patterns in agitated vessels and Power consumption in agitated vessels. Theory of blending and mixing, Motionless mixers, gas dispersion. Mixers for pastes and plastic masses, Mixers for dry powders and Mixing index in blending granular solids	Lecture Method using power point presentation, google forms, white board	To learn about agitation equipment, flow patterns and design of power required for agitation equipment and mixers for pastes and free flowing solids	Seminar, viva and weekly test
II.	Particle shape, particle size, mixed particle sizes and screen analysis. Storage of solids, transportation of solids: Belt, Chain, Screw and Pneumatic conveyors	Lecture Method using power point presentation, google forms, white board	To learn Identifying the need for screen analysis and storage of solids and conveying systems.	Seminar, viva and weekly test
III.	Principles of Communication, criteria for communication Characteristics of comminuted products, Energy and power requirements in communination, Communination laws, Size Reduction equipment.	Lecture Method using power point presentation, google forms, white board	To learn about size reduction equipment's. Capability of problem solving pertaining to size reduction equipment's	Seminar, viva and weekly test
IV.	Screening equipment: Stationary screens, grizzlies, gyration screens, Vibrating screens C and centrifugal sifter. Comparison of ideal and actual screens, capacity and effectiveness of screens. Filtration equipments: Plate and Frame filter press, continuous rotary filters, suspended batch centrifuge and	Lecture Method using power point presentation, google forms, white board	To learn about the need for size separations and screening equipment's	Seminar, viva and weekly test

	leaf filter.			
V.	Gravity classifiers, sorting classifiers Clarifiers and thickeners. Centrifugal setting process: Cyclone separators, Tubular centrifuge and Disc centrifuge. Crystal geometry, Theoretical treatment of principles of crystallization, Crystallization equipment, vacuum crystallizers, Swenson walker crystallizer	Lecture Method using power point presentation, google forms, white board	To learn about centrifugal separation process and crystallization equipment.	Seminar, viva and weekly test

List of References (Book / ICT / Weblinks):

1. Warren L. McCabe, Julian C. Smith., and Peter Hariott. 1993. Unit Operations of Chemical Engineering. 5th ed.
2. W.L. Badger and Julius T. Banchero. 1993. Introduction to Chemical Engineering. 5th ed.

Name of the faculty member & Signature: Dr.G.Vani- G. Vani

Approved by Head of the Department: Dr. Zakir Hussain- SK. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: Chemical Technology **Class & Section:** DCT **Course Code:** CT18502

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Heat Transfer

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Modes of heat transfer, Fourier's law of heat conduction, Steady state heat conduction through walls (single and multiple layers), Steady state heat flow through a cylinder, Steady state heat flow through a sphere.	Lecture Method using ICT (Chalk & Board) Tools, Topic Discussion.	Explain how heat transfer through industrial equipment occurs, Apply Fourier's law to calculate the rate of heat transfer by conduction in solids.	• Unit Test includes matching the column, Filling the blanks, etc. • Problem-solving sessions • Practical conducted
II.	Typical heat exchange equipment, Counter and parallel flows in Double Pipe Heat Exchanger, Energy balance for heat exchanger, Overall heat transfer coefficient, Calculation of overall coefficient from individual coefficient, Dimensional analysis, Heat transfer by natural convection (calculations using empirical relations), Heat transfer by forced convection (calculations by the use of empirical relations).	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Learn the fluid flow patterns, and how their temperatures affect the heat transfer through industrial equipment, Apply the different equations for different situations to calculate the rate of heat transfer through fluids without phase change, and understand the different factors that affect the heat transfer, fluid properties and their behavior were studied through dimensionless numbers.	• Unit Test includes matching the column, Filling the blanks, etc. • Problem-solving sessions • Practical conducted
III.	Dropwise and film type condensation, Coefficients for film type condensation, Practical use of Nusselt equation, Pool Boiling of saturated liquid: Nucleate boiling, Maximum flux and critical temperature drop, Minimum heat flux and film boiling.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Explain heat transfer to fluids with phase change. One learns Condenser and Boiler selection, and studies heat transfer profiles for applications in the industry.	• Unit Test includes matching the column, Filling the blanks, etc. • Problem-solving sessions • Practical conducted

IV.	Fundamentals of radiation, Black body radiation, laws of black body radiation, Kirchoff's law, Radiant heat exchange between Non-black surfaces, Combined heat transfer by conduction, convection, and radiation, Single pass 1-1 heat exchanger, 1-2 parallel counter flow heat exchanger, Correction of LMTD for cross – flow.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion, PowerPoint Presentation.	Heat transfer through radiation and combined modes, Explain the construction and working of Heat Exchangers and the significance of different components in equipment.	• Unit Test includes matching the column, Filling the blanks, etc. • Problem-solving sessions • Practical conducted
V.	Single – Effect Evaporation (Including calculations), Multiple – effect Evaporation (only theoretical treatment), Methods of Feeding, Types of Evaporators: Forced circulation evaporation, long–tube vertical evaporators, Agitated–film evaporators.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Explain the construction and working of evaporators. Feeding methods in evaporators and their efficiency, Different types of evaporators and their uses.	• Unit Test includes matching the column, Filling the blanks, etc. • Problem-solving sessions • Practical conducted

List of References (Book / ICT / Weblinks):

1. Mc. Cabe and Smith. 2000. Unit Operations of Chemical Engineering. Sixth Edition. New Delhi: Tata McGraw Hill Publishing Company Ltd.
2. K. A. Gavhane, 215. Unit Operations – II (Heat and mass Transfer) Nirali Prakashan, Twenty-Ninth Edition, ISBN 978-81-96396-12-1.

Name of the faculty member and signature: (Ms. Reshma Lakra)

Approved by Head of the Department: SK. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: Chemical Technology **Class & Section:** NCT **Course Code:** CT18405

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Instrumentation and Process Control

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	The meaning of the instrument, the elements of the instrument, Static and dynamic characteristics, and Expansion thermometers. Bimetallic thermometer, pressure spring thermometers, Thermoelectric temperature measurements, Industrial Thermocouples, Lead wires, Materials of construction, specifications, and applications of various thermometers.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Explain the qualities of measurement. Learn about instruments construction, characteristics, specification, and their applications.	• Unit Test includes matching the column, Filling the blanks, one-word answers, etc. • Seminar • Group Discussion • Quiz
II.	Resistance Thermometers, Industrial resistance thermometer, Bulbs, calendar Griffith, bridge circuits, Radiation Temperature measurement, Laws of Radiation, Radiation receiving elements Radiation pyrometer, Optical pyrometer and photoelectric pyrometer, Specifications, application of various thermometers, Hygrometer method, pH concentration measurements, Special methods of analysis: Hydrogen sulfide detection system, Oxygen analysis cell based on paramagnetic effect.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Choose a suitable thermometer for a given application and describe the methods for composition analysis of moisture in gases.	• Unit Test includes matching the column, Filling the blanks, one-word answers, etc. • Seminar • Group Discussion • Quiz
III.	Measurement of pressure and vacuum, Pressure, vacuum, and head relation, Measurement elements for gauge pressure and vacuum e.g., Pressure	Lecture Method using ICT (Chalk & Board, and PowerPoint	Explain various pressure and vacuum measurement instruments and process instrumentation, measurement of Head, and Level of	• Unit Test includes matching the column, Filling the blanks, one-word answers, etc.

	spring gauge, bellows gauge, diaphragm gauge, Pirani vacuum gauge, thermocouple vacuum gauge, Measurement of Head and Level: Float and shaft unit, Hydraulic remote transmission of liquid level, bubble system for liquid level measurement, Flow metering: Velocity meter e.g. Propeller meter quantity meters: Piston meter, Nutating disc meter, Process Instrumentation: Recording Instruments, circular chart and strip recording chart, Use of signaling system, Control center: Central layout and unit layout, Purpose of instrumentation diagram.	Presentation) Tools, Topic Discussion.	fluids, and Understand flow meter construction and working.	• Seminar • Group Discussion • Quiz
IV.	The role of process dynamics and control, Control system: Response of first-order systems, Transfer function for stirred tank heater, mixing tank and level control, Block diagrams, Feedback control: Negative Feedback and Positive Feedback (Theoretical Approach Only).	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Describe the role, and functions, of process dynamics and control.	• Unit Test includes matching the column, Filling the blanks, one-word answers, etc. • Seminar • Group Discussion • Quiz
V.	Controllers and Final control elements, Control valve and mechanism of control valve, P- Control, P-D-Control, P-I-Control, P-I-D control, Mechanism of all three controllers by pneumatic force, (Theoretical Treatment only), Controller Tuning (2), Selection modes.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Describe controllers and final controller elements, and their mechanisms.	• Unit Test includes matching the column, Filling the blanks, one-word answers, etc. • Seminar • Quiz

List of References (Book / ICT / Weblinks):

1. Donald P Eckman. 2004. Industrial Instrumentation. New Delhi: CBS Publishers & Distributors Reprint. (for units I, II & III) 2. Coughanowr & Koppel. 1991.
2. Process System Analysis and Control. 2nd edition. McGraw Hill International Editions. (for units IV & V)
3. George Stephanopoulos. 2010. Chemical Process Control. New Delhi: PHI Learning Private Limited.

Name of the faculty member and signature: (Ms. Reshma Lakra)

Approved by Head of the Department: SK. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-III

Department: Chemical Technology **Class & Section: NCT** **Course Code: CT23302**

Name of the Faculty: Dr B. SHASHI KANTH **Course Title: CHEMISTRY – III**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Halogen compounds, Classification– Alkyl halides, Nomenclature , Preparation of Alkyl halides, Aryl halides, Reaction of Alkyl halides, S_N1, S_N2 Mechanism and stereochemistry, hydroxy compounds, Nomenclature, classification Preparation,Properties – Physical Chemical, Phenols, Nomenclature, Preparation Physical Properties: Chemical Properties, Reaction of Phenols	Lecture Method using power point, white board, youtube lessons.	Explain synthesis and properties of Halogens, Alcohols, Phenols and Ethers	Seminar, Viva, Weekly test, quiz
II.	Aldehydes and ketones, nomenclature, Preparation of Aliphatic aldehydes and ketones: Physical properties: Keto-enol tautomerism, relative reactivity of aldehydes & ketones, Reactions of Aldehydes and ketones, Base Catalyzed Mechanisms, Distinguishing Test for aldehydes and ketones	Lecture Method using power point, white board, youtube lessons.	Compare the synthesis and properties of Aldehydes and Ketones	Seminar, Viva, Weekly test, quiz
III.	Chemistry of first transition series, Definition, Electronic configuration, Metallic nature, Oxidation state – stability of various oxidations states, acidic and Basic nature, Colour, Magnetic, Complex formation,	Lecture Method using power point, white board, youtube lessons.	Explain the preparation, properties of “d” and “f” Block elements	Seminar, Viva, Weekly test, quiz

	Catalytic properties, chemistry of lanthanides, Definition, Electronic Configuration, Colour and Magnetic properties, Lanthanide contraction – Cause and consequences, its applications, separation of Lanthanides			
IV.	Electro chemistry -I, Electrolysis, Faradays laws, different types of conductances, Effect of dilution on conductance, Strong and weak electrolytes, Kohlrauschs law, Transport Number-Definition-Hittorf Rule, method to determine transport number , Debye Huckel Theory of Strong Electrolytes	Lecture Method using power point, white board, youtube lessons, e-material.	Compare the electrical conductivites of various Conductors and their related Laws	Seminar, Viva, Weekly test, quiz
V.	Electro chemistry – ii, Common ion effect, Buffer solutions, calculation of pH of buffer mixture, Electrochemical cells, representation of electrochemical cells, electrochemical series, Nernst equation, Calculation of Half-cell potential, Commercial cells (Lechanchi and lead storage cell). Reference electrodes, definition and construction of SHE, SCE.	Lecture Method using power point, white board, youtube lessons, e-material.	Evaluate Cell Potential, Compare various Electrodes and their functions	Seminar, Viva, Weekly test, quiz

List of References (Book/ICT/ Weblinks):

1. P.L. Soni: Organic Chemistry, Published by Sultan Chand & Sons 3rd Edition –1999
2. P.L. Soni. A Text Book of Physical Chemistry, Published by Sultan Chand & Sons 3rd Edition –1999
3. Puri & Sharma: A Text Book of Physical Chemistry, Published by Sultan Chand & Sons 3rd Edition –1999

Name of the faculty member & Signature:

B. Shashi kanth
(B. SHASHI KANTH)

Approved by Head of the Department: Sk. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-IV

Department: Chemical Technology **Class & Section: NCT** **CourseCode: CT23402**

Name of the Faculty: Dr B. SHASHI KANTH **CourseTitle: CHEMISTRY – IV**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Preparation of aliphatic and aromatic Carboxylic acids, Reaction involving the –OH group, –CO group, aliphatic moiety, Active Methylene compounds, EAA-Preparation, Synthetic Applications, Diethyl Malonate, Dicarboxylic acids, unsaturated acids.	Lecture Method using power point, white board, youtube lessons.	Compare Preparation and properties of Aliphatic and Aromatic carboxylic acids	Seminar, Viva, Weekly test, quiz
II.	Nitrogen compounds, Amines – Nomenclature, Classification, Preparation, Separation methods of 1^0, 2^0, 3^0 amines, Physical properties, Chemical properties, Arene - Diazonium salts, Preparation of Pyrrole, Aromatic nature, Reactivity, Physical Properties, chemical properties, Physical properties, Comparison of basicity of Pyrrole, Pyridine and Piperidine.	Lecture Method using power point, white board, youtube lessons.	Compare Synthesis and properties of Nitro compounds and Heterocyclic compounds	Seminar, Viva, Weekly test, quiz
III.	Carbohydrates and aminoacids, Introduction, Classification. Structure elucidation of glucose, Absolute configuration, Structure elucidation of fructose, Chemical Properties of glucose & fructose, Inter conversions, Amino acids: Definition,classification	Lecture Method using power point, white board, youtube lessons.	Synthesis and structural analysis of Carbohydrates and Amino acids.	Seminar, Viva, Weekly test, quiz

	& preparation methods, Physical properties, Chemical Properties.			
IV.	Co-ordination chemistry, Definition of terms, IUPAC Nomenclature, Werner theory, Sidwick's theory, valence bond theory: postulates, crystal field theory, splitting in geometries. magnetic properties of transition metal complexes, types of magnetic behavior, Electronic spectra of metal complexes, d-d transitions.	Lecture Method using power point, white board, youtube lessons, e-material.	Interpret Metal Complexes based on LFT, CFT, MOT	Seminar, Viva, Weekly test, quiz
V.	Stability of the complexes, determination of composition of complexes, isomerism in co-ordination compounds, structural, stereo isomerism – geometrical and optical isomerism, catalysis-Introduction, Characteristics of catalysts, classification and mechanisms inorganic reaction mechanisms, classification of reactions: dissociation and association.	Lecture Method using power point, white board, youtube lessons, e-material.	Apply Catalyst, Reaction mechanism of complexes and OMC, preparation and properties	Seminar, Viva, Weekly test, quiz

List of References (Book/ICT/ Weblinks):

1. P.L. Soni: Organic Chemistry, Published by Sultan Chand & Sons 3rd Edition –1999
2. P.L. Soni. A Text Book of Physical Chemistry, Published by Sultan Chand & Sons 3rd Edition –1999
3. Puri & Sharma: A Text Book of Physical Chemistry, Published by Sultan Chand & Sons 3rd Edition –1999

Name of the faculty member & Signature:

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(B. SHASHI KANTH)

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-V

Department: Chemical Technology **Class & Section: DCT** **Course Code: CT18504**

Name of the Faculty: Dr B. SHASHI KANTH **Course Title: CHEMISTRY – V**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	alkaloids – terpenoids and steroids-definition isolation and structural determination, properties and constitution, dye stuffs and dyeing-introduction and classification color, synthesis of dyes-azodye, triphenyl methane dyes, phthalein dyes, indigo and alizarin.	Lecture Method using power point, white board.	Determine the Extraction, structure and uses of Alkaloids, Terpenoids, Steroids and Dye Stuffs.	Seminar, Viva, Weekly test, quiz
II.	Polymers, definition, mechanism of polymerization, types of polymers, synthetic fibers, preparation of acetate rayon,dacron and terylene, teflon, polyester and polyurethane and properties, plastics , Definition and classification, Manufacture of Urea formaldehyde, rubber , Natural and Synthetic ,Properties and uses of synthetic rubber.	Lecture Method using power point, white board.	Application of Polymers, development of Polymers and Rubbers	Seminar, Viva, Weekly test, quiz
III.	Synthetic drugs, Introduction – constitution and physiological action, synthesis and uses of Antimalaria's, Antipyretics, Analgesics, Antiseptics, Sulpha drugs, Anti biotics.	Lecture Method using power point, white board.	Classify Drugs, demonstrate drugs and explain their action	Seminar, Viva, Weekly test, quiz

iv.	Spectroscopy, ultraviolet and visible spectroscopy, infrared spectroscopy, n.m.r. spectroscopy, mass spectroscopy, principles, instrumentation and applications.	Lecture Method using power point, white board, e-material.	Explain the Fundamental concepts of Spectroscopic techniques	Seminar, Viva, Weekly test, quiz
V.	Chemical kinetics, Rate of reaction – factors influencing the rate of a reaction, order and molecularity, Determination of order of a reaction, Arrhenius equation, photochemistry, Laws of photo chemistry, Joblonski diagram, Photosensitized reactions.	Lecture Method using power point, white board.	Evaluate Order and Molecularity of reactions, application of Photo chemical reactions	Seminar, Viva, Weekly test, quiz

List of References (Book/ICT/ Weblinks):

1. P.L. Soni. 1999. Organic Chemistry. 3rd Edition. New Delhi: Sultan Chand & Sons.
2. P.L. Soni. 1999. Physical Chemistry. 3rd Edition. New Delhi: Sultan Chand & Sons.
3. P.L. Kalsi. 1990. Organic Spectroscopy. 1st Edition. New Delhi: Jay Prakash Nath publications

Name of the faculty member & Signature:

B. Shashi Kanth
(B. SHASHI KANTH)

Approved by Head of the Department: Sk. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: Chemical Technology **Class & Section:** DCT **Course Code:** CT18603

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Chemical Reaction Engineering

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Classification of reactions, Variables affecting the rate of reaction, Definition of reaction rate, Calculation of equilibrium constant for simple reversible reactions (A ⇄R & A+B ⇄R+S), Variation of equilibrium constant with temperature (Vant Hoff equation), Single and multiple reactions, Elementary and non-elementary reactions, Molecularity and order of reaction, Rate constant, representation of an elementary reaction, Representation of a non-elementary reaction, Kinetic models for non-elementary reactions, Testing kinetic models (search for the reaction mechanism).	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Learn various types of reactions, determination of reaction rate constant, and order of reaction, study the performance of ideal steady state reactors, Study classification of chemical reactions, define rate equation and test mechanism.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Problem Solving Sessions • Seminar • Conduct Practical
II.	Temperature dependency of rate constant from Arrhenius's law, Significance of activation energy, activation energy, and temperature dependency, Temperature dependency of rate constant from thermodynamics, Temperature dependency of rate constant from Collision theory, Temperature dependency of rate	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Learn the dependency of the rate constant on temperature from different theories and calculate the rate constant.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Problem Solving Sessions • Seminar • Conduct Practical

	constant from Transition – state theories, Comparison of theories with Arrhenius law.			
III.	Analysis of total pressure data obtained in a constant volume system, Irreversible unimolecular-type first-order reactions, Irreversible bimolecular-type second–order reactions, Empirical rate equations of the nth order, Zero-order reactions, Overall order of irreversible reactions from half–life, Irreversible reactions in parallel, Homogeneous catalyzed reactions, Auto-catalytic reaction, Irreversible reactions in series.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Learn about various chemical reactions and use rate equations to calculate the specific rate constant and the order of the reaction for irreversible reactions in the case of a constant volume Batch Reactor.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Problem Solving Sessions • Seminar • Conduct Practical
IV.	First-order reversible reaction, Second–order reversible reactions, Reactions of shifting order, Differential method of analysis of data, Partial and complete analysis of rate equation, Varying volume batch reactor.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Use rate equation to calculate the rate constant for reversible reactions in case of Constant Volume Batch Reactor and rate constant in case of Variable Volume Batch Reactor.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Problem Solving Sessions • Seminar • Conduct Practical
V.	The single ideal batch reactor, Spacetime and space velocity, Steady state back mix flow reactor, Steady-state plug flow reactor, Holding time and space-time for flow systems.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Use the performance equation to design single ideal reactors.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Problem Solving Sessions • Seminar • Conduct Practical

List of References (Book / ICT / Weblinks):

1. Octave Levenspiel. 2008. Chemical Reaction Engineering. Third Edition, Singapore: John Wiley & Sons.
2. K.A. Gavhane. 2009. Chemical Reaction Engineering. First Edition, Pune: Nirali Prakashan Publications.
3. S.D. Dawande. 2001. Principles of Reaction Engineering. First Edition. Nagpur: Central Techno Publications.

Name of the faculty member and signature:  (Ms. Reshma Lakra)

Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: Chemical Technology **Class & Section:** NCT **Course Code:** ES23401

Name of the Faculty Member: Mr. Nityananda Ghosh **Course Title:** Environmental Studies and Gender Sensitization

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition, Scope, and importance of environmental studies. Need for public awareness, Renewable & Non-Renewable resources, Brief account on Forests, Water, Minerals and Energy (Solar, Wind, and Geo-thermal & Bio-energy), Definition of Ecosystem, Structure and functions-food chains, food webs, ecological pyramids, producers, consumers, and decomposers. Energy flow and example ecosystems Forest, Desert, Aquatic ecosystems, Definition of Biodiversity, types (Genetic, Species, Ecosystem), India- mega diversity Nation, Hotspots, Threats to biodiversity, Conservation of biodiversity (In-Situ and Ex-Situ).	Lecture Method using ICT (Chalk and Board, and PowerPoint Presentation) Tools and topic Discussion.	Understand the importance of Environmental education and its implementation, Conservation of natural resources & understanding the types, importance, structure, and components of ecosystems and biodiversity, Learn about the conservation of biodiversity.	• Unit Test • Weekly tests • Group Discussion • Viva
II.	Definition of Environmental pollution, Brief account of causes, effects, prevention and control measures of (a) Air pollution (b) Water Pollution (c) Soil pollution (d) Noise pollution (e) Marine Pollution, Solid Waste Management: Causes, Effects & Control measures of urban and industrial wastes, Disaster	Lecture Method using ICT (Chalk and Board, and PowerPoint Presentation) Tools, Topic Discussion.	Understand the present different pollution problems, their cause, effect, and control measures, and apply the environmental science knowledge on solid waste management, disaster management	• Unit Test • Weekly tests • Group Discussion • Viva

	Management: floods, Earthquakes, and Cyclones.			
III.	Rain-water harvesting, Water-shed Management, From Unsustainable to Sustainable Development, Global Warming, Ozone depletion, and Acid rains, Environmental Legislation: Air Act, Water Act, Environmental Protection Act, Forest Act, Wildlife Act, Environmental & Human Health---- HIV/AIDS, Welfare Programs---- Family, Women & Child Welfare, Population Explosion, Role of Information Technology in Environmental Studies.	Lecture Method using ICT (Chalk and Board, and PowerPoint Presentation) Tools, Topic Discussion.	Apply the environmental science knowledge to improve the resources Evaluate and understand the sustainable environmental conditions and control methods. Learn about major sustainable development goals and environmental Policy Acts, Understand the environmental impact on human health and vice-versa, different family, women, and child welfare programs, and Study IT role in the study of the environment.	• Unit Test • Weekly tests • Group Discussion • Viva
IV.	Why should we study gender issues? Socialization- Making women and making men, Being together as equals- Through the lens of gender, Missing women: Gender selection and its consequences, Health issues of Women	Lecture Method using ICT (PowerPoint Presentation) Tools and Topic Discussion.	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity class, sexuality, and so on) and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space, and time. And their problems	• Unit Test • Group Discussion • Viva
V.	Housework: The invisible labor- my mother doesn't work "share the load", Women's Work: Role in Politics and Economics Fact and Fiction. Unrecognized and Unaccounted work. Wages and Conditions of Work., Sexual harassment – say no eve teasing – the caste-based violence –Nirbhaya Act, Domestic violence - Is home a safe place? - Blaming the victim. -Domestic Violence Act, Forums of justice-Hindu Inheritance Act (2005)	Lecture Method using ICT (PowerPoint Presentation) Tools and Topic Discussion.	Understand the gender problems and ways of addressing them, including interactions across local to global scales in communities and overcome inequalities with legislation	• Unit Test • Group Discussion • Viva

List of References (Book / ICT / Weblinks):

1. Dr D K Asthana and Dr Meera Asthana. 2014. A Textbook of Environmental Studies Revised Edition. New Delhi: S. Chand & Company.
2. Anji Reddy .M (2007), Textbook of Environmental Sciences and Technology, Hyderabad, BS Publications.

3. Y Anjaneyulu.(2004), Introduction to Environmental Sciences, BS Publications.
4. Www.Wikipedia.Com/Watershedmanagement.Html
5. Suhas P Wani and Kaushal K Garg, Watershed Management Concept and Principles, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) Patancheru 502 324, Andhra Pradesh, India
6. Sustainable Development drishtiias.com/printpdf/sustainable-development-3, Isfahan University of Technology, Isfahan, Iran, 8415683111
7. Muna Yacoub Hindiyeh, Handbook of Water Harvesting and Conservation Title (subtitle) : Basic Concepts and Fundamentals
8. Description Of The Process Depleting The Ozone Layer And The Threats To The Environment And Humankind Site: United Nations Information Portal On Multilateral Environmental Agreements
9. United States Air and Radiation EPA 430-F-10-027 Environmental Protection 6205J August 2010 Agency www.epa.gov/ozone/strathome.html
10. Dileep Kumar Singh, Environmental Protection and Wildlife Acts, International Journal of Multidisciplinary Innovative Research. ISSN: 2583-0228 Volume 1, Number 1 (Jul' 2021) pp. 44-50
11. Environmental Laws in India clearias.com/environmental-laws-India, 2022
12. http://www.epa.gov/globalwarming/climate/index.html
13. http://www.ngdc.noaa.gov/paleo/globalwarming/greeneffect.html http://www.al.noaa.gov/WWWHD/pubdocs/Greenhouse.html Life on Earth
14. Sivakumaran Sivaramanan, Acid Rain, Causes, Effects And Control Strategies, DOI: 10.13140/RG.2.1.1321.4240/1
15. Subodh Kumar, Acid Rain-The Major Cause of Pollution: Its Causes, Effects, International Journal of Applied Chemistry. ISSN 0973-1792 Volume 13, Number 1 (2017) pp. 53-58
16. www. Clearias.com, Biodiversity Hotspots in India, 2023
17. Manoj Kumar Pradhan, Biodiversity and its conservation
18. Biodiversity and its conservation, Ref. Textbook for Environmental Studies Erach Bharucha for UGC
19. India's Forest and Tree Cover - Contribution as a Carbon Sink, Ministry of Environment and Forests, Government of India, August 2009 5. State of Environment Report-India 2009, Ministry of Environment and Forests, Government of India 6. http://edugreen.teri.res.in/explore/life/forest.html.
20. Biodiversity: uses, threats and conservation by Bhavna Gupta
21. Sen Amartya More Than One Million Women Are Missing. New York Review of Books 37.20 (20 December 1990). Print. We Were Making History...Life Stories of Women in the Telangana People's Struggle. New Delhi: Kali for Women. 1998
22. Tripti Lahiri. By the Numbers: Where Indian Women Work. Women's Studies Journal. (14 November 2012)
23. K. Satyanarayana and Susie Tharu. Ed. Steel Nibs Are Sprouting: New Dalit Writing from South India, Dossier 2: Telugu and Kanada Code=3732
24. Vimala. Vantillu (The Kitchen)". Women Writing in India: 600 BC to the Present. Volume II. The 20th Century. Ed. Suise Tharu and K. Laltitha. Delhi: Oxford University Press, 1995. 599-601
25. Shatrughna, Veena. Women's Work and its Impact on Child Health and Nutrition. Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993.

Name of the faculty member & Signature: (Nityananda Ghosh)

Approved by Head of the Department: SK. Zakir Hussain

Internal Quality Assurance Cell ***2023-2024***

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-5

Department: B Sc.Chemical Technology **Class & Section: DCT**

Course Code:CT18506B

Name of the Faculty Member:Dr.Sunitha Nair A **Course Title: Industrial Management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Concept of Management- Definition, Features, nature objectives, levels, functions, principles, universality, contribution of Taylor and Fayol	Teaching and Using PPT	Understand management activities	Quiz, debate and group presentation.
II.	Organisation-concept importance,nature,steps,principles,org.structure,leadership, concept,features,importance,qualities of an effective leader, leadership styles and theories	Teaching and Using PPT	Apply organizational and leadership skills	Quiz, debate and group presentation.
III.	Industrial Relations- objectives, weapons or industrial disputes, causes of Industrial dispute, methods of settlement of industrial dispute, wages and industrial relations, components of wages, method of wage fixation, factors contributing to wage fixation, problems and issues of wage determination	Teaching and Using PPT	Evaluate relation between labour and management	Quiz, debate and group presentation.
IV.	TQM,need for TQM,principles, objectives,process.Six Sigma- meaning, methodology, elements	Teaching and Using PPT	Identify TQM principles and objectives	Quiz, debate and group presentation.
V.	SSIs, introduction, rols, importance,problems faced by SSis, sources of finance for SSis, entrpeneurship in relation to SSIs	Teaching and Using PPT	Significance of SSis	Quiz, debate and group presentation.

List of References (Book / ICT / Weblinks):

1. Sharma, R S Gupta & N S Bhalla- *Principles and Practice of Management*
2. L M Prasad -*Organizational Behaviour*
3. Arun Monappa -*Industrial Relations*
4. S D Bagade- *Total Quality of Management*
5. Amit Singh -*Six Sigma concepts and cases*
6. S K Mandal -*TQM principles and practice*

Name of the faculty member & Signature: Dr. Sunitha Nair A.

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-V

Department: Chemical Technology **Class & Section: DCT** **Course Code: CT18501**

Name of the Faculty Member: Dr. Zakir Hussain **Course Title: Mass Transfer Operations-1**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Mass Transfer and Role of diffusion in Mass Transfer, Molal flow rate, velocity, and flux Relationship between diffusivities and diffusion Fick 1st law Diffusivity in gases Diffusivity in liquids Mass transfer coefficients and two resistance theory Experimental Measurement of Mass Transfer coefficient by wetted wall Column	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion.	Demonstration of mass transfer coefficient calculation using laboratory setup	Assignment-1, weekly test, surprise test
II.	Vapour liquid equilibrium, Relative volatility and Boiling point diagram (T-x-y), Raoults law and Henrys law concept, Types of distillation: Batch distillation, Rayleighs equation Flash distillation: operating line equation, Continuous distillation: details of the Rectification column Material and Energy Balance (Operating Line for rectifying, Stripping and Q-line equation derivations), Steam distillation. Principle and working details.	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion.	VLE, boiling point diagram, flash calculations using Aspen Plus software	Assignment-2, weekly test, surprise test

	Problems Solving			
III.	Feed line: conditions of Feed, Enriching line and stripping line, modification for McCabe Thiele, Calculation of number of Ideal Stages using McCabe Thiele Method, Use of Partial and total condensers minimum of reflux ratio, Total Reflux, and optimum Reflux Ratio, Problems Solving, Overall column efficiency, Murphree plate efficiency, Factors influencing plate efficiency	Virtual operations from videos (petroleum refinery operations, ADU, ADU), projector, PPTs, student presentation, problems solving, research papers discussion.	Refinery operation using rigorous Radfrac unit in Aspen Plus	Assignment-3, weekly test, quiz
IV.	Industrial application of leaching, Types of Leaching Heep leaching, Intermediate size particles leaching, Fine Particles leaching, Leaching equipment: stationary solid bed, Moving Bed Extractor, Leaching equipment: Boollman Extractor; Hildebrand extractor, Dispersed solid leaching, Principles of continuous counter current Leaching, Ideal stage and equilibrium in Leaching, Operating line equation, Constant and variable underflow, Number of ideal stages for constant under flow and variable under flow system, Number of ideal stages for variable under flow system	Virtual operations from videos (petroleum refinery operations, ADU, ADU), projector, PPTs, student presentation, problems solving, research papers discussion on deep eutectic solvents used for desulphurization of diesel fuel.	Extractive Desulphurization using Aspen Plus	Assignment-4, weekly test, quiz
V.	Extraction equipment: Mixer settlers, Spray and packed extraction towers, Extraction equipment: perforated plate towers, baffle towers, Principles of extraction: equilibrium and phase compositions, Triangular diagram,	projector, PPTs, student presentation, problems solving, research papers discussion on ionic liquids used for	Extractive Desulphurization using Aspen Plus	Assignment-5, weekly test, quiz, final viva-voce

	equilibrium Line, plait point. Single stage extraction, multistage cross current extraction for miscible system Insoluble liquids: single stage extraction Continuous counter current multistage extraction problems solving	desulphurization of diesel fuel.		

List of References (Book / ICT / Weblinks):

1. Robert E Treybal. Mass Transfer Operations. Third edition, New Delhi: McGraw Hill International Edition.
2. Warren L. Mc Cabe, Julian C. Smith, and Peter Harriot. 1993. Unit Operations of Chemical Engineering. 5th Edition. New Delhi: McGraw Hill International edition.
3. Badger and Banchero. 1955. Introduction to Chemical Engineering. New Delhi: McGraw Hill International Edition. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing.
4. https://www.youtube.com/watch?v=YS9PYajzk_c&list=PLPOztuy6v_2kn-pFH_NaNl5iY2624Jn8b

Name of the faculty member & Signature: Dr. Zakir Hussain SK. Zakir Hussain

Approved by Head of the Department: SK. Zakir Hussain

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: Chemical Technology **Class & Section: DCT** **Course Code: CT18601**

Name of the Faculty Member: Dr. Zakir Hussain **Course Title: Mass Transfer Operations-II**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction, Industrial use of absorption, Types of tower packing: regular and random packing, contact between liquid and gas, loading and flooding, Types of packing material and requirement of packing material. Principles of absorption, choice of the solvent for absorption, Material balance for absorption column. Design of packed column, Calculation of Packed height of the column, Number of transfer units, Height of transfer unit, for lean gas Absorption of rich Gases,* Absorption with chemical reaction.*	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion, Revision or industrial visit (virtual) or lab experiment demonstration.	Demonstration of mass transfer coefficient calculation using laboratory setup	Assignment-1, weekly test, surprise test
II.	Humidity, saturated gas, relative humidity, percentage humidity, humid heat, humid volume, dew point Humidity chart, wet bulb temperature and measurement of humidity, Principle of adiabatic saturation, Principle of wet bulb thermometry, Lewis relation, equipment for humidification operation, Natural	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion.	Operation of psychrometer (WBT and DBT simultaneously) in laboratory	Assignment-2, weekly test, surprise test

	draft cooling tower			
III.	Classification of dryers- with the nature of the substance and type of heat transfer, Principles of drying, heat transfer in dryers, Mass Transfer in Dryers, equilibrium moisture curves, Mechanism of porous substance drying, calculation of drying time under constant, Drying conditions, Drying equipment, tray dryer rotary dryers, Fluidized bed dryer, spray dryer, drum dryers, Calculation of drying rate constant, heat duty in dryers, Drying of non-porous substances: shrinkage and case hardening	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion.	Drying operation in laboratory: preparation of clay brick and study of its drying curve.	Assignment-3, weekly test, quiz
IV.	Industrial use of adsorption, Types of Adsorbents, Physical Adsorption and Chemisorption, Adsorption Isotherm, Principles of adsorption, application of Freundlich equation, Fixed bed adsorbers, stirred tank adsorbers, continuous adsorbers, Break through curves scale up, length of unused bed, Effect of feed concentration	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion.	Continuous adsorption column design and operation in laboratory, Acetic acid adsorption using activated charcoal, natural adsorbent preparation and testing for pollutants removal	Assignment-4, weekly test, quiz
V.	Industrial use of membrane technology, Introduction to Membrane, Types of Membranes and their classifications, Separation of gases: Binary mixture, Separation of Liquids: Dialysis, Flow pattern in Membrane separation, Reverse Osmosis: Principle and Application	projector, PPTs, student presentation, problems solving, research papers discussion, visit to RO plant on campus	RO plant parts demonstration	Assignment-5, weekly test, quiz, final viva-voce

List of References (Book / ICT / Weblinks):

1. Robert E Treybal. Mass Transfer Operations. Third edition, New Delhi: McGraw Hill International Edition.
2. Warren L. Mc Cabe, Julian C. Smith, and Peter Harriot. 1993. Unit Operations of Chemical Engineering. 5th Edition. New Delhi: McGraw Hill International edition.
3. Badger and Banchero. 1955. Introduction to Chemical Engineering. New Delhi: McGraw Hill International Edition. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing.
4. https://www.youtube.com/watch?v=yjfb7ba_jcg&list=PLPOztuy6v_2kKC8HuCG3I4HLtI4e8su4B

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: Chemical Technology **Class & Section: DCT** **Course Code: CT18605A**

Name of the Faculty Member: Dr. Zakir Hussain **Course Title: Non-Conventional Energy Sources**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	An introduction to energy sources Types of energy sources Energy consumption as a measure of prosperity World energy future Energy sources and their availability Renewable energy sources Estimation of average solar radiation Flat plate collectors, Focusing type of collectors	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion.	Activity-1 (Inigo Block Solar Panels)	Assignment-1, weekly test, surprise test
II.	Solar Energy Storage Solar energy storage systems Extraction of Thermal energy Applications of solar energy Solar water heating, Space cooling Solar distillation Solar pumping Solar green house	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion.	Activity-2 (Chemical Engineering Labs Solar Panels and Dryers)	Assignment-2, weekly test, surprise test
III.	Wind Energy: Introduction Basic principles of wind energy conversion Wind data and energy estimation (Theoretical Treatment only) Site selection considerations Energy from Biomass: Introduction Biomass conversion technologies	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion.	Activity-3 (Chemical Engineering Labs Solar Panels and Dryers)	Assignment-3, weekly test, quiz

	(Wet & Dry Processes) Biogas generation, biogas from plant waste Community biogas plants, selection of site for biogas generation			
IV.	Geothermal Energy: Introduction Estimation of geothermal power Nature of geothermal fields Geothermal sources Applications of geothermal energy	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion on deep eutectic solvents used for desulphurization of diesel fuel.	Revision or Industrial Visit (Virtual)	Assignment-4, weekly test, quiz
V.	Chemical Energy Sources: Fuel cells Classification of fuel cells, Types of fuel cells Applications of fuel cells Hydrogen Energy: Introduction Hydrogen production (Electrolysis, Thermochemical Methods, Fossil fuel method, Solar energy method.) Hydrogen storage, transportation, utilisation of Hydrogen gas Hydrogen as an alternative fuel for motor vehicles	projector, PPTs, student presentation, problems solving, research papers discussion on ionic liquids used for desulphurization of diesel fuel.	Activity-5 (Inigo Block Solar Panels)	Assignment-5, weekly test, quiz, final viva-voce

List of References (Book / ICT / Weblinks):

1. G. D. Rai: Non-Conventional Sources of Energy, 5th ed, Khanna Publishers. New Delhi, 2011.
2. N. K. Giri. 2010. Alternate Energy Sources and Applications. 2nd edition. New Delhi: Khanna Publishers.
3. S. Rao and Parulekar. 2010. Energy Technology-Non-Conventional, Renewable and Conventional. 2nd ed. New Delhi: Khanna Publishers.

Name of the faculty member & Signature: Dr. Zakir Hussain SK. Zakir Hussain

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: Chemical Technology **Class & Section: DCT** **Course Code: CT18606B**

Name of the Faculty Member: Dr. Zakir Hussain **Course Title: Organic Surface Coatings Technology**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Importance of organic surface coatings, Decorative and protective functions, Major components of surface coatings: Film formers, pigments, extenders, and additives. Differences between paints, varnishes, lacquers and industrial coatings, Principles of Natural and synthetic drying oil; Eg: Linseed oil, Tung oil, Soya bean oil. General properties of oils and their characteristics: Acid value, Iodine value, saponification value and their importance.	Virtual operations from videos, projector, PPTs, student presentation, problems solving (amount of paint required for a given wall size or room size), research papers discussion, revision / industrial visit (field or virtual)	Presentation of novel aspects in paint industry by students, amount of paint required for a given wall size or room size.	Assignment-1, weekly test, surprise test
II.	Pigments: Important pigments and their properties Eg: Titanium dioxide, Zinc oxide, carbon black, red lead, Prussian blue, Phthalocyanine green and Blue, lead chrome, barium and Potassium chromates Extenders: Important properties and	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion, revision / industrial visit (virtual)	Case study on Asian paints and Coromandel paints limited	Assignment-2, weekly test, surprise test

	their contribution to film properties. Eg. China clay, gypsum, mica and talc.			
III.	Natural Resins: Rosin and Shellac Synthetic Resins: Alkyd resins, Phenolic resins, epoxies, Chlorinated rubber, vinyl resins. Solvents and their blends properties. Criteria for their selection Plasticizers: properties, types, and their applications. Additives: driers, dispersing agents, anti-skinning agents and leveling agents.	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion, revision, showing laboratory setup of orbital shaking incubator, petri diches, striking etc.	Shellac and rosin extraction process using YouTube Videos	Assignment-3, weekly test, quiz
IV.	Application of paint: Viscosity consideration, brush application, Spray application and electrostatic spray application. Testing of paints: wet paint and dry paint testing, film thickness, Dispersion test, colour matching test, Defects in paints and their remedies.	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion, revision / industrial visit (field or virtual)	Case study on application of paint on various parts and performing color matching test using cards.	Assignment-4, weekly test, quiz
V.	Specialty coatings: High solids, powder coatings, water soluble coatings. Heat resistant coatings, Automotive coatings, Marine coatings. Fire resistant coatings, coatings for swimming pools. Space and aircraft coatings. Coatings for chemical industries	Virtual operations from videos, projector, PPTs, student presentation, problems solving, research papers discussion, revision	Case study on various markings on road and their use. Student presentation on novel processes or coatings and metals to combat corrosion.	Assignment-5, weekly test, quiz, final viva-voce

List of References (Book / ICT / Weblinks):

1. Turner GPA. 1988. Chapman and Hall. Principles of paint technology.
2. W.M. Morgans. 1990. Introduction to paint chemistry. London: Edward Arnold Publishers.
3. Oil and Chemist Association, 1972. Vol- I to Vol-VIII, Paint Technology Manuals Chapman, and Hall.

4. C. Patton, A Wiley. 1973. Pigment Handbook. Vol-I to Vol-VIII. Temple Inter science Publications.
5. F.G Dunkley and C.W Collier. 2000. The Testing of Paints. Vol- V. Paint Technology Manual, Chapman, and Hall.
6. Hess Manfred. 1958. Paint Film Defects and their remedies. London: Chapman and Hall Ltd. SHREVE. R. NERVES and BRINKJOSEPH. A; Chemical Process Industries .
7. https://www.youtube.com/watch?v=3iut8C3t7JQ&list=PLPOztuy6v_2k-QUv9buOfKpFas6SssqDZ

Name of the faculty member & Signature: Dr. Zakir Hussain SK. Zakir Hussain

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-III

Department: Chemical Technology **Class & Section: NCT** **Course Code: CT23303**

Name of the Faculty: Mr.NITYANANDA GHOSH **Course Title: PHYSICS – III**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Moving Charge in Electric & Magnetic Fields & Electronics-2: Motions of a charged particle in electric And magnetic fields Hall Effect & its applications. Cyclotron, Synchrocyclotron, Synchrotron. Transistors: PNP & NPN transistor Transistor CB-CE-CC configurations Current component in transistors Transistor as an amplifier	Lecture Method using white board, YouTube lessons. Problems solving	The student would be able to learn the concepts of motion of charge in EM Fields & its applications. Compare various types of transistors and analyze CB-CE-CC configurations, enable the students to understand the concept of amplification of signals.	Seminar, Viva, Weekly test, Quiz
II.	Nano Technology: Introduction: Nanoparticles, Nanomaterials & Classification of Nanomaterials Why the properties of Nanomaterials are different from bulk materials. Different preparation Techniques of Nanomaterials (Ball Milling, Sol-Gel, Plasma arching, chemical vapour deposition) Carbon nanotubes - Different types & Properties Quantum Nanostructures (Quantum Dot, Wire & Well). Applications of Nanomaterials.	Lecture Method using white board, YouTube lessons. Problems solving, research discussions on Nanotechnology	Analyze Nanoscience & technology and survey different types of Nano materials, Synthesis of Nano particles and its applications.	Seminar, Viva, Weekly test, Quiz

III.	Optics of Interference of Light: Interference-principle of superposition of waves, Intensity at a point in a plane, Study of interference fringes Fresnel's Biprism Construction Describe Fresnel's Biprism to find the wavelength of monochromatic light Describe Fresnel's Biprism to determine the thickness of a thin mica sheet, Oblique incidence of a plane wave on a thin film due to reflected And transmitted light(Cosine law), Colours of thin films, Theory of Newton's rings Determination of wavelength of sodium light by Newton's Rings.	Lecture Method using white board, YouTube lessons. Problems solving	Students will be able to demonstrate competency and understanding of the concepts & phenomena of Optics of Interference & It's Applications.	Seminar, Viva, Weekly test, Quiz

IV.	**Optics of Diffraction of Light:** Differences between Fresnel's & Fraunhofer diffraction Fraunhofer diffraction at single slit (normal incidence case only) Fraunhofer diffraction at double slit (normal incidence case only) Diffraction grating. Using Diffraction grating to find wavelength of a given Monochromatic source. Resolving power of a grating	Lecture Method using power point, white board, YouTube lessons, Problems solving	Students will be able to demonstrate competency and understanding of the concepts & phenomena of Optics of diffraction & It's Applications.	Seminar, Viva, Weekly test, quiz
V.	**Optics of Polarization:** Introduction to polarization Brewster's law, Malus law Double refraction, Huygens's theory of Double Refraction. Nicol's prism, Quarter wave plate, half wave plate Circular & elliptical polarization Optical activity, Specific Rotation. Laurent's Half -Shade Polarimeter.	Lecture Method using white board, YouTube lessons, Problems solving	Students will be able to demonstrate competency and understanding of the concepts & phenomena of Optics of Polarization & It's Applications.	Seminar, Viva, Weekly test, quiz

List of References (Book/ICT/ Weblinks):

1. Dr. Gupta S.L & Sanjeev Gupta. 2014. **Unified Physics**. Vol-III: 35th edition. Meerut: Prakash Nath & Co.
2. Dr. Gupta S.L. & Sanjeev Gupta. 2016. **Unified Physics**. Vol-II, 55th edition. Meerut: Prakash Nath & Co.
3. Dr. Gupta S.L. & Sanjeev Gupta. 2018. **Unified Physics**. Vol-IV, 58th edition. Meerut: Prakash Nath & Co.
4. B.Sc. Second Year & B.Sc. Third Year Physics -Telugu Academy

Name of the faculty member & Signature: (Nityananda Ghosh)

NITYANANDA GHOSH

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023–2024

SEMESTER-IV

Department: Chemical Technology **Class & Section: NCT** **Course Code: CT23403**

Name of the Faculty: Mr.NITYANANDA GHOSH **Course Title: PHYSICS – IV**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**(A) Quantum Mechanics (Origin):** Black body, spectrum of black body radiations Plank's Hypothesis & Radiation Laws Compton effect **(B) Wave Mechanics**: Wave & particle dual nature , De- Broglie's hypothesis Davisson -Germer experiment. Heisenberg uncertainty principle and its experimental Illustrations. Wave function, its properties & significance Postulates of Quantum mechanics. Operators, Eigen functions & Eigen values Schrodinger's Time dependent and Time independent Wave equations, Finding expressions for energy & wave functions of a particle in a 1-d box of Infinite height.	Lecture Method usingwhite board, YouTube lessons. Problems solving	To introduce the Quantum Mechanical concepts of measurements for physical systems. To introduce the role of Quantum Mechanics on evolution of the physical systems in our Universe. Explains how extremely small objects simultaneously have the characteristics of both particles (tiny pieces of matter) and waves (a disturbance or variation that transfers energy). Apply the Principles of Quantum mechanics and wave mechanics in solving quantum problems.	Seminar, Viva, Weekly test, Quiz
II.	**Nuclear Physics:** Nuclear structure: Basic properties of nucleus- size, Charge, mass, spin, Magnetic dipole moment. and Electric Quadrupole moment, Binding energy of nucleus , Deuteron binding energy, p-p, n-p scattering (Concepts) Nuclear forces, Yukawa Meson Theory Nuclear models- Liquid drop model & Shell model	Lecture Method usingwhite board, YouTube lessons. Problems solving.	Nuclear physics is the study of the structure of nuclei—their formation, stability, and decay. It aims to understand the fundamental nuclear forces in nature, their symmetries, and the resulting complex interactions between protons and neutrons in nuclei and among quarks inside hadrons, including the proton.	Seminar, Viva, Weekly test, Quiz

III.	**Atomic Spectra**: Introduction - Drawbacks of Bohr's atomic Model – Somerfield's elliptical orbits -relativistic correction (no derivation)Vector atom model and quantum numbers Associated with it. L-S and j-j coupling schemes. Spectral terms Selection rules & Intensity rules. Spectra of alkali atoms, doublet fine structure. **Molecular Spectroscopy:** Types of molecular spectra pure rotational energies (Quantization) and spectrum of Diatomic molecule. Determination of inter nuclear distance. Vibrational energies and spectrum of diatomic molecule Raman effect, Quantum theory of Raman effect Experimental arrangement for Raman effect and its applications.	Lecture Method (1) using white (1) board, YouTube (1) lessons. (1) Problems solving (1) (1)	Spectroscopy is mainly used for studying the structure of molecules and atoms. Spectroscopy will use a large wavelength to investigate the structure and electron configurations of atoms and molecules. Analyze Atomic & Molecular Spectra of Atoms & Molecules.	Seminar, Viva, Weekly test, Quiz
IV.	**Solid State Physics & Crystallography:** **Crystal Structure**: Crystalline nature of matter. Crystal lattice, Unit Cell, Crystal systems, Bravais lattices. Miller indices. Crystal structures (S.C., BCC, FCC) **X-ray Diffraction:** Diffraction of X -rays by crystals, Bragg's law, Experimental techniques - Laue's method and powder method	Lecture Method usingwhite board, YouTube lessons, Problems solving (((	The primary focus of solid-state physics lies in examining the electronic and crystalline attributes of solid materials. The examination of solid materials and their crystal structure can be instigated through crystallographic methods such as electron diffraction, and X-ray crystallography	Seminar, Viva, Weekly test, quiz
V.	**FIBER OPTICS & LASERS** Introduction -principle of optical fibers and Structure of Optical Fibers Types of optical fibers (No. of Modes & Refractive Index) and Signal propagation mechanism through the fibers Acceptance Angle and Numerical Aperture Applications of optical fibers Characteristics of lasers, Absorption, Spontaneous emission, Stimulated emission & Population Inversion Laser Principle & Components. Ruby Laser & Helium –Neon Laser Applications of Lasers	Lecture Method using white board, YouTube lessons, Problems solving	Fiber optic cables are commonly used because of their advantages over copper cables. Some of those benefits include higher bandwidth and transmit speeds. Fiber optics is used for long-distance and high-performance data networking. Laser devices use light to store, transfer, or print images and text; they are also used in a wide range of other applications, including surgery and weaponry. The coherent radiation of the laser gives it special strength.	Seminar, Viva, Weekly test, quiz

List of References (Book/ICT/ Weblinks):

1. Dr. Gupta S.L. & Sanjeev Gupta. 2016. **Unified Physics**. Vol-II, 55th edition. Meerut: Prakash Nath & Co.
2. Dr. Gupta S.L. & Sanjeev Gupta. 2018. **Unified Physics**. Vol-IV, 58th edition. Meerut: Prakash Nath & Co.
3. B.Sc. Fourth Year Physics -Telugu Academy

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: Chemical Technology **Class & Section:** DCT **Course Code:** CT18605B

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Refractory Technology

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Importance and scope of Refractory technology, Definition of refractories, Classification of refractories, Important properties of refractories, General method of manufacture of refractory, Requisites of a good refractory for a particular job, Selection of refractories.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Learn about refractory technology and classify and select the refractory materials. Selection of refractories for different applications.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Seminar
II.	Manufacture, properties, and uses of Fire-clay refractories, Silica refractories, Graphite refractories, and Magnesite chrome refractories.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Describe the manufacturing procedure, properties, and uses of some important refractory materials.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Seminar
III.	Iron and Steel Industry: Blast Furnace, Hot Metal Mixer, and Open Hearth Furnace, Glass Industry: Refractories used in glass melting tank furnaces, Cement Industry: Refractories used in rotary kilns.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Identify the refractory used in Iron and Steel, Glass, and Cement industries, productions, and working flow diagrams.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Seminar
IV.	Testing of Refractories: Testing methods for the properties of refractory materials, Refractoriness, Refractoriness under load (RUL), Porosity, Bulk density and Permeability, Insulating refractories: Raw materials for insulating refractories,	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Explain the testing procedures for some important properties of refractory materials and describe the properties, characterization, and uses of insulating refractories.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Seminar

	desired properties of good insulating refractories. Uses of insulating refractories.			
V.	Special Refractories: Raw materials, properties and uses of some special refractories such as super refractories, silicon carbide refractories, sialon refractories, cermet, and fused and electro cast refractories, Refractory Cement/Mortars: Raw materials, characteristics, and uses of refractory cements.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Choose the special refractories for specified applications, and their characterization, and describe the use of refractory cement.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Seminar

List of References (Book / ICT / Weblinks):

1. OM Prakash Gupta. 1994. "Elements of Fuels, Furnaces, and Refractories". Third Edition. Delhi. Khanna Publishers.

Name of the faculty member and signature: (Ms. Reshma Lakra)

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER III

Department: Chemical Technology **Class & Section:** General Elective **Course Code:** G18CT1T

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Solar Processing Technologies

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition of energy, Forms of energy, Transformations of energy, Energy conservation.	Lecture Method using ICT (Chalk & Board) Tools and topic Discussion with students.	Identify different forms of energy, Describe the transformation of one form of energy to another form.	• Unit Test includes matching the column, Filling the blanks, etc. • Viva • General Discussion
II.	Need for Non-conservational energy, Types of Non-conservational energy, Significance of solar energy, Concept of green energy.	Lecture Method using ICT (Chalk & Board) Tools, Topic Discussion.	Identify the need for energy conservation. Describe the significance of solar energy.	• Unit Test includes matching the column, Filling the blanks, etc. • Viva • General Discussion
III.	Energy from sun, harnessing solar energy, Flat plate collector; focusing type of collector, Applications of solar energy.	Lecture Method using ICT (Chalk & Board) Tools, Topic Discussion.	Describe the harnessing of solar energy and study the selection of solar collectors based on requirements.	• Unit Test includes matching the column, Filling the blanks, etc. • Practical conducted using the basic conventional and non-conventional solar dryer • Viva • General Discussion
IV.	Solar water heating, solar lighting, solar cooking, Solar water treatment, Solar drying.	Lecture Method using ICT (Chalk & Board) Tools, Topic Discussion.	Describe applications of solar energy and the harnessing techniques of solar energy.	• Unit Test includes matching the column, Filling the blanks, etc. • Practical conducted using the basic conventional and non-conventional solar dryer

				• Viva • General Discussion
V.	Solar vehicles, solar applications in Agriculture and horticulture, ISO standards for solar applications.	Lecture Method using ICT (chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Solar energy application in transportation, and agriculture, and briefly studied ISO standards for solar applications.	• Unit Test includes matching the column, Filling the blanks, etc. • Practical conducted • Viva • General Discussion

List of References (Book / ICT / Weblinks):

- Rai G D. 2011. Non-Conventional Sources of Energy. 5th ed. New Delhi: Khanna Publishers.
- The NEED Project Elementary Energy Infobook (www.NEED.org), 2018
- Energy Information Administration, Electric Power Annual, Form EIA-860, Annual Electric Generator Report database, 2006
- Renewable Energy Systems and Desalination – Vol. II - Flat-Plate Collectors - Encyclopedia of Desalination and Water Resources (DESWARE) by V.G. Belessiotis
- International Journal of Advance Research in Science and Engineering http://www.ijarse.com IJARSE, Vol. No.4, Special Issue (01), April 2015 ISSN-2319-8354(E)
- Idowu David Ibrahim, and Yasser Alayli, Principles and Applications of Solar Energy, PRSP.000532. 2(2).2022.
- Dr. Trikal S. P., Patil C. V, Harnessing Solar Energy: A Bright and Promising Future In India, International Journal of Engineering Research & Technology (IJERT) Vol. 2 Issue 2, February- 2013
- N. Bharathi, M. K. Usha, Solar Energy Harnessing in India: An Overview, International Journal of Scientific Engineering and Science Volume 3, Issue 12, pp. 44-47, 2020. ISSN (Online): 2456-7361

Name of the faculty member and signature: (Ms. Reshma Lakra)

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER V

Department: Chemical Technology **Class & Section:** DCT **Course Code:** CT18502

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Heat Transfer

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Modes of heat transfer, Fourier's law of heat conduction, Steady state heat conduction through walls (single and multiple layers), Steady state heat flow through a cylinder, Steady state heat flow through a sphere.	Lecture Method using ICT (Chalk & Board) Tools, Topic Discussion.	Explain how heat transfer through industrial equipment occurs, Apply Fourier's law to calculate the rate of heat transfer by conduction in solids.	• Unit Test includes matching the column, filling the blanks, etc. • Problem-solving sessions • Practical conducted
II.	Typical heat exchange equipment, Counter and parallel flows in Double Pipe Heat Exchanger, Energy balance for heat exchanger, Overall heat transfer coefficient, Calculation of overall coefficient from individual coefficient, Dimensional analysis, Heat transfer by natural convection (calculations using empirical relations), Heat transfer by forced convection (calculations by the use of empirical relations).	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Learn the fluid flow patterns, and how their temperatures affect the heat transfer through industrial equipment, Apply the different equations for different situations to calculate the rate of heat transfer through fluids without phase change, and understand the different factors that affect the heat transfer, fluid properties and their behavior were studied through dimensionless numbers.	• Unit Test includes matching the column, filling the blanks, etc. • Problem-solving sessions • Practical conducted
III.	Dropwise and film type condensation, Coefficients for film type condensation, Practical use of Nusselt equation, Pool Boiling of saturated liquid: Nucleate boiling, Maximum flux and critical temperature drop, Minimum heat flux and film boiling.	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Explain heat transfer to fluids with phase change. One learns Condenser and Boiler selection, and studies heat transfer profiles for applications in the industry.	• Unit Test includes matching the column, filling the blanks, etc. • Problem-solving sessions • Practical conducted

IV.	Fundamentals of radiation, Black body radiation, laws of black body radiation, Kirchoff's law, Radiant heat exchange between Non-black surfaces, Combined heat transfer by conduction, convection, and radiation, Single pass 1-1 heat exchanger, 1-2 parallel counter flow heat exchanger, Correction of LMTD for cross – flow.	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Heat transfer through radiation and combined modes, Explain the construction and working of Heat Exchangers and the significance of different components in equipment.	• Unit Test includes matching the column, filling the blanks, etc. • Problem-solving sessions • Practical conducted
V.	Single – Effect Evaporation (Including calculations), Multiple – effect Evaporation (only theoretical treatment), Methods of Feeding, Types of Evaporators: Forced circulation evaporation, long–tube vertical evaporators, Agitated–film evaporators.	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Explain the construction and working of evaporators. Feeding methods in evaporators and their efficiency, Different types of evaporators and their uses.	• Unit Test includes matching the column, filling the blanks, etc. • Problem-solving sessions • Practical conducted

List of References (Book/ICT/ Web links):

1. Mc. Cabe and Smith. 2000. Unit Operations of Chemical Engineering. Sixth Edition. New Delhi: Tata McGraw Hill Publishing Company Ltd.
2. K. A. Gavhane, 215. Unit Operations – II (Heat and mass Transfer) Nirali Prakashan, Twenty-Ninth Edition, ISBN 978-81-96396-12-1.

Name of the faculty member and signature:  (Ms. Reshma Lakra)

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER III

Department: Chemical Technology **Class & Section:** General Elective **Course Code:** G18CT1T

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Solar Processing Technologies

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition of energy, Forms of energy, Transformations of energy, Energy conservation.	Lecture Method using ICT (Chalk & Board) Tools and topic Discussion with students.	Identify different forms of energy, Describe the transformation of one form of energy to another form.	• Unit Test includes matching the column, filling the blanks, etc. • Viva • General Discussion
II.	Need for Non-conservational energy, Types of Non-conservational energy, Significance of solar energy, Concept of green energy.	Lecture Method using ICT (Chalk & Board) Tools, Topic Discussion.	Identify the need for energy conservation. Describe the significance of solar energy.	• Unit Test includes matching the column, filling the blanks, etc. • Viva • General Discussion
III.	Energy from sun, harnessing solar energy, Flat plate collector; focusing type of collector, Applications of solar energy.	Lecture Method using ICT (Chalk & Board) Tools, Topic Discussion.	Describe the harnessing of solar energy and study the selection of solar collectorsbased on requirements.	• Unit Test includes matching the column, filling the blanks, etc. • Practical conductedusing thebasic conventional and non-conventional solar dryer • Viva • General Discussion
IV.	Solar water heating, solar lighting, solar cooking, Solar water treatment, Solar drying.	Lecture Method using ICT (Chalk & Board) Tools, Topic Discussion.	Describe applications of solar energy and the harnessing techniques of solar energy.	• Unit Test includes matching the column, filling the blanks, etc. • Practical conducted using the

				basic conventional and non-conventional solar dryer • Viva • General Discussion
V.	Solar vehicles, solar applications in Agriculture and horticulture, ISO standards for solar applications.	Lecture Method using ICT (chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Solar energy application in transportation, and agriculture, and briefly studied ISO standards for solar applications.	• Unit Test includes matching the column, filling the blanks, etc. • Practical conducted • Viva • General Discussion

List of References (Book/ICT/ Web links):

- Rai G D. 2011. Non-Conventional Sources of Energy. 5th ed. New Delhi: Khanna Publishers.
- The NEED Project Elementary Energy Infobook(www.NEED.org), 2018
- Energy Information Administration, Electric Power Annual, Form EIA-860, Annual Electric Generator Report database, 2006
- Renewable Energy Systems and Desalination – Vol. II - Flat-Plate Collectors - Encyclopedia of Desalination and Water Resources (DESWARE) by V.G. Belessiotis
- International Journal of Advance Research in Science and Engineering http://www.ijarse.com IJARSE, Vol. No.4, Special Issue (01), April 2015 ISSN-2319-8354(E)
- Idowu David Ibrahim, and Yasser Alayli, Principles and Applications of Solar Energy, PRSP.000532. 2(2).2022.
- Dr. Trikal S. P., Patil C. V, Harnessing Solar Energy: A Bright and Promising Future In India, International Journal of Engineering Research & Technology (IJERT) Vol. 2 Issue 2, February- 2013
- N. Bharathi, M. K. Usha, Solar Energy Harnessing in India: An Overview, International Journal of Scientific Engineering and Science Volume 3, Issue 12, pp. 44-47, 2020. ISSN (Online): 2456-7361

Name of the faculty member and signature:  (Ms. Reshma Lakra)

Approved by the Head of the Department

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER IV

Department: Chemical Technology **Class & Section:** NEL & NBBA-ROM **Course Code:** ES23401

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Environmental Studies and Gender Sensitization

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition, Scope, and importance of environmental studies. Need for public awareness, Renewable & Non-Renewable resources, Brief account on Forests, Water, Minerals and Energy (Solar, Wind, and Geo-thermal & Bio-energy), Definition of Ecosystem, Structure and functions-food chains, food webs, ecological pyramids, producers, consumers, and decomposers. Energy flow and example ecosystems Forest, Desert, Aquatic ecosystems, Definition of Biodiversity, types (Genetic, Species, Ecosystem), India- mega diversity Nation, Hotspots, Threats to biodiversity, Conservation of biodiversity (In-Situ and Ex-Situ).	Lecture Method using ICT (Chalk and Board, and Power Point Presentation) Tools and topic Discussion.	Understand the importance of Environmental education and its implementation,Conservation of natural resources &understandingthe types, importance, structure, and components of ecosystems and biodiversity, Learn about the conservation of biodiversity.	• Unit Test • Weekly tests • Group Discussion • Viva
II.	Definition of Environmental pollution, Brief account of causes, effects, prevention and control measures of (a) Air pollution (b) Water Pollution (c) Soil pollution (d) Noise pollution (e) Marine Pollution, Solid Waste Management: Causes, Effects & Control measures of urban and industrial wastes, Disaster Management: floods, Earthquakes, and Cyclones.	Lecture Method using ICT (Chalk and Board, and Power Point Presentation) Tools, Topic Discussion.	Understand the present different pollution problems,their cause, effect, and control measures, and apply the environmental science knowledge on solid waste management, disaster management	• Unit Test • Weekly tests • Group Discussion • Viva

III.	Rain-water harvesting, Water-shed Management, From Unsustainable to Sustainable Development, Global Warming, Ozone depletion, and Acid rains, Environmental Legislation: Air Act, Water Act, Environmental Protection Act, Forest Act, Wildlife Act, Environmental & Human Health---- HIV/AIDS, Welfare Programs---- Family, Women & Child Welfare, Population Explosion, Role of Information Technology in Environmental Studies.	Lecture Method using ICT (Chalk and Board, and Power Point Presentation) Tools, Topic Discussion.	Apply the environmental science knowledge to improve the resources Evaluate and understand the sustainable environmental conditions and control methods. Learn about major sustainable development goals and environmental Policy Acts, Understand the environmental impact on human health and vice-versa, different family, women, and child welfare programs, and Study IT role in the study of the environment.	• Unit Test • Weekly tests • Group Discussion • Viva
IV.	Why should we study gender issues? Socialization- Making women and making men, Being together as equals- Through the lens of gender, Missing women: Gender selection and its consequences, Health issues of Women	Lecture Method using ICT (PowerPoint Presentation) Tools and Topic Discussion.	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity class, sexuality, and so on) and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space, and time. And their problems	• Unit Test • Group Discussion • Viva
V.	Housework: The invisible labor- my mother doesn't work "share the load", Women's Work: Role in Politics and Economics Fact and Fiction. Unrecognized and Unaccounted work. Wages and Conditions of Work., Sexual harassment – say no eve teasing – the caste-based violence –Nirbhaya Act, Domestic violence - Is home a safe place? - Blaming the victim. -Domestic Violence Act, Forums of justice-Hindu Inheritance Act (2005)	Lecture Method using ICT (PowerPoint Presentation) Tools and Topic Discussion.	Understand the gender problems and ways of addressing them, including interactions across local to global scales in communities and overcome inequalities with legislation	• Unit Test • Group Discussion • Viva

List of References (Book/ICT/ Web links):

1. Dr D K Asthana and Dr Meera Asthana. 2014. A Textbook of Environmental Studies Revised Edition. New Delhi: S. Chand & Company.
2. Anji Reddy .M (2007), Textbook of Environmental Sciences and Technology, Hyderabad, BS Publications.
3. Y Anjaneyulu.(2004), Introduction to Environmental Sciences, BS Publications.
4. Www.Wikipedia.Com/Watershedmanagement.Html
5. Suhas P Wani and Kaushal K Garg, Watershed Management Concept and Principles, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) Patancheru 502 324, Andhra Pradesh, India

6. Sustainable Development drishtiias.com/printpdf/sustainable-development-3, Isfahan University of Technology, Isfahan, Iran, 8415683111
7. Muna Yacoub Hindiyeh, Handbook of Water Harvesting and Conservation Title (subtitle) : Basic Concepts and Fundamentals
8. Description Of The Process Depleting The Ozone Layer And The Threats To The Environment And Humankind Site: United Nations Information Portal On Multilateral Environmental Agreements
9. United States Air and Radiation EPA 430-F-10-027 Environmental Protection 6205J August 2010 Agency www.epa.gov/ozone/strathome.html
10. Dileep Kumar Singh, Environmental Protection and Wildlife Acts, International Journal of Multidisciplinary Innovative Research. ISSN: 2583-0228 Volume 1, Number 1 (Jul' 2021) pp. 44-50
11. Environmental Laws in India clearias.com/environmental-laws-India, 2022
12. http://www.epa.gov/globalwarming/climate/index.html
13. http://www.ngdc.noaa.gov/paleo/globalwarming/greeneffect.html http://www.al.noaa.gov/WWWHD/pubdocs/Greenhouse.html Life on Earth
14. Sivakumaran Sivaramanan, Acid Rain, Causes, Effects And Control Strategies, DOI: 10.13140/RG.2.1.1321.4240/1
15. Subodh Kumar, Acid Rain-The Major Cause of Pollution: Its Causes, Effects, International Journal of Applied Chemistry. ISSN 0973-1792 Volume 13, Number 1 (2017) pp. 53-58
16. www. Clearias.com, Biodiversity Hotspots in India, 2023
17. Manoj Kumar Pradhan, Biodiversity and its conservation
18. Biodiversity and its conservation, Ref. Textbook for Environmental Studies Erach Bharucha for UGC
19. India's Forest and Tree Cover - Contribution as a Carbon Sink, Ministry of Environment and Forests, Government of India, August 2009 5. State of Environment Report-India 2009, Ministry of Environment and Forests, Government of India 6. http://edugreen.teri.res.in/explore/life/forest.html.
20. Biodiversity: uses, threats and conservation by Bhavna Gupta
21. Sen Amartya More Than One Million Women Are Missing. New York Review of Books 37.20 (20 December 1990). Print. We Were Making History...Life Stories of Women in the Telangana People's Struggle. New Delhi: Kali for Women. 1998
22. Tripti Lahiri. By the Numbers: Where Indian Women Work. Women's Studies Journal. (14 November 2012)
23. K. Satyanarayana and Susie Tharu. Ed. Steel Nibs Are Sprouting: New Dalit Writing from South India, Dossier 2: Telugu and Kanada Code=3732
24. Vimala. Vantillu (The Kitchen)". Women Writing in India: 600 BC to the Present. Volume II. The 20th Century. Ed. Suise Tharu and K. Laltitha. Delhi: Oxford University Press, 1995. 599-601
25. Shatrughna, Veena. Women's Work and its Impact on Child Health and Nutrition. Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993.

Name of the faculty member & Signature:  (Ms. Reshma Lakra)

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year2023–2024

SEMESTER IV

Department: Chemical Technology **Class & Section:** NCT **Course Code:** CT18405

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Instrumentation and Process Control

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	The meaning of the instrument, the elements of the instrument, Static and dynamic characteristics, and Expansion thermometers. Bimetallic thermometer, pressure spring thermometers, Thermoelectric temperature measurements, Industrial Thermocouples, Lead wires, Materials of construction, specifications, and applications of various thermometers.	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Explain the qualities of measurement. Learn about instruments construction, characteristics, specification, and their applications.	• Unit Test includes matching the column, filling the blanks, one-word answers, etc. • Seminar • Group Discussion
II.	Resistance Thermometers, Industrial resistance thermometer, Bulbs, calendar Griffith, bridge circuits, Radiation Temperature measurement, Laws of Radiation, Radiation receiving elements Radiation pyrometer, Optical pyrometer and photoelectric pyrometer, Specifications, application of various thermometers, Hygrometer method, pH concentration measurements, Special methods of analysis: Hydrogen sulfide detection system, Oxygen analysis cell based on paramagnetic effect.	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Choose a suitable thermometer for a given application and describe the methods for composition analysis of moisture in gases.	• Unit Test includes matching the column, filling the blanks, one-word answers, etc. • Seminar • Group Discussion
III.	Measurement of pressure and vacuum, Pressure, vacuum, and head relation, Measurement elements for gauge pressure and vacuum e.g., Pressure spring gauge, bellows gauge, diaphragm gauge, Pirani vacuum gauge,	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Explain various pressure and vacuum measurement instruments and process instrumentation, measurement of Head, and Level of fluids, and Understand flow meter construction and working.	• Unit Test includes matching the column, filling the blanks, one-word answers, etc. • Seminar • Group Discussion

	thermocouple vacuum gauge, Measurement of Head and Level: Float and shaft unit, Hydraulic remote transmission of liquid level, bubble system for liquid level measurement, Flow metering: Velocity meter e.g. Propeller meter quantity meters: Piston meter, Nutating disc meter, Process Instrumentation: Recording Instruments, circular chart and strip recording chart, Use of signaling system, Control center: Central layout and unit layout, Purpose of instrumentation diagram.			
IV.	The role of process dynamics and control, Control system: Response of first-order systems, Transfer function for stirred tank heater, mixing tank and level control, Block diagrams, Feedback control: Negative Feedback and Positive Feedback (Theoretical Approach Only).	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Describe the role, and functions, of process dynamics and control.	• Unit Test includes matching the column, filling the blanks, one-word answers, etc. • Seminar • Group Discussion
V.	Controllers and Final control elements, Control valve and mechanism of control valve, P- Control, P-D-Control, P-I-Control, P-I-D control, Mechanism of all three controllers by pneumatic force, (Theoretical Treatment only), Controller Tuning (2), Selection modes.	LectureMethodusing ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Describe controllers and final controller elements, and their mechanisms.	• Unit Test includes matching the column, filling the blanks, one-word answers, etc. • Seminar

List of References (Book/ICT/ Web links):

1. Donald P Eckman. 2004. Industrial Instrumentation. New Delhi: CBS Publishers & Distributors Reprint. (for units I, II & III) 2. Coughanowr & Koppel. 1991.
2. Process System Analysis and Control. 2nd edition. McGraw Hill International Editions. (for units IV & V)
3. George Stephanopoulos. 2010. Chemical Process Control. New Delhi: PHI Learning Private Limited.

Name of the faculty member and signature:  (Ms. Reshma Lakra)

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER VI

Department: Chemical Technology **Class & Section:** DCT **Course Code:**CT18603

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Chemical Reaction Engineering

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Classification of reactions, Variables affecting the rate of reaction, Definition of reaction rate, Calculation of equilibrium constant for simple reversible reactions (A ⇄R & A+B ⇄R+S), Variation of equilibrium constant with temperature (Vant Hoff equation), Single and multiple reactions, Elementary and non-elementary reactions, Molecularity and order of reaction, Rate constant, representation of an elementary reaction, Representation of a non-elementary reaction, Kinetic models for non-elementary reactions, Testing kinetic models (search for the reaction mechanism).	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Learn various types of reactions, determination of reaction rate constant, and order of reaction, study the performance of ideal steady state reactors, Study classification of chemical reactions, define rate equation and test mechanism.	• Unit Test includes matching the column, filling the blanks, one-word answers, Quiz, etc. • Problem Solving Sessions • Seminar • Conduct Practical
II.	Temperature dependency of rate constant from Arrhenius's law, Significance of activation energy, activation energy, and temperature dependency, Temperature dependency of rate constant from thermodynamics, Temperature dependency of rate constant from Collision theory, Temperature dependency of rate constant from Transition – state theories, Comparison of theories with Arrhenius law.	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Learn the dependency of the rate constant on temperature from different theories and calculatethe rate constant.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Problem Solving Sessions • Seminar • Conduct Practical

III.	Analysis of total pressure data obtained in a constant volume system, Irreversible unimolecular-type first-order reactions, Irreversible bimolecular-type second–order reactions, Empirical rate equations of the nth order, Zero-order reactions, Overall order of irreversible reactions from half–life, Irreversible reactions in parallel, Homogeneous catalyzed reactions, Auto-catalytic reaction, Irreversible reactions in series.	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Learn about various chemical reactions and use rate equations to calculate the specific rate constant and the order of the reaction for irreversible reactions in the case of a constant volume Batch Reactor.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Problem Solving Sessions • Seminar • Conduct Practical
IV.	First-order reversible reaction, Second–order reversible reactions, Reactions of shifting order, Differential method of analysis of data, Partial and complete analysis of rate equation, Varying volume batch reactor.	LectureMethodusing ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Use rate equation to calculate the rate constant for reversible reactions in case of Constant Volume Batch Reactor and rate constant in case of Variable Volume Batch Reactor.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Problem Solving Sessions • Seminar • Conduct Practical
V.	The single ideal batch reactor, Spacetime and space velocity, Steady state back mix flow reactor, Steady-state plug flow reactor, Holding time and space-time for flow systems.	LectureMethodusing ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Use the performance equation to design single ideal reactors.	• Unit Test includes matching the column, Filling the blanks, one-word answers, Quiz, etc. • Problem Solving Sessions • Seminar • Conduct Practical

List of References (Book/ICT/ Web links):

1. Octave Levenspiel. 2008. Chemical Reaction Engineering. Third Edition, Singapore: John Wiley & Sons.
2. K.A. Gavhane. 2009. Chemical Reaction Engineering. First Edition, Pune: Nirali Prakashan Publications.
3. S.D. Dawande. 2001. Principles of Reaction Engineering. First Edition. Nagpur: Central Techno Publications.

Name of the faculty member and signature: (Ms. Reshma Lakra)

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER VI

Department: Chemical Technology **Class & Section:** DCT **Course Code:** CT18605B

Name of the Faculty Member: Ms. Reshma Lakra **Course Title:** Refractory Technology

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Importance and scope of Refractory technology, Definition of refractories, Classification of refractories, Important properties of refractories, General method of manufacture of refractory, Requisites of a good refractory for a particular job, Selection of refractories.	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Learn about refractory technology and classify and select the refractory materials. Selection of refractories for different applications.	• Unit Test includes matching the column, filling the blanks, one-word answers, etc. • Seminar
II.	Manufacture, properties, and uses of Fire-clay refractories, Silica refractories, Graphite refractories, and Magnesite chrome refractories.	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Describe the manufacturing procedure, properties, and uses of some important refractory materials.	• Unit Test includes matching the column, Filling the blanks, one-word answers, etc. • Seminar
III.	Iron and Steel Industry: Blast Furnace, Hot Metal Mixer, and Open Hearth Furnace, Glass Industry: Refractories used in glass melting tank furnaces, Cement Industry: Refractories used in rotary kilns.	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Identify the refractory used in Iron and Steel, Glass, and Cement industries, productions, and working flow diagrams.	• Unit Test includes matching the column, Filling the blanks, one-word answers, etc. • Seminar
IV.	Testing of Refractories: Testing methods for the properties of refractory materials, Refractoriness, Refractoriness under load (RUL), Porosity, Bulk density and Permeability, Insulating refractories: Raw materials for insulating refractories, desired properties of good	Lecture Method using ICT (Chalk & Board, and PowerPoint Presentation) Tools, Topic Discussion.	Explain the testing procedures for some important properties of refractory materials and describe the properties, characterization, and uses of insulating refractories.	• Unit Test includes matching the column, Filling the blanks, one-word answers, etc. • Seminar

	insulating refractories. Uses of insulating refractories.			
V.	Special Refractories: Raw materials, properties and uses of some special refractories such as super refractories, silicon carbide refractories, sialon refractories, cermet, and fused and electro cast refractories, Refractory Cement/Mortars: Raw materials, characteristics, and uses of refractory cements.	Lecture Method using ICT (Chalk & Board, and Power Point Presentation) Tools, Topic Discussion.	Choose the special refractories for specified applications, and their characterization, and describe the use of refractory cement.	• Unit Test includes matching the column, Filling the blanks, one-word answers, etc. • Seminar

List of References (Book/ICT/ Web links):

1. OM Prakash Gupta. 1994. "Elements of Fuels, Furnaces, and Refractories". Third Edition. Delhi. Khanna Publishers.

Name of the faculty member and signature:  (Ms. Reshma Lakra)

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.SC Computer Science And Engg

Class & Section: ACS

Course Code: EN23101

Name of the Faculty Member: ASHA JOHN

Course Title: GENERAL ENGLISH-1

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Short Story – The Mystery Story Present Tense Past Tense Future Tense Paragraph Writing	Lecture Method using ICT Tools	To learn about the fundamentals Of communication	Solving mixed tense exercises Narrating mystic experiences Writing paragraphs on various topics
II.	Poem – Goodbye Party for Miss Pushpa T.S. Subject- Verb Agreement Punctuations Review Writing	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Explanation of the poem by students Grammar exercises Film review writing
III.	Lesson – Wit and Humour Nouns and Articles Homophones, Homonyms, Homographs Note making	Lecture Method using ICT Tools	To identify the different types of nouns and articles in a sentence composition and to learn the correct usage and spelling of different words which spell or sound similar.	Character sketch of the story characters Grammar exercises like fill in the blanks, multiple choice and true or false.

IV.	Lesson – India's Contribution to World Unity Adverbs Adjective and adverb Suffixes Formal letters and Curriculum Vitae	Lecture Method using ICT Tools	To think critically, demonstrate an understanding of diverse cultures and historical movements. To recognize the different parts of speech	Description of the message conveyed by the author and its relevance in the day today world. Practice in Formal letter and Curriculum Vitae writing
V.	Lesson – Sachin Tendulkar Adjectives, Comparison of Adjectives Common Errors, Commonly misspelt words, Commonly Confused words	Lecture Method using ICT Tools	To write grammatically correct sentences and to identify different degrees of comparison.	Text book exercises and worksheets

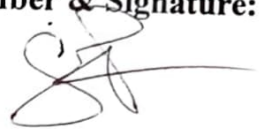
List of References (Book / ICT / Weblinks):

1. Skills Annexe. Functional English for Success. Orient Black Swan

SUGGESTED READING:

- Balasubramaniam, M. 1985 Business Communication. New Delhi: Vani Educational Books.
- Krishna Mohan and Meera Banerjee, 1990. Developing Communication Skills. New Delhi: Macmillan India Ltd.
- Krishnaswamy.N. and Sriraman, T. 1995. Current English for Colleges. Madras: Macmillan India Ltd.
- Narayanaswamy.V.R. 1979 Strengthen Your Writing. New Delhi: Orient Longman.
- Sharma.R.and Krishna Mohan. Business Correspondence. 1978. New Delhi. Tata McGraw-Hill Publishing Co

Name of the faculty member & Signature: ASHA JOHN



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –2024

SEMESTER

Department: BSC Computer Science & Engineering

Class & Section: ACS ~~& BSC~~. ~~Computer Science~~

Course Code:VE18201

Name of the Faculty Member: Ms. A. Sandhria Thomas

Course Title: Value Education and Personality Development.

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to ethics (Reasons to have ethics, Norms and Dimensions of Human Development)	Lecture Method (Case Studies and Real-World Examples) and ICT Tools	Students will develop a heightened awareness of ethical issues and dilemmas, recognizing the importance of ethical considerations in personal and societal decision-making. To learn to differentiate between Accepted norms and Counter values and be able to identify the various dimensions of Human Development.	Scenario Selection: Choose a range of scenarios that relate to everyday life, workplace, or community situations where ethical decisions are crucial
II.	Approach to Life (Conscience and Pseudo-conscience , Happiness as Life- goal , Values revealed and lived in Religions, Experience of God , Love: The three components of love,Some of basic stages and issues of life: Family, Love, Sex, Marriage.)	Lecture Method (Debates and Discussions) and ICT Tools.	Students will synthesize ethical values from different religious traditions, exploring commonalities and differences to develop a comprehensive approach to life that integrates diverse moral principles.	Values Identification: Begin with a session on values identification. Guide students in reflecting on their core values and principles that influence their decisions and actions. Group Discussions: Facilitate group discussions where students share their identified values and discuss how these values shap
III.	Concern for others (Self and Another,Human context, Moral Problems of a Society.)	Lecture Method (Values Clarification Exercises ,Case-Based	Students will develop a sense of empathy, understanding and appreciating the perspectives,	Creative Solution Brainstorming: Challenge students to think creatively and

		Learning).	feelings, and challenges faced by both themselves and others in the context of societal moral problems.	brainstorm alternative solutions to the presented ethical dilemmas. Emphasize the importance of innovative thinking in addressing societal moral problems.
IV.	Transformation of Self (Definitions , Elements, Characteristics of Personality.Traits of a good personality. Self - identity, Self concept, Self discovery and Self acceptance)	Lecture Method (Mindfulness and Meditation Practices)	Students will develop a sense of self-awareness, recognizing their values, beliefs, and personal strengths as a foundation for the transformation of self.	Reflection Prompts:Offer the students a set of reflection prompts related to self-transformation. These prompts can include questions about personal values, aspirations, challenges, and growth areas. For example: Describe a moment in your life when you felt the need for personal change.
V.	Life Enrichment Skills(Purpose of life - Goal setting and it's characteristics, Building Relationships, Time Management, Stress Management, Emotion Management, Conflict Management and Team management (Group Dynamics)	Lecture Method (Reflection and Journaling)	Students will demonstrate proficiency in self-management skills, including effective time management, goal setting, and organization, contributing to a more enriched and balanced life.	Rotational Group Activities.

List of References (Book / ICT / Weblinks):

1. Human Values - Development Programme - AIACHE
2. In Harmony - Value Education at College level. By a Team of Ethics Teachers (G.M. James , B.J JAYARAJ , K.CANDASSAMY, BERNARD D'SAMI , S.J.A PACKIARAJ)

Name of the faculty member & Signature:
Ms. Arasharial Sandhria Thomas

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

I-SEMESTER

Department:Computer Science &Engineering **Class&Section:BSC(ACS)** **Course Code:BS19101**

Name of the Faculty Member:Pathri Shirisha **Course Title:Mathematics-I**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**(Differential Equations of First order and First Degree)** 1.Exact differential equations – Integrating factors – Change of Variables (5) 2.Linear differential equations(5) 3.Differential Equations reducible to linear form Bernoulli's equation(5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Categories the differential equations with respect to their order and linearity. Solve differential equations of first order Using numerical and analytics methods such as integrating factors	Group Discussion ,Case Study
II.	**(Linear Differential Equations With Constant Coefficient)** 1.Auxiliary equation, Complementary function, Particular integral (5) 2.Working rule for finding P.I. when $X=e^{ax}$, Sinbx , Cosbx, $e^{ax}V$, x^m (5) 3. Cauchy's equation (5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Analyze and Solve basic Applications problems Described by first order differential equations Such as Orthogonal Trajectories	Written Test, Solving the problems by Using Different Methods
III.	**(Calculus)** 1.Mean Value theorems: Rolle's Theorem (5) 2. Lagrange's Mean Value theorem with their geometrical interpretations(5) 3. Cauchy's mean Value theorem and applications(5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Solve Second order Homogeneous Equations with Constant Coefficients, obtain exact and numerical solutions using Differential Equations technology	Quiz ,Solving Competitive Mathematical Questions

IV.	**(Infinite Series)** 1. Sequence: Definition of a sequence ,Limit ,Convergent divergent and oscillatory sequences Series-General Properties of series(5) 2. Necessary condition for convergence- Series of positive terms, Comparison tests- p-test(5) 3. D' Alembert's ratio test, Cauchy's Root Test, Alternating Series Without(Proof), Absolute and conditional convergence(5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Combine The necessary Laplace transform technique to solve second order ordinary differential equations solve the Laplace transform Standard Functions	Encouraging The Students to Participate workshops about Mathematical Sciences
V.	**(Fourier Series)** 1.Fourier Series of a function in an interval of length 2π (5) 2. Fourier Series for even and odd Functions (5) 3. Half range Sine series and Cosine Series (5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Analyze A Fourier series of a given periodic function By Evaluating Fourier Coefficients	Oral Test,Group Discussion

Listof References (Book/ICT/ Weblinks):

1. Zafar Ashan.**Differential Equations and Their Applications** 2nd edition Prentice hall of India (Units I,II,III)
2. B.S.Grewal 2014.**Higher Engineering Mathematics**. 3rd Edition Kanna Publishers (IV,V)
3. Iyengar T.K.V.B Krishna Gandhi ,Ranganatham Prasad M.V.S.S.N 2009 **Engineering Mathematics** Vol II S Chand

Name of the faculty member & Signature: Pathri Shirisha

P. Shirisha

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024 **SEMESTER I**

Department: ~~CSH~~ B.Sc. Computer Science & Engineering **Class & Section:** ACS **Course Code:**CS22101

Name of the Faculty Member: K LUCAS REDDY **Course Title:** EDC

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Semiconductors PN Junction Diode Rectifiers and filters	Lecture Method using ICT Tools and board	To Learn about concepts of semi conductors, functioning of diode and operation of Rectifiers	Oral question and answers Drawing Diagrams Knowing the operation and working
II.	BJT Structure working and its characteristics Transistor amplifier and its analysis FET Structure operation and its charectarestics,FET amplifier	Lecture Method using ICT Tools and Board And Demonstration	To learn the operation of BJT and FET,applying these devices to amplify signals	Oral question and answers Drawing Diagrams Knowing the operation and working
III.	Feedback amplifier Its gain and application Oscillators- construction and working	Lecture Method using ICT Tools and Board And Demonstration	To learn the concepts of feedback and its features, construction and operation of Oscillators	Oral question and answers Drawing Diagrams Knowing the operation and working
IV.	Operation Amplifiers,charecterics and applications Display Systems Construction and working of CRO	Lecture Method using ICT Tools and Board And Demonstration	To learn the features of Op-Amp its applications,Disply systems(CRO)	Oral question and answers Drawing Diagrams Knowing the operation and working
V.	Data acquisition systems and Photo electric devises and Sensors(LVDT,SG,LDR,LED,LCD RTD etc)	Lecture Method using ICT Tools and Board And Demonstration	To learn the structure and functioning of Transducers, Photo devises and sensors	Oral question and answers Drawing Diagrams Knowing the operation and working

List of References (Book / ICT / Web links):

1. Basic electronics and Linear Circuits by Bhargava ,Guptha,2006 Tata McGraw-hill

Name of the faculty member & Signature:

K. LUCAS REDDY

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: CSE

Class & Section:ACS

Course Code:BS19121

Name of the Faculty Member: k. sitarama sastry

Course Title: Engineering Physics

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**WAVE MECHANICS:** Matter waves – DeBroglie wavelength,Properties of wave function, Physical significance,Schrodinger time dependent and time independent wave equations,Particle in a 1-D box,Basic laws of electricity and magnetism,Maxwell's equations in integral and differential forms, EM waves and poynting theorem.	Lecture Method using ICT Tools	Analyze wave behavior of microscopic particles and to explain the Electromagnetic waves .	Quiz, and Brainstorming.
II.	Introduction – Propagation of light through an optical fiber, NA, Types of ofc,fibre drawing process double crucible method.	Lecture Method using ICT Tools	Apply physics principles for the development of Fiber optics and Lasers technology	Doing practical in physics lab.
III.	Introduction to Ultrasonic waves,Production of ultrasonic waves by Piezo - electric method,Properties and applications of Ultrasonics,Wavelength of Ultrasonic by Debye-Sears method,Dielectrics-Introduction,Expressions for portability,Frequency and temperature dependence of dielectric polarization,Ferro electricity-Barium titanate, applications of Ferroelectrics	Lecture Method using ICT Tools	Analyze dielectric materials and ultrasonic waves.	Quiz and problem solving through formulas.
IV.	Brief idea about semi	Lecture Method using	Explain semiconductors,	Doing practicals in lab.

	conductors,Thermistor as a temperature sensor its V-I characteristics,Introduction - General properties of super conductors – Applications, Hall effect 1 Type I and Type II superconductors 1 BCS theory (qualitative), Introduction to High T_c superconductors ,Missioner effect, types of magnetic materials, weiss theory of ferro-magnetism,Hysteresis curve,Soft and hard magnetic materials, Ferrites: Applications of ferrites.	ICT Tools	superconductors and magnetic materials.	
V.	Distinction between bulk and thin films,Thin film preparation techniques,Thermal evaporation methods, Electron beam evaporation, Construction and working of Solar cell – Applications Construction and working of Solar cell – Applications Construction and working of Solar cell – Applications, Introduction to nano materials and preparation of nano materials.	Lecture Method using ICT Tools	Design various thin films and nano materials for future applications	Groupdiscussion, brainstorming, PPTpresentation.

List of References (Book / ICT / Weblinks)

1. P.K.Palanisamy. 1998. **Engineering Physics**. 5th Edition. Scitech publications.
2. M.S. Avdhanulu and P.G. Kshirasagar. 1992. **Engineering Physics.** S.Chand & Co 1st Edition.
3. Dr.S.L.Guptha, Sanjeev Guptha. 2015. **Unified physics**. Vol-I,III,IV, 47th edition. Jai Prakash Nath Publications. India:Meerut.

Name of the faculty member & Signature: K.sitarama sastry.

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER I

Department: B.Sc. (Computer Science& Engg) **Class & Section:ACS** **Course Code:BS19123**

Name of the Faculty Member:S.Swapna **Course Title: PROBLEM SOLVING AND PROGRAMMING IN 'C'**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Introduction to Computer, Block diagram of computer 2. Introduction to Computer software-System and application software 3. Algorithms and Flow charts 4. Introduction to C programming 5. Structure of C program 6. Files used in a C program 7. Compiling and executing C program	The traditional lecture method	Explain the basic introduction of computer and programming languages	computer based test,
II.	1. C tokens, Constants, Character set in C, Keywords, Identifiers 3 2. Data Types in C, Enumerated data types, typedef 2 3. Variables and scope of a variables 2 4. Data input and output statements in C 5. Operators and expressions 6. Type conversion and Typecasting	Lecture Method using ICT Tools	Categorize different data types, operators and data input /output functions in 'C'.	QUIZ
III.	1. Conditional Branching Statement – if, if-else, if-else-if, switch case 2. Iterative Statements – while loop, do-while loop, for loop 3. Nested loops, break and continue statements, goto statement 4. Arrays - Single and double dimensional arrays 5. String- string input output functions, string manipulation functions	Active learning methods	Develop programs using 'C' control structures, arrays and string concept.	Coding and Computer Programming

IV.	1.Function- Declaring, defining and invoking functions 2. Categories of functions-Built-in functions 3. Passing parameters to functions – call by value & call by reference 4. Storage classes 5. Recursion. 6. Pointers - Declaration, passing pointer to functions 7. Pointers and one dimensional arrays 8. Dynamic memory allocations.	Project-Based Learning	Analyse larger problems into smaller ones using 'C' functions.	Seminars
V.	1. Structures - Simple structures, nested structure, Array of structures 2. Unions-Differences between Structures and Unions. 3. File handling - Various modes, File operations – fopen(), fclose() 4. File input output functions – fputc(), fgetc(), fputs(), fgets(), getw(), putw(), getc(), putc(), fprintf(), fscanf(), getchar(), putchar() 5. Random accessing file – fseek(), ftell(), rewind()	Real-World Relevance	Create programs using the concept of structures, union and file handling in 'C'.	Practice and Repetition

List of References (Book / ICT / Weblinks):

1. Thareja Reema. 2015. Programming in C. 2 nd Edition. New Delhi:BPB.
2. Kanetkar Yashwanth. 1995. Let us C. New Delhi:BPB.

Name of the faculty member & Signature: S. Swapna 10/11/2023

Approved by Head of the Department: 10/11/2023

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: B.SC(COMPUTER SCIENCE & ENGINEERING) **Class & Section:ACS** **Course Code: BS22202**

Name of the Faculty Member:S.Swapna **Course Title: C++ and DATA STRUCTURES**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Features of OOP's, applications of OOP's 2. Keywords, data types, variables and their declaration, reference variables, Scope resolution, 3. Member dereferencing memory management operators, manipulators, input and output, Objects (cin,cout) 4. Functions : Definition, Function components, call by value, reference & address, Inline functions, functions with default arguments, function overloading 5. Defining classes, defining member functions, nesting of member functions, private member functions,Memory allocation for objects, static data members and member functions, friend class 6. Objects and Returning objects	Lecture Method using ICT Tools	**Differentiate** between object-oriented programming and procedure-oriented programming.	Seminars conducted
II.	1. Constructors, default and parameterized constructors overloading,constructors with default arguments, Destructors 2. Inheritance: Defining derived classes, single inheritance, making private members Inheritable, 3. Multilevel, multiple, hierarchical and hybrid inheritances. 4. Virtual base classes, constructors in derived classes, abstract classes 5. Pointers to objects, this pointer, pointers to derived classes, virtual functions, Pure virtual functions	Lecture Method using ICT Tools	**Develop** programs using object oriented programming features.	Group discussions

	6. Operator overloading using member functions and Template functions and Template classes			
III.	1. Linear and non-linear data structures, Stacks-Definition, implementing stack using arrays 2. Applications of stack: infix, prefix and postfix expressions, conversion of infix to prefix and infix to postfix, 3. evaluation of postfix expression 4. Queues- Definition, implementing queue using arrays, circular queue and double ended queue 5. Sparse Matrix-definition, representation of sparse matrix in3-tupleform	Traditional method	**Organize** the data using sorting and various linear data structures and determine the time complexity	CBT,Assignments
IV.	1. Linked list- Definition, single linked lists, operations on single linked list (Insertion & deletion), Stack and queue using linked list. 2. Trees- Definition, linked representation of trees, Binary search tree, Tree Traversals(in order, preorder and post order traversals 3. Linear search and binary search 4. Sorting-Bubble, selection, insertion, quick and merge sort techniques	Lecture Method using ICT Tools, Blackboard	**Illustrate** non-linear data structures like trees, graph	Group discussions,Seminars conducted
V	1. B trees-insertion and deletion operations on Btrees 2. Graphs: Definition, Array and linked list representation of graphs 3. Graph traversals-BFS and DFS 4. Spanning tree and Krushkals algorithm	Lecture Method using ICT Tools, Blackboard	**Choose** appropriate data structures to represent data items in real world problems	CBT

List of References (Book / ICT / Weblinks):

1. Object Oriented Programming With C++ by Reema Thareja, Oxford University Press, 2015.
2. Balaguruswamy, E. 2004. Object Oriented Programming with C++. 8 th Edition.
New Delhi: Tata McGraw-Hill publication (For units I and II)
3. Kanetkar Yashwant, P. 2007. Data Structures through C++. 3 nd Edition. New Delhi: BPB Publications(For units III, IV and V)

Name of the faculty member & Signature: S. Swapna

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department ~~ENGLISH~~ B.Sc Computer Science & Engineering **Class & Section:** ACS **Course Code:** EN23101

Name of the Faculty Member: Asha John **Course Title:** GENERAL ENGLISH-2

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Flash Fiction- 'The Mice' by Lydia Davies (1)** Simple,Complexand Compound Sentences (3) Conversion of Sentences (3) Information Transfer (2)	Lecture Method using ICT Tools	To learn about the fundamentals Of communication	Solving mixed grammar exercises Narrating mystic experiences Writing paragraphs on various topics.
II.	**Short Story- 'The Face on the Wall' by E V Lucas (2)** • Active and Passive Voice (3) • Conjunctions (2) Essay Writing (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Narration of short stories by students. Grammar exercises Essay writing exercises
III.	**From the text *Three Days to See by* Helen Keller** • Explanation of the text (3) • Grammar- Usage of Modal Auxiliary Verbs (2) • Vocabulary – Collective • Nouns,TechnicalVocabulary(2) Writing Skill –Newspaper Report (2)	Lecture Method using ICT Tools	To recognize the moral element which underlies in the short story. To identify the different types of modal auxiliary verbs in a sentence composition and to learn the correct usage of Collective Nouns, Technical Vocabulary.	Character sketch of the story characters. Grammar exercises like fill in the blanks, multiple choice and true or false. Newspaper Report writing exercises.
IV.	**Short Story from the text 'Leela's Friend' by R.K. Narayan** • Explanation of the text (3) • Grammar- Phrasal Verbs, Wh-questions (2) • Vocabulary- Noun and Verb	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills.	Description of the different characters of the story. Grammar exercises Exercises exercises like fill in the blanks, multiple choice and true or false.

	Suffixes (2) • Writing Skill- Writing a Narrative (2)			Practice in writing a narrative
V.	**From the text 'The Last Leaf' by O. Henry** • Explanation of the text (3) • Grammar- Prepositions (2) • Vocabulary – Idioms (2) Writing Skill – Precis Writing (2)	Lecture Method using ICT Tools	To write grammatically correct sentences and usage of idioms in sentences.	Textbook exercises and worksheets Precis' writing exercises.

List of References (Book / ICT / Weblinks):

Epitome of Wisdom, Maruthi Publications

SUGGESTED READING:

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Name of the faculty member & Signature:ASHA JOHN

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - II

Department: B.sc. Computer Science &Engg / ~~B.sc. Computer Science &Cloud Computing~~

Class & Section:CS/CSCC

Course Code:BS18201

Course Title: Mathematics - II

Name of the Faculty Member: K.KIRAN KUMAR

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	System of Linear Equations: Rank of a Matrix Rank-Echelon form	Lecture Method using ICT Tools	To Learn how to find rank and how	SEMINAR CONDUCTED ,CLASS TEST
	Normal form-Solution of Linear Systems	Chalk &board ~~LCD projector~~	solve linear equations.	
	Homogeneous and non-Homogeneous Equations			
II.	Eigen values - Eigen vectors: Eigen values-Eigen vectors-Properties	Lecture Method using ICT Tools Chalk &board	Skill to know how to find eigen values and vectors and find	SLIP TEST
	Cayley-Hamilton Theorem and Inverse and powers of a matrix by using Cayley-Hamilton theorem	LCD projector	A-1.	
	Quadratic forms- Reduction of quadratic form to canonical form			
III.	**Vector Calculus-I**	Lecture Method ~~using ICT Tools~~	To find grad f and ~~DD and Equation~~	SEMINAR CONDUCTED.CLASS TEST
	Vector Differentiation and the necessary and sufficient. condition for a vector function to have constant magnitude! and constant direction.	Chalk &board LCD projector	of tangent &Normal planes	
	Vector Continuity- Differentiability- Vector Integration			

	Gradient-Directional derivative of a scalar function - Equation of the Tangent and normal to a surface				
IV.	**Vector Calculus-II**	Lecture Method ~~using ICT Tools~~ Chalk &board ~~LCD projector~~	Get idea about dot ~~& cross product~~ utilization		CLASS TEST
	Divergence and Curl Operators				
	Formulae involving these operators				
	Vector Identities- Simple Problems there on				
V.	**Vector Calculus: III**	Lecture Method ~~using ICT Tools~~ Chalk &board ~~LCD projector~~	To find length of ~~the curve , Area~~ and volume of the surface		SEMINAR CONDUCTED,CLASS TEST
	Line Integrals-Surface integrals- Volume integrals				
	Green's theorem, Gauss theorem, Stoke's Theorem (Without proofs)				
	Problems on Green's theorem, Gauss theorem, Stoke's Theorems				

List of References (Book / ICT / Weblinks):

1.Vasistha A.R and Vasistha A.K , 2014 , MATRICES ,Krishna prakashan Media (for Unit I and II)
2. Vasistha A.R& Dr.Agarwal D.C 2015 Vector Caluclus,9th edition,Meerut, Krishna Publication (for units III,IV &V)

Name of the faculty member & Signature:

Mr.K.Kiran Kumar &

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- II

Department: B. Sc, Computer Science & Engineering

Class : ACS

Course Code:IC-23101

Name of the Faculty Member:Dr.K.Musalaiah

Course Title: Indian Heritage and Culture

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals. Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation

IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the constitution.	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr. K. Musalaiah

Dr.K.Musalaiah

Approved by Head of the Department:

Mrs. S. Swapna

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER II

Department: CSE **Class & Section: ACS** **Course Code:BS22204**

Name of the Faculty Member: K LUCAS REDDY **Course Title: LDC**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Number systems, compliments Athematic Operations Binary decimal codes Logic gates universal gates Parity generation and checking	Lecture Method using ICT Tools and board	To Learn about concepts of number systems and binary codes and Logic gates and functions	Oral question and answers Drawing Diagrams Knowing the operation and working
II.	Logic families (TTL, Totem pole, open collector and CMOS Boolean Algebra, Morgan Theorems Boolean functions and Karnaugh map simplification	Lecture Method using ICT Tools and Board And Demonstration	To learn the operation of Logic family's simplification of Boolean functions maps	Oral question and answers Drawing Diagrams Knowing the operation and working
III.	Combinational circuits design procedure (Arithmetic circuits, Code converters, Encoder, decoder, Mux and Demux	Lecture Method using ICT Tools and Board And Demonstration	To learn the concepts of Design of various combinational circuits	Oral question and answers Drawing Diagrams Knowing the operation and working
IV.	Design procedure of frequential circuits – Flip flops Timing Diagrams, Register design and analysis	Lecture Method using ICT Tools and Board And Demonstration	To learn the features of Flip flops and Registers	Oral question and answers Drawing Diagrams Knowing the operation and working
V.	Design of synchronal counters, ripple counters classification of memories (RAM and ROM)	Lecture Method using ICT Tools and Board And Demonstration	To learn the design and functioning of various types of Counters	Oral question and answers Drawing Diagrams Knowing the operation and working

List of References (Book / ICT / Web links):

1. **Digital Logic and Commuter design by M Morris Mano, TMH 2/e**

Name of the faculty member & Signature: K. Lucas Reddy

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER III

Department: B.Sc Computer Science & engineering

Class & Section:B.Sc/BBA/B.COM/BA

Course Code:13

Name of the Faculty Member: S.Lakshmi

Course Title:PC Opearting Systems

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Windows 10,Backup & Recovery,File Management, Viruses	Lecture Method using ICT Tools	To Learn about backup & Recovery,File Management and Viruses	How to provide Backup,managing files & importance of viruse
II.	System Diagnosis Report,Memory	Lecture Method using ICT Tools	To Learn about Memory	How to diagnose the system
III.	Introduction to Ubuntu,Flavours,Downloading and Installing Ubuntu	Lecture Method using ICT Tools	To Learn about downloading and installing ubuntu	Importance of flavours of ubuntu
IV.	Creating Users,PWD,Creating & Finding Files	Lecture Method using ICT Tools	To Learn about creating users, files	How to create users and file in ubuntu
V.	Installation of Windows ,Ubuntu in virtual box	Lecture Method using ICT Tools	To Learn about Installations	How to Install the softwares

List of References (Book / ICT / Weblinks):

1. Gaskin & Vargas, GO! With microsoft windows 10 Introductory, Pearson Publication

Name of the faculty member & Signature:S.Lakshmi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.SC(Computer Science & Engineering) **Class & Section:NCS** **Course Code: CS20302**

Name of the Faculty Member:K.ANITHA **Course Title: OOP THROUGH JAVA**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Fundamentals of Object oriented concepts, 2.Java Evolution and overview .3Variables, Data types and Arrays, 4.Operators and Control Statements. Class Fundamentals, declaring objects and methods. 5.Constructor, this Keyword 6.Overloading methods, Objects as parameters. 7..Access control, static, command line arguments	Lecture Method using ICT Tools	**Understand** fundamentals of object oriented concept , classes , objects and methods.	Seminars conducted,CBT
II.	1.Inheritance, multilevel hierarchy, super, method overriding 2.Dynamic Method Dispatch, Abstract classes, using final 3.Package-package access, importing packages and classes, user defined package 4.Interface-define, implement and extending Interface, Multiple inheritance 5.Exception handling: try-catch, multiple catch, Nested try, 6. throw, throws, finally, user defined exception	Lecture Method using ICT Tools,Blackboard	**Apply** inheritance, packages and exceptional handling techniques	Seminars .programming quiz
III.	1. Multithreading- Thread Model, Main Thread, Creating a Thread, isAlive (),join () 2. Thread priorities, Synchronization. 3. String class, Wrapper class 4. String methods.	Lecture Method using ICT Tools, Blackboard	**Demonstrate** Threads and applet programming	Seminars conducted,CBT

	6. Working with frames, fonts, color, Graphics and displaying images in applet.			
IV.	1. Event Handling: The delegation event model, Event classes-Action event, Mouse Event, Window Event, Item Event, Key Event 2. Layout manager-card, grid, flow and border. 3. Swing- MVC architecture, components and containers Swing control- JLabel and ImageIcon, JTextField,JButton JRadioButton, JCheckbox, JToggleButton, JTextArea.	Lecture Method using ICT Tools, Blackboard	**Express** event handling and swing components.	Group discussions,quiz
V.	1. JTable, JOptionPane JTree, JList,JMeJScrollBar, JSplitPane,Input-output- File- directories, File Name Filter, Reading and Writing Files, 2. File Reader and File Writer3 3. **RMI:** Architecture, registry service, Parameter passing inRemote Methods, 4. Creating RMI Application and steps involved in running RMI application	Lecture Method using ICT Tools	**Design** interactive programs using swing	Seminars conducted,CBT

List of References (Book / ICT / Weblinks):

1. Schildt, Herbert. 2002. **The Complete reference Java2.** New Delhi: Tata McGraw Hill
2. Balagurusamy, E. **Programming with Java, A Primer**. 3rd Edition. New Delhi: TMH.

Name of the faculty member & Signature:K.ANITHA

Approved by Head of the Department:S.SWAPNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: B.SC(COMPUTER SCIENCE &ENGINEERING)

Name of the FacultyMember: K.KIRANKUMAR

Class & Section:NCS

Course Code: BS18335

Course Title: DISCRETE MATHEMATICS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Relations and ordering 2. Partial order relations - Partially ordered sets 3. Hasse diagrams 4. Lattices - Properties of lattices 5. Types of Lattices	Lecture Method using Blackboard.	**Develop** understanding of Logic Sets and Functions.	SEMINAR CONDUCTED,CLASS TEST
II.	1. Definition of a graph, Degree of vertex 2. First theorem of graph theory Paths and connection 3. Isomorphism of graphs 4. Some special simple graphs	USING GRAPH MODELS	**Evaluate** and apply the fundamental concepts in graph theory	CLASS TEST
III.	1.Trees and their properties 9 Binary trees, Binary search trees, Spanning trees, Kruskal's Algorithm- Prim's Algorithm 2.Planar graphs, Euler's formula	Lecture Method using ICT Tools,Blackboard	**Develop** understanding of how graph and tree concepts are used to solve problems arising in the computer science.	SEMINAR CONDUCTED, CLASS TEST
IV.	1.Euler graphs 2.Hamiltonian graphs- Grinberg theorem Chromatic numbers	Lecture Method using ICT Tools,Blackboard	**Express** the concepts and results of Number Theory.	GROUP DISCUSSION
V.	1.Divisibility- Division algorithm 2.Euclid' algorithm 2 3.Properties of G.C.D	Lecture Method using ICT Tools,Blackboard	**Identify** methods and techniques used in number theory.	COMPUTER BASED TEST

	5.Congruence's – Properties 6.Fermat's theorem and its Applications Wilson's theorem and its Applications			

List of References (Book / ICT / Weblinks):

1. Tremblay, J.P and Manohar, R. 2007. **Discrete Mathematical Structures withapplications to Computer Science.** New Delhi: Tata McGraw-Hill.(For Unit I)
2. Mott, J.L and Kandel. 2007. **Discrete Mathematics for Mathematicians and Computer Scientists.** 2nd Edition. New Delhi : PHI. (For Units II, III & IV)

Name of the faculty member & Signature:K.KIRANKUMAR

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-III

Department: Environmental Science

Class: NCS

Course Code: ES23301

Name of FacultyMember:S.BALACHANDAR

Course Title: EVS&GS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition, Scope and Importance of environmental Studies Renewable & Non Renewable resources Definition of Ecosystem, Structure and functions Biodiversity and its conservation	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of naturalresources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	Environmental pollution Solid Waste Management Industrial Waste Management Disaster Management: floods, Earth quakes, and Cyclones	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge onsolid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	Rain-Water Harvesting, Water-shed Management Global Warming Ozone depletion, and Acid rains Environmental Legislation Environmental & Human Health-HIV/AIDS Role of Information Technology in Environmental Studies.	Lecture Method using ICT Tools and Board	Apply the environmental science knowledge to improve the resources Evaluate and understand the sustainable environmental conditions and control methods	Oral question and answers To understand the environmental policies and regulations

	Missing women **Being together as equals** **Through the lens of gender**	ICT Tools and Board	Interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	To develop students' sensibility with regard to issues of gender in contemporary India
V.	**Sexual harassment** **Say no eve teasing** **The caste based violence** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act(2005)**	Lecture Method using ICT Tools and Board	Understand the gender problems and ways of addressing them, including interactionsacross local to global scales in communities and overcome inequalities with legislation	Oral question and answers To expose the students to debate on the politics and economic works and on gender violence

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition.Chennai: Oxford University Press.
Dr D K Asthana and Dr Meera Asthana. 2014.
2.**A Text Book of EnvironmentalStudies** Revised Edition. New Delhi: S. Chand & Company
3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomen in the Telangana People's Struggle**. New Delhi: Kali for Women.
4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.**Hyderabad: National Institute of Nutrition, Indian Council of Medic Research .1993

Name of the faculty member & Signature: S. Balachandar

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER III

Department: B.Sc. (Computer Science& Engg) **Class & Section: NCS** **Course Code: BS18330**

Name of the Faculty Member:S.Swapna **Course Title: Operating Systems**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Introduction-Definition of operating system, mainframe system, desktop systems 2. Multiprocessor systems, distributed systems, clustered systems 3. Real time systems , hand held systems 4. Operating system structures-system components 5. Operating system services, system calls 6. system programs, system structures , virtual machines	The traditional lecture method	Explain functions, types and structures of operating system	Computer Based Test
II.	1. Process concept-process concept, process scheduling 2. Operation on processes, cooperating processes 3. Inter process communication 4. Process scheduling-basic concepts, scheduling criteria, scheduling algorithms.	Lecture Method using ICT Tools	Analyze various process management concepts including scheduling and synchronization	QUIZ
III.	1. Process synchronization-critical section problem 2. Semaphores, monitors 3. Deadlocks-deadlock characterization, methods for handling deadlocks 4. Deadlock prevention, Deadlock	Active learning methods	Demonstrate process synchronization and dead locks	Coding and Computer Programming

	avoidance, Deadlock detection			
IV.	1. File system-file concept, access methods 2. Directory structure, file system mounting, file system sharing. 3. File system implementation-file system structure, file system implementation. 4. Directory implementation, allocation methods, free space management	Project-Based Learning	Solve issues related to file system interface	Seminars
V.	1 Memory management-swapping, contiguous memory allocation 2 Fragmentation-internal and external fragmentation 3 Paging, segmentation, segmentation with paging. 4 Virtual memory management-demand paging 5. Page replacement algorithms, Thrashing and working set model.	Real-World Relevance	Choose an appropriate Page replacement algorithm	Practice and Repetition

List of References (Book / ICT / Weblinks):

1. Silberschatz Abraham, Galvin Peter,B. and Gagne Greg. 2006. Operating System Concepts. India: Wiley.
2. https://www.youtube.com/watch?v=sEVfeXqWY-s
3. https://www.youtube.com/watch?v=16kaPQtYo28

Name of the faculty member & Signature: S. Swapna 10/11/23

Approved by Head of the Department: 10/11/23

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – III

Department: Computer Science & Engineering **Class & Section: NCS** **Course Code: CS23301**

Name of the Faculty Member: Dr C. Santhi **Course Title: Electrical Circuits and Machines**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Resistance, Capacitance, Inductance, Flux Density • Ohms Law and Kirchhoff's laws. Analysis of circuits using KVL and KCL • Power in AC and DC circuits, Power factor in AC circuits • Star – Delta and Delta – Star Transformations. Problems on simple networks • Phasor representation of Sine quantities	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Student will be able to analyze the electrical circuits with help of KCL and KVL techniques, Star – delta transformations	Case Studies, PPT presentation and assignments
II.	• Average and RMS value, form factor. • Mutual inductance dot convention. • Power factor measurement by two wattmeter method. • Principles of operation and EMF equation of Transformer. • Regulation and efficiency of transformer. Losses in transformer • Voltages and currents, equivalence circuit theory • O.C. and S.C. tests – efficiency calculations.	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Understanding the fundamentals of alternating current and terminology. Judge to develop equivalent circuit and evaluate performance of transformers.	Case Studies, PPT presentation and assignments

III.	• Thevenin's Theorem • Nortons's Theorem • Maximum Power Thransfer Theorem • Reciprocity Theorem • Superposition Theorem • Problems on simple resistive networks	Lecturing using traditional methods, Interactive Learning Problem-Solving	Students will be able analyze currents and powers in required branches using network theorems.	Case Studies, PPT presentation and assignments
IV.	• Construction and working principles of DC machines (Generators & Motors) • Types of DC Generators • Characteristics of DC generators • Back – emf and its significance in DC Motors • Types of DC Motors and their applications • Characteristics of DC Motors • Speed control of DC Motors • Stepper Motor and its Applications	Lecturing using traditional methods, Lecturing Method using ICT Tools,	Students will be able to explain the operation of DC generator and analyze the Characteristics of DC generator. Student will be able to explain the principle of operation of DC motor and analyze their Characteristics. Acquire the skills to analyze the starting and speed control methods of DC motors.	Case Studies, PPT presentation and assignments
V.	• Production of rotating magnetic field • Construction and working of 3-Φ Induction Motor • Construction and working of 1-Φ Induction Motor • Slip – Torque Characteristics • 1-Φ Induction motor starting methods - Split phase, permanent capacitor type, Shaded pole and their applications.	Lecturing using traditional methods, Lecturing Method using ICT Tools,	Ability to identify speed – torque characteristics of induction motor and understand starting methods of induction motor.	Case Studies, PPT presentation and assignments

List of References (Book / ICT / Weblinks):

1. Theraja, B.L. & Theraja,AK. 2015. **A Essential Reading of Electrical TechnologyVol-1.** S.CHAND. (Unit- I & II)
2. Theraja, B.L. Theraja, AK. 2015. **A Essential Reading of Electrical Technology Vol –II.** S.CHAND. (Unit-III, IV & V)

Name of the faculty member & Signature: Dr. C. Santhi , C. Santhi

Approved by Head of the Department

Internal Quality Assurance Cell

2023-2024

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-IV

Department: B. Sc Computer science & Engg. **Class&Section: NCS(Theory)** **Course Code: BS 20404**

Name of the Faculty Member: Dr K Rama

Course Title: Microprocessor &Microcontroller

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Introduction of microprocessor, Evolution of microprocessors. 2. 8086 architecture- internal block diagram, Signal description of 8086 3. Memory segmentation and Register organization. 4. Operation of 8086 based microcomputer (minimum mode) 5. Bus activities during read and write machine cycles	Traditional teaching method	To understand the microprocessor architecture with the help of 8086	Computer based test
II.	1. Addressing modes of 8086 2. Introduction to programming, standard programming structures 3. 8086 instruction set. Data transfer and Arithmetic Instructions. 4. Logical, Shift, rotate and Loop instructions 5. Flag manipulation and string instructions 6. Assembly Language Programs	Teaching method using ICT tools.	To study the concepts of interfacing techniques	Program based test
III.	1.Methods of parallel data transfer and implementing Hand-Shake data transfer 2.8255 PPI internal block diagram, system connections, operational modes and initialization 2 3.Key Switch Types, keyboard-circuit connections	Teaching method using ICT tools.	To study microprocessor programming applications	seminars

	4.Interfacing a Microprocessor to a Keyboard -- Software Keyboard Interfacing 5.Interfacing to Alphanumeric Displays, software-multiplexed LED displays			
IV.	1. Interrupts (external and Internal interrupts). 2. Interrupt system- interrupt response- Interrupt Pointer Table 3. 8259A Interrupt priority controller- block diagram and signal description 4. DMA data transfer, basic block diagram of DMA Controller 5. Introduction to asynchronous serial data communication 6. 8251A USART: block diagram, signal description, initialization, sending and receiving data	Teaching method using ICT tools.	To understand the differences between microprocessor and microcontroller	seminars
V.	1. Introduction to 8051 Microcontroller, difference between Microprocessor and Microcontroller3 2. 8051controller functional block diagram, description of various blocks/units 3. 3.Pin diagram and signal description of 8051 Microcontroller 4. 8051 registers, flags and stack operation 5. Internal organization of 8051 memory	Teaching method using ICT tools.	To study the architecture of 8051 microcontroller	seminars

Listof References (Book/ICT/ Weblinks):

1. **Hall Douglas V, SSSP Rao, 2012, MICROPROCESSORS AND INTERFACING. 3rd Edition, McGH (For units- I, II, III and IV)**
2. **Mazidi Mohammad Ali, Mazidi Janice Gillispie. 8051 Microcontroller &Embedded systems, PHI. 2005 (For unit V)**

Name of the faculty member & Signature: Dr k. Rama

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.SC(COMPUTER SCIENCE & ENGINEERING) **Class & Section:NCS** **Course Code: CS21504**

Name of the Faculty Member:K.ANITHA **Course Title: WEB TECHNOLOGIES**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**HTML** 1. Origin and Evolution of HTML and XHTML, basic syntax, Document structure 2. Basic text markup, Images 3. Hypertext links, lists 4. Tables, Forms 5. Frames.	Lecture Method using ICT Tools	**Illustrate** basic html scripts to design web pages	Seminars conducted.CBT
II.	**CASCADING STYLE SHEETS** 1.Introduction, Levels of style sheets, 2.style specification format 3.Selector forms, property value forms 4.Font properties, list properties 5.Color, alignment of text, the box model 6.Background images, the and tags	Lecture Method using ICT Tools	**Explain** about cascading style sheets	Group discussions
III	**JAVASCRIPT** 1. Overview, object orientation and JavaScript 2 General syntactic characteristics 3 Primitives, operations, expressions 4 Control statements, Screen output and keyl 6 Object creation and modification, Arrays, Functions 7 Pattern Matching using regular expressions	Traditional method	**Analyze** java script programming using operators, expressions, functions	Programming quiz

IV.	**EVENT HANDLING IN JAVA SCRIPT** 1. Document Object model, Element Access in JavaScript 2. Events and Event Handling 3. Handling Events from Body, Button, text box and password Elements 4. Moving Elements, Element Visibility, Changing colors and fonts. **XML** Syntax, Document Structure, DTD Displaying XML documents with CSS, XSLT Style sheets	Lecture Method using ICT Tools, Blackboard	**Classify** event handling in java script and introduction to xml	Group discussions.Seminars conducted
V.	**PHP** 1. Overview of PHP, General Syntactic characteristics 2. Primitives, Operations and Expressions 3. Output, Control Statements, Arrays, Functions 4. Pattern Matching, Form Handling, Files, Cookies and Session tracking 5. Database access through web: Architectures for database access MySQL Database System, Database access with PHP and MySQL	Traditional method,PPTS	**Develop** PHP programs and database connectivity through mysql.	Programming quiz,CBT

List of References (Book / ICT / Weblinks):

1. Sebesta, Robert W. 2008. **Programming the World Wide Web.** 4th Edition. New Delhi: Pearson Education

2. HTML 5 Black Book, 2nd Edition, Kindle Edition

Name of the faculty member & Signature: K. Anitha. 6/4/24.

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – IV

Department: Computer Science & Engineering **Class & Section: NCS** **Course Code: CS23402**

Name of the Faculty Member: Dr C. Santhi **Course Title: Computer organization**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Register transfer language, register transfer, bus system for 4 registers • Arithmetic micro operations, logic micro operations • Shift micro operation, Arithmetic logic shift unit • Instruction codes-direct and indirect mode • Computer registers, 16 bit common bus system • Computer instructions	Lecturing using traditional methods, Lecturing Method using ICT Tools,	Student will be able to demonstrate knowledge of register organization of a basic computer system	Case Studies, PPT presentation and assignments
II.	• Timing and Control, Instruction cycle • Input Output and interrupt • Memory reference instruction • Central processing unit, general register organization • Instruction format • Addressing modes • Data transfer and manipulation • Programmed control	Lecturing using traditional methods, Lecturing Method using ICT Tools	Explain machine language of a basic computer system.	Case Studies. PPT presentation and assignments
III.	• Micro programmed control: control memory • Address sequencing • Computer hardware configuration • Micro instruction format • Design of control unit and micro-	Lecturing using traditional methods	Appraise in-depth understanding of control unit organization and micro programmed control.	Case Studies. PPT presentation and assignments

	program sequencer			
IV.	• Pipeline and vector processing-parallel processing • Arithmetic pipeline, Instruction pipeline • RISC pipeline , Array Processors. Computer arithmetic-addition and subtraction Floating point Arithmetic operation-consideration, configuration, addition and Subtraction • Multiplication algorithm- Booth algorithm, Array Multiplier • Division Algorithm- Hardware implementation, algorithm and divide overflow	Lecturing using traditional methods, Lecturing Method using ICT Tools	Apply various al uorithins to perform arithmetic operations and propose suitable hardware for them	Case Studies. PPT presentation and assignments
V.	• Peripheral devices • I/O interfaces , Modes of transfer • Direct Memory Access • I/O processor- CPU IOP Communication • Memory organization-memory hierarchy • Main memory-design of RAM and ROM chips • Auxiliary memory ,Cache and Associative memory	Lecturing using traditional methods, Lecturing Method using ICT Tools	Analyze and emphasize various communication media in the basic computer system using design of various memory structures.	Case Studies. PPT presentation and assignments

List of References (Book / ICT / Weblinks):

1. . Mano Morris, M. 2003. **Computer System Architecture.** Prentice Hall of India.

Name of the faculty member & Signature: Dr C. Santhi

Approved by Head of the Department

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER - IV

Department: B.Sc (CSE)

Class & Section :NCS

Course Code: BS23401

Name of the Faculty Member: D. SRAVANI

Course Title: Probability and Statistics

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Various measures of Central Tendency – Mean, Median & Mode Definitions, Merits, Demerit, Problems (grouped and ungrouped data) Various measures of dispersion - Standard Deviation and Variance Definitions, Merits, Demerit, Problems (grouped and ungrouped data) Probability Basic terminology, Addition theorem problems, Multiplication theorem problems, Bayes theorem problems	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	Calculate the mean, median, and mode of a set of data and identify the importance of measures of dispersion	Computer Based test.
II.	Random Variable: Discrete Random variable & Continuous Random variable Probability Mass & Density functions. Mathematical Expectation: Mathematical Exception, Addition Theorem of expectation, Multiplication theorem of expectation. (Excluding Derivations Theoretical Distributions: Discrete	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Use discrete and continuous probability distributions, including requirements and making decisions.	Offline Quiz.

	distributions: Binomial distribution. Fitting of binomial distribution, Poison distributions. Fitting of poisson distribution, Normal Distribution : Chief characteristics of the normal distribution. area of a property, Importance and fitting of a normal distribution.			
III.	Simple correlations(definitions and types) Karl Pearson coefficient of correlation Rank correlation Regression and regression lines	Discussion and Demonstration. Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Employee the principles of linear regression and correlation, including least square method, predicting a particular value of Y for a given value of X and significance of the correlation coefficient..	Offline Quiz.
IV.	Testing of Hypothesis: Sampling distribution, the null hypothesis and type I and II errors. Critical region and level of significance. Tests of significance for large samples: Test of single proportion Test of significance of difference of proportions Test of significance for single mean and difference of means Test of significance for difference of standard deviations.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Knowledge about formulating and testing a hypothesis, using critical values to draw conclusions And determining probability of making errors in hypothesis tests, and about large sample tests..	Written Test.
V.	Small Sample Tests: Chi – Square test: Population Variance Goodness of fit Independence of attributes T- test : Single Mean Difference means and paired t-test F-test: Test of significance based on equality of two variances	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Understand and analyze various methods of small sample tests.	Written Test.

List of References (Book/ICT/Web links):

1. Gupta, S. C. (2011). Fundamentals of statistics (pp. 18-1). New Delhi, India: Himalaya publishing house.
2. Gupta, S. P. (1978). Statistical Methods 1978. 46 th Edition.
3. Deovre, J. (1987). Probability and statistics for engineering and science. Brooks/Cole, Belmont, CA.
4. Richard A. Johnson, Miller, Freund. Probability & Statistics for Engineers. PHI Publications
5. **Spearman's rank correlation for repeated ranks - https://youtu.be/blAlbNcSd9g**
6. **Spearman's rank correlation for non-repeated ranks https://youtu.be/II_Qylg1SaM**

Name of the faculty member &Signature: Dr. Sravani

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER IV

Department: B.Sc. (Computer Science&Engg) **Class&Section: NCS** **CourseCode: BS23406**

CourseTitle:DBMS

Nameofthe FacultyMember:K.HIMABINDU

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to DBMS, System structure, Database languages, Database levels, Database design, Data models, Constraints.	The traditional lecture method	Represent logical database using ER model and EER model	Computer Based Test
II.	Relational model, Structure, Reduction to relational schema, Relational Algebra, Modification of Database, Normalization, Types of Normal forms.	Lecture Method using ICT Tools	Formulate database using relational algebra and organize relation using Normalization.	QUIZ
III.	Introduction to SQL, Basic structure of SQL,SET operators, SQL operators, SQL functions, NULL values, Sub queries, Introduction to PL/SQL, Cursors, Triggers, Data authorization	Active learning methods	Design SQL queries and implements PL/SQL.	Programming Based Test
IV.	File organization methods, Indexing & Hashing, Static Hash function ,Dynamic Hash function, Database system Architecture, Distributed Systems, Concurrency control in Distributed system	Lecture Method using ICT Tools	Classify the storage and file structure ,Indexing & Hashing	Seminars
V.	Database Recovery system, Failure classification system, Implementation of ATOMICITY, Log based Recovery, Check points. Transaction, properties,	The traditional lecture method	Explain the concept of Transactions, Recovery system and concurrency control	Seminars

	Implementation of ATOMICITY &Durability, Serializability, Concurrency control, Lock based protocols, Two phase locking protocol Deadlock handling, NO-SQL , Types of NO-SQL		

List of References (Book/ICT/ Weblinks): 1.Silberschatz Abraham korth, Henry F and Sudarshan S 2006 Databse System Concepts,5th Edition. MC GRAWHILL International Edition

2.Bayross Ivan,SQL ,PL/SQL ,4th Revised Edition

Introduction to Oracle - https://youtu.be/v005sQh0wUI

Name of the faculty member& Signature: K.HIMABINDU

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: B.SC(COMPUTER SCIENCE & ENGINEERING) **Class & Section:NCS** **Course Code: CS20405**

Name of the Faculty Member:S.Swapna **Course Title:** Object Oriented Systems Development

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Introduction to Object oriented system development 2. Object Basics– Objects, classes, state and properties 3. Behavior, methods, messages, 4. Encapsulation, class hierarchy, polymorphism 5. Relationships and associations 6. Aggregations and containment 7. Object identify and static and dynamic binding, persistence, meta classes	Lecture Method using ICT Tools	**Explain** basics of OOSD concepts	Seminars conducted
II.	1. Object oriented system life cycle– Analysis Design, Prototyping 2. Implementation and Incremental testing. 3. Object oriented Methodologies –Unified approach 4. UML – Introduction , class diagrams 5. Use case diagram 6. Interaction diagram 7. Sequence diagram, collaboration diagram, state chart 8. Activity diagram, component diagram, Deployment diagram	Lecture Method using ICT Tools	**Categorize** Object oriented methodologies and UML diagrams.	Group discussions
III.	1. Object Oriented Analysis - Identifying use cases-Introduction 2. Business object analysis, Use- case model 3. developing effective documentation, case studies 4. Classification- classification theory 5. classes, responsibilities, collaborators, naming classes 6. Object relationships, attributes and methods-associations 7. Super and sub-class relationships, a part – of	Traditional method	**Choose** classification theory and performing case studies.	CBT,Assignments

	relationship 8. Class responsibilities, identifying attributes and methods 9. Object responsibility, defining methods and messages, case studies.			
IV.	1. Object Oriented Design - Object oriented design process and design axioms 2. Corollaries, design and patterns 3. Designing classes – Introduction, Designing classes-the process 4. Class visibility, refining attributes, 5. Designing methods and protocols , case studies 6. Designing methods for the ViaNet Bank Objects: verify password method, Deposit method, Account class withdraw method 7. Access Layer- Database management systems Object Oriented Database management systems	Lecture Method using ICT Tools, Blackboard	**Design** models based on Object oriented concept.	Group discussions.Seminars conducted
V	1. Software Quality Assurance – Introduction, QAT 2. Testing strategies- Black Box Testing, White Box Testing, Top-Down Testing, Bottom-Up Testing 3. Impact of Object Oriented testing, test cases, test plan 4. Continuous testing, case studies 5. System Usability and measuring user satisfaction – Introduction 6. Usability testing , user satisfaction test, user satisfaction test template 7. Case study	Lecture Method using ICT Tools, Blackboard	**Identify** software quality. system usability. measuring and satisfaction	CBT

List of References (Book / ICT / Weblinks):

1. Bahrami. Ali. 1999. Object Oriented System Development. New Delhi: McGraw-Hill.

Name of the faculty member & Signature: S. Swapna

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-V

Department: B.SC(Computer Science & Engineering) **Class & Section:DCS** **Course Code: BS18545**

Name of the Faculty Member:K.HIMABINDU **Course Title: COMPUTER NETWORKS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Introduction: Data Communications, networks, Protocols and Standards 2. OSI Model, layers in the OSI model, TCP/IP Protocol suite 3. Analog and Digital, Transmission impairments 4. Transmission Media-Guided media, Connecting Devices 5. Digital Transmission- digital-to-digital conversion 6. Multiplexing: Frequency-division, Wavelength and Time Division	Lecture Method using ICT Tools	**Identify** basic computer network topologies and protocols and explain Data Communication System components	Seminars conducted ,Group discussion
II.	1. Error detection and correction-Parity, check sum, CRC, Hamming code 2. Data Link Control: Framing, flow and error control 3. Stop-and-wait ARQ, Go-Back-N ARQ, Selective Repeat ARQ, Piggybacking 4. HDLC, Random Access- ALOHA, CSMA, CSMA/CD, CSMA/CA 5. Wired LANs- Ethernet	Lecture Method using ICT Tools	**Classify** different error detecting techniques.	Seminars conducted ,Computer based test
III.	1. IP address space-Introduction. 2. Classful and Classless addressing, Subnetting and Supernetting 3. IPv4- datagram, Fragmentation,	Lecture Method using ICT Tools	**Construct** sub-netting and routing mechanisms.	Seminars conducted ,Group discussion

	checksum, options 4. Internet Control Protocols- ICMP, IGMP, ARP and RARP 5. Delivery, Forwarding, Unicast routing protocols- RIP, OSPF, BGP			
IV.	1. Process-to-Process Delivery, UDP-well known ports, user datagram, checksum 2. UDP Operation, use of UDP 3. TCP- process to process communication, Numbering bytes, TCP services 4. Flow control- silly window syndrome, Error Control 5. TCP connection, State transition diagram, Congestion control, Timers, Options	Lecture Method using ICT Tools	**Sketch** the routing protocols and analyze how to assign the IP addresses for the given network	Group discussion,Computer based test
V.	1. DNS- Namespace, domain name space, distribution of name space 2. DNS in internet, resolution, DNS messages, types of records 3. TELNET, E-mail- architecture, message transfer agent: SMTP4. 4.Message Access Agent: POP, FTP 5. WWW and HTTP- architecture, web documents, HTTP	Lecture Method using ICT Tools	**Develop** network design and implementation	Seminars conducted ,Group discussion

List of References (Book / ICT / Weblinks):

1. Forouzan, Beharouz A. 2011. **Data Communications and Networking**. 3rdEdition. New Delhi: Tata McGraw Hill
2. Tanenbaum, Andrew S. 2008. **Computer Networks**. 4th Edition. New Delhi: Pearson Education.
https://drive.google.com/drive/folders/1LfTTOqAsVOkydHqCPf-eBBWx3wQx4hzk?usp=sharing

Name of the faculty member & Signature:K.HIMABINDU

Approved by Head of the Department:

10/11/23.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.SC(Computer Science &Engineering) **Class & Section:DCS** **Course Code: CS21501A**

Name of the Faculty Member:K.HIMABINDU

Course Title: SOFTWARE TESTING & QUALITY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1.Example test series – first cycle 2.Second cycle, subsequent cycles 3.Objectives and limits of Testing 4.Testing in software development process- planning process – planning stage 5.Design stage testing 6.Glass box code testing 7.Black box testing 8.Software errors 9.Reporting and analyzing bugs – problem report, contents characteristics 10.Analysis of reproducible bug Tactics for analyzing a reproducible bug making a bug reproducible	Lecture Method using ICT Tools	**Express** importance of . testing in software development process, glass-box testing, black-box testing, and how to report and analyze bugs	Seminars conducted, group discussions
II.	1. Problem tracking systems – Objectives, tasks, 2. Overview, users, 3. Mechanics, further thoughts on problem reporting 4. Test case design – characteristics of good test 5. Equivalence classes and boundary values 6. Visible state transitions, race conditions, load testing, error	Lecture Method using ICT Tools	**Design** different types of test case.	Group discussions,Computer based test

	guessing 7. Function equivalence testing 8. Regression testing, executing the tests			
III.	1. Building a software testing strategy 2. Establishing a software testing methodology 3. Determining a software testing techniques. 4. Eleven steps for software testing process – Overview 5. Assess project Management.	Lecture Method using ICTTools&BLACKBOARD	**Organize** how to build testing strategy, establishing software testing methodology and software testing techniques.	Seminars conducted, Computer based test
IV.	1. Product Metrics - Software Quality, Framework for product metrics 2. Metrics for Process and Products - Software measurement 3. Metrics for Software Quality. 4. Quality Management – Quality concepts, Software Quality Assurance 5. Software Reviews, Formal Technical Reviews, Software Reliability	Lecture Method using ICT Tools	**Identify** the definition of quality, metrics for software quality and inspection techniques.	Seminars conducted, Group discussions
V.	1.Change Management - Software configuration management 2.SCM repository, SCM Process 3.Reengineering – Software reengineering 4.Reverse engineering, Restructuring.	Lecture Method using ICT Tools & BLACKBOARD	**Explain** software configuration management, software reengineering and software restructuring techniques.	Seminars conducted, Computer based test

List of References (Book / ICT / Weblinks):

1. CemKaner, Jack Falk, Hung Quocguyen. 1998. **Testing computer software.** Comdex.
2. Pressman Roger, S.**Software Engineering – a Practioner's approach.** 6th Edition. McGraw-Hill International Edition.

https://drive.google.com/drive/folders/1S0pHerO1KmEJA8XKg8EtivDAWGQAzy0v?usp=sharing

Name of the faculty member & Signature: K. Himabindu

Approved by Head of the Department: 10/11/23

Internal Quality Assurance Cell

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - : V

Department: ~~CSE~~ B.Sc (Computer science & Engg) **Class&Section :DCS**

CourseCode: BS21048

Nameofthe FacultyMember: D. SRAVANI

CourseTitle: Operations Research

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to OR- origin, nature, applications and limitations Linear programming problem and fundamrental theorem of lpp, Graphical method and simplex method.	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	To learn how to use the various decision making tools OR to solve real life problems.	Computer Based test.
II.	Artificial variables and solution to Big M method and two phase method. (procedures), degeneracy. Duality, dual simplex method , primal dual relationship.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	The reasons are that the inclusion of the big number M may cause round-off error and other computational difficulties The dual simplex method is a technique used to solve linear programming problems. It produces a sequence of dual feasible tables. It is an algorithm of an iterative process for solving linear programming problems.	Offline Quiz.
III.	Transportation problem and its applications IBFS- using north west corner rule Matrix minimum method Vogel's approximation method Unbalanced transportation problem Degeneracy	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	ToLearnabout basic feasible solution using various methods and describe suitable method for maximizing the objective function.	Offline Quiz.

	Optimality test			Internal Quality Assurance Cell
IV.	Assignment problem- Hungarian method Balanced and unbalanced AP-problems Restricted AP Travelling sales man problem	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to formulate and solve the assignment problem .	Written Test.
V.	Sequencing problem, Johnson's algorithm of n-jobs on 2 machines and 3 machines.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Sequencing helps students understand and organize material they've learned as well as helps them solve problems..	Written Test.

Listof References (Book/ICT/ Weblinks):

1. Gupta, P. K., &Hira, D. (2010). Operations Research. S. Chand & Company Ltd.
2. Sharma, J. K. (2013). Operations Research (5th ed.). Mcmillan Publishers IndiaLtd.
3. Taha : An Introduction to Operations Research, PHI
4. https://youtu.be/1CnFjNOewEU
5. https://youtu.be/ILWbaWrjgU4
6. https://www.youtube.com/watch?v=z3zjieArlAE
7. https://www.youtube.com/watch?v=rrfFTdO2Z7I
8. https://www.youtube.com/watch?v=WrAf6zdteXI
9. https://www.youtube.com/watch?v=-Kza-8JmqHU

Nameofthefacultymember&Signature: D. Sravani

Approvedby HeadoftheDepartment: 10/11/2023.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: B.Sc Computer Science & engineering **Class & Section:B.Sc (DCS)** **Course Code:13**

Name of the Faculty Member: S.Lakshmi **Course Title:Mobile Application Development**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Downloading & Installing ,Android Architecture,	Lecture Method using Black Board & Chalk.	To Learn about Architecture of Android	Developing & Executing First android application
II.	Activities Intents ,Fragments	Lecture Method using Black Board & Chalk ,Android Studio(ICT)Tool	To Learn about activities ,fragments,intents	Developing fragment,intents,activities
III.	View Groups & Views	Lecture Method using ICT Tools(Android Studio)	To Learn about creating front end application	Developing about Front end applications
IV.	Handling Pictures,Designing Context Menu, Notifications	Lecture Method using ICT Tools(Android Studio)	To Learn about creating images	Developping Images in Gallery View.
V.	Persistent Storage ,Reading Data From Files,SQLite Database	Lecture Method using ICT Tools	To Learn about Storage and SQLite Database	Developing the Application in Backend

List of References (Book / ICT / Weblinks):

1. Pradeep Kothari, Android Application Developmet BlackBook,DreamTech Press,2017
2. Jerome(JF)DiMarzio,Android-A programmers guide-Mc GrawHill,2008

Name of the faculty member & Signature:S.Lakshmi

Approved by Head of the Department:

10/11/23

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: B.Sc Computer Science & engineering **Class & Section:B.Sc (DCS)** **Course Code:13**

Name of the Faculty Member: S.Lakshmi **Course Title: BigData Analytics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction of BigData,using Bigdata in Business Context, Technologies for Handling BigData	Lecture Method using Black Board & Chalk.	To Learn about the importance of Big data	How to use data in business.
II.	Hadoop Ecosystem	Lecture Method using Black Board & Chalk.	To Learn about Hadoop & Map Reduce	Benefits of Hadoop & Map Reduce
III.	Customize Data using Map Reduce Application	Lecture Method using Black Board & Chalk.	To Learn about Map Reduce Application	Develop & use map Reduce application
IV.	YARN Architecture & HIVE	Lecture Method using Black Board & Chalk.	To Learn about Working of YARN Datatypes & built in functions in HIVE	Benefits of YARN & HIVE
V.	Analyzing data with PIG & NOSQL	Lecture Method using Black Board & Chalk.	To Learn about Operators, functions types of NOSQL	How to use operators and functions

List of References (Book / ICT / Weblinks):

1. BigData Black Book.Dream Tech Press

Name of the faculty member & Signature:S.Lakshmi

10/11/23.

Approved by Head of the Department:

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: B.Sc. (Computer Science& Engg) **Class & Section:DCS** **Course Code:CS18502**

Name of the Faculty Member:S.Swapna **Course Title: ADVANCED JAVA**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Over view, Collection Interfaces- Collection, List, Set and Sorted Set 2 2. Collection classes- ArrayList, LinkedList, HashSet, LinkedHashSet, TreeSet 2 3. Accessing a Collection via an iterator- using an iterator 1 4. Working with Maps- Map Interfaces, Map Classes 3 5. Comparators- using a comparator 1 6. The Collection Algorithms, Arrays class 2 7. Stack, Dictionary, and Hashtable	The traditional lecture method	Understand and develop concepts of data structures using Java library.	Computer Based Test
II.	1. Java Bean-advantages and applications, builder tools, Using BDK 2 2. JAR files- manifest files, The JAR utility 2 3. Introspection, Developing Simple Bean using BDK, Persistence 2 4. Introduction, XML and DOM, DOM Nodes 1 5. Element Node, Node, Attr Node, Document Node, Text Node 2 6. Parsing XML	Lecture Method using ICT Tools	Develop component-based Java software using JavaBeans and create well formed XML document.	QUIZ
III.	1. Introduction, advantages, architecture, servlet life cycle 2 2. Using Tomcat for Servlet	Active learning methods	Develop client/server applications using Servlets and JSP.	Coding and Computer Programming

	development, a simple servlet 2 3. Generic Servlet, HTTP Servlet 1 4. Passing Parameter to servlets, Retrieving parameters 1 7. JSP- Introduction, Architecture, life cycle, Comments 2 8. Scripting Elements, Directives- page and include, implicit objects 2 9. Action Elements – forward, include, plugin, adding java bean to JSP page			
IV.	1. JDBC concept, driver types, over view of JDBC process 2 2. Database Connection- The Connection, associating JDBC/ODBC bridge 1 3. Statement Objects- The Statement, Prepared Statement, Callable 2 4. Result Set- reading, scrollable and updatable, Result Set Metadata 2 5. Java Security Architecture, Access control- applets and applications 2 6. Certificates, key stores 1 7. Signing Code and Granting permission 1 8. Signing and verifying JAR files	Project-Based Learning	Update and retrieve the data from the databases using SQL	Seminars
V.	BASIC NETWORKING 1. Classes and Interfaces, Getting Network interfaces- addresses and properties 1 2. URL- creating, parsing, web page retrieval 1 3. URL Connection, HTTPURL Connection-URL encoder/decoder 2 SOCKET PROGRAMMING 4. Client/Server Programs, Sockets- types, ports, address and reserved ports 1	Real-World Relevance	Identify the type of socket used for connection and implement TCP/IP socket programming	Practice and Repetition

	5. TCP Sockets- Server Socket Class, Socket Class, application 2 6. Handling multiple client request, Concurrency solution 2 7. Sending and receiving objects, Writing the server 8. UDP Sockets- Datagram packets, Server, client, receiving multiple datagrams 1 9. Sending and receiving object using UDP, Sending object, reconstructing object And running the application			

List of References (Book / ICT / Weblinks):

1. Schildt, Herbert. 2002. The Complete Reference: Java2. 5 th Edition. New Delhi: McGraw-Hill. (UNIT-I, II and III)
2. Roy, Uttam K. 2015. Advanced Java Programming. 1 st Edition. New Delhi: Oxford University Press. (UNIT – II (Java and XML), and V)
3. Bayross, Ivan. Shah, Sharanam. Bayross, Cynthia and Shah Vaishali. 2008. Java Server Programming for Professionals 2. India: Shroff Publishers and Distributors Pvt Ltd. (UNIT-III, IV)
4. Keogh, Jim. 2002. J2EE: The Complete Reference. First Edition. New Delhi: Tata Mc-Graw Hill.(UNIT-IV)
5. Campione, Mary. Walrath, Kathy. Huml, Alison. 1999. The Java tutorial continued: the rest of JDK. Addison-Wesley. (UNIT-IV)
6. https://www.simplilearn.com/tutorials/java-tutorial/java-servlets

Name of the faculty member & Signature: S. Swapna 10/11/2023

Approved by Head of the Department: 10/11/2023

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.SC(COMPUTER SCIENCE & ENGINEERING) Class & Section:DCS **Course Code: CS21504**

Name of the Faculty Member:K.ANITHA **Course Title: WEB TECHNOLOGIES**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**HTML** 1. Origin and Evolution of HTML and XHTML, basic syntax, Document structure 2. Basic text markup, Images 3. Hypertext links, lists 4. Tables, Forms 5. Frames.	Lecture Method using ICT Tools	**Illustrate** basic html scripts to design web pages	Seminars conducted,CBT
II.	**CASCADING STYLE SHEETS** 1.Introduction, Levels of style sheets, 2.style specification format 3.Selector forms, property value forms 4.Font properties, list properties 5.Color, alignment of text, the box model 6.Background images, the and tags	Lecture Method using ICT Tools	**Explain** about cascading style sheets	Group discussions
III.	**JAVASCRIPT** 1. Overview, object orientation and JavaScript 2. General syntactic characteristics 3. Primitives, operations, expressions 4. Control statements, Screen output and keyb 6.Object creation and modification, Arrays, Functions 7.Pattern Matching using regular expressions	Traditional method	**Analyze** java script programming using operators, expressions, functions	Programming quiz

	EVENT HANDLING IN JAVA SCRIPT 1. Document Object model, Element Access in JavaScript 2. Events and Event Handling 3. Handling Events from Body, Button, text box and password Elements 4. Moving Elements, Element Visibility, Changing colors and fonts. **XML** Syntax, Document Structure, DTD Displaying XML documents with CSS, XSLT Style sheets	Lecture Method using ICT Tools, Blackboard	**Classify** event handling in java script and introduction to xml	Group discussion, ... conducted
V.	**PHP** 1. Overview of PHP, General Syntactic characteristics 2. Primitives, Operations and Expressions 3. Output, Control Statements, Arrays, Functions 4. Pattern Matching, Form Handling, Files, Cookies and Session tracking 5. Database access through web: Architectures for database access MySQL Database System, Database access with PHP and MySQL	Traditional method,PPTS	**Develop** PHP programs and database connectivity through mysql.	Programming quiz,CBT

List of References (Book / ICT / Weblinks):

1. Sebesta, Robert W. 2008. **Programming the World Wide Web.** 4th Edition. New Delhi: Pearson Education

2. HTML 5 Black Book, 2nd Edition, Kindle Edition

Name of the faculty member & Signature: K. Anitha.

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: B.SC(COMPUTER SCIENCE & ENGINEERING) **Class & Section:DCS** **Course Code: BS21604**

Name of the Faculty Member:K.ANITHA **Course Title: Python Programming**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**1.Python Basics-** Origin, features, Statements and Syntax, Variable Assignment, Identifiers, Basic Style Guidelines, Memory Management. **2.Python Objects-** Python Objects, Type object, Null object, Object identity comparison, type () and isinstance (), Categorizing the standard types, **3.Conditionals and Loops-** if, else elif statement, Conditional Expressions, while, for statement, range() Built-in function, break, continue, pass, Iterators and iter() function, List Comprehensions, Generator Expressions **4.Numbers-** Introduction, Integers, Double precision Floating point numbers, Complex numbers, Operators, Built-in and Factory functions, Other Numeric Types	Lecture Method using ICT Tools	**Demonstrate** basic programming techniques.	Seminars conducted,CBT
II.	**1.Functions-** Introduction, Calling functions, Crea Formal arguments, Variable length arguments, Fu scope, recursion, Generators **2.Sequences: Strings, Lists and Tuples-** Sequen String-Only Operators, Built-in functions, String I of Strings. Lists- Introduction, Operators, Built-in methods. Tuples- Introduction, Tuple Operators a features of Tuples. **3.Dictionaries-** Introduction, Mapping type opera Factory functions, Mapping type built-in methods	Lecture Method using ICT Tools	**Apply** concepts of functions, sequences, dictionaries	Group discussions

List of References (Book / ICT / Weblinks):

[1] Chun Wesley, J. **Core Python Programming**.2nd Edition. Pearson Education (Unit I, II, III, IV- Object Oriented Programming)

[2] Chun Wesley, J. **Core Python Applications Programming**. 3rd Edition. Pearson Education (Unit IV, V)

Name of the faculty member & Signature:K.ANITHA

Approved by Head of the Department: 5/4/24.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER VI

Department: B.Sc. (Computer Science&Engg) **Class&Section:DCS** **CourseCode: CS18601A**

Nameofthe FacultyMember:K.HIMABINDU **CourseTitle:E-COMMERCE**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Electronic commerce-overview, EC and role of independent third parties, CPA vision project, web site seal options, Regulatory environment.	The traditional lecture method	**Explain** ecommerce basics and regulatory environment	computer based test.
II.	EDI-traditional EDI systems, Risks of insecure systems, risks associated with business transactions,confidentiality, viruses, Risk management, Risk management paradigms, disaster recovery plans.	Lecture Method using ICT Tools	**Identify**EDI and risks associated, maintained and recovery plans.	QUIZ
III.	Internet security standards, security protocols, Messaging protocols, secure electronic payment protocols, Cryptography and authentication, Encryption techniques ,key management	Lecture Method using ICT Tools	**Classify** security, cryptography and messaging protocols briefly	Group discussion
IV.	Firewalls – Categories, components, functionalities, Electronic payment mechanism- Dual signatures, Magnetic strip cards, Smart cards, Electronic-cash, Electronic checks, Intelligent agents	Lecture Method using ICT Tools	**Use** Firewalls, Intelligent Agents and EPS.	Seminars
V.	Retailing in electronic commerce-		**Apply** retailing and advertising	Seminars

	business models of electronic marketing, Web advertising- advertising methods, Electronic commerce for service industries, Business to business electronic commerce–characteristics and models of B2B EC	Lecture Method using ICT Tools	techniques and B2B business.	

Listof References (Book/ICT/ Weblinks): Feinman Greenstein. 2000. **Electronic Commerce**. India :Mc.Graw-Hill. (Unit 1,2,3,&4)

Turban Efraim. Lee Jae, King David, H. and Chung Michael. 2000. **Electronic Commerce, a Management Perspective.** India: Prentice Hall.(Unit 5)

Ecommerce and it's types - https://youtu.be/bM0T3HF8xcI?si=N-uByRErSbv8EuJS

Nameofthefacultymember&Signature: K.HIMABINDU

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: B.SC(COMPUTER SCIENCE & ENGINEERING) **Class & Section:DCS** **Course Code: CS18601B**

Name of the Faculty Member:S.Swapna **Course Title: Principles of Information Security**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Introduction to Security, Critical Characteristics of Information 2. NSTISSC Security Model, Components of Information Security, Balancing Information Security and Access 3. Approaches to Information Security Implementation, System Development Life Cycle 4. Security System Development Life Cycle, Information Security :Art of Science 5. Need For Security: Business Needs, Threats, Attacks	Lecture Method using ICT Tools	**Explain** concepts of confidentiality, availability and integrity (CIA) in context of Information security	Seminars conducted
II.	1. Overview of Risk Management 2. Risk Identification 3. Risk Assessment 4. Risk Control Strategies 5. Selecting a Risk Control Strategy	Lecture Method using ICT Tools	**Identify** the risk, assess and risk control strategies.	Group discussions
III.	1. Firewalls: Processing modes, categorizations 2. Firewall Architecture, Choosing a Firewall 3. Configuring and Managing a Firewall 4. Firewall Rules 5. Protecting Remote Connections: Securing Authentication with Kerberos 6. VPN: Transport and Tunnel Mode	Traditional method	**Demonstrate** expertise in configuring host and network level technical security controls to include host firewalls, user access controls, host logging, network filtering, intrusion detection	CBT,Assignments

			and prevention	
IV.	1. IDPS :terminology, types of IDPS 2. IDPS Detection Methods, IDPS Response Behavior 3. Strengths and Limitations of IDPS 4. Honey pots, Honey nets and Padded Cell Systems 5. Port Scanners, Firewall Analysis Tools 6. Operating System Detection Tools, Vulnerability Scanners 7. Packet Sniffers , Wireless Security Tools	Lecture Method using ICT Tools, Blackboard	**Analyse** systems, tools, methods, and techniques for securing digital information within an organization	Group discussions,Seminars conducted
V	1. Terminology, Cryptographic Tools, PKI, 2. Digital Signature, Digital Certificate and Stenography 3. Protocol for Secure Communication: Securing Internet with SSL 4. Securing Email with S/MIME,PGP 5. Securing web Transactions SET 6. Securing wireless Network with WEP and WPA 7. Securing TCP/IP with IPSEC	Lecture Method using ICT Tools, Blackboard	**Develop** encryption and decryption techniques.	CBT

List of References (Book / ICT / Weblinks):

1. Whitman Michael, E. and Mattord Herbert, J. 2011. Principles of Information Security. 4 th Edition. USA: Course Technology.

Name of the faculty member & Signature: S. Swapna

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: B.SC(COMPUTER SCIENCE & ENGINEERING) **Class & Section:DCS** **Course Code: CS18602A**

Name of the Faculty Member:K.ANITHA **Course Title: CLOUD COMPUTING**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1.Cloud Computing Overview - Introduction to Cloud Computing, Cloud Components, Infrastructure Services. 2.Benefits – Scalability, Simplicity, Knowledgeable Vendors , More Internal Resources, Security. 3.Limitations - Your Sensitive Information, Applications Not Ready, Developing Your Own Applications 4.Features of cloud platform. 5.System models for advanced computing –clusters of cooperative computing, 6.Software systems for advanced computing-service oriented software and parallel and distributed programming models with introductory details.	Lecture Method using ICT Tools	**Understand** basic advantages and disadvantages of cloud computing	Seminars conducted,CBT
II.	1.Introduction. 2.The cloud reference model: Architecture, Infrastructure-and	Lecture Method using ICT Tools	**Classify** design and architecture of cloud computing, types of clouds and services of cloud	Group discussions

List of References (Book / ICT / Weblinks):

1. Cloud Computing, A Practical Approach Anthony T Velte, Toby J Velte, Robert Elsenpeter.
2. Mastering Cloud Computing- Raj Kumar Buyya, Christian Vecchiola and S.TanuraiSelvi, TMH, 2012.

Name of the faculty member & Signature:Mrs.K.Anitha

5/4/24

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - VI

Department: B.Sc. Computer Science & Engineering **Class & Section:** DCS **Course Code: CS21602B**

Name of the Faculty Member: Y. Rathna Deepthi **Course Title:** DATA MINING

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Data Mining Basics, Architecture of Data Mining System, Knowledge Discovery Process, Integrating Data Mining with Data Ware House , Related areas of Data Mining, criteria for evaluating data mining tools, Categorize data mining systems, Interesting and Useful data, Web mining, text mining, Temporal data mining, Sequence mining, Time Series Analysis, Spatial Data Mining, Applications of Data mining, Issues and challenges, current trends in Data Mining	Lecture Method using Board	Understanding the importance of data mining and its related areas	Quiz and Group Discussion
II.	**FREQUENT PATTERN MINING:** Basic Problem Definition, Mining Association rules, Applications and Variations, Interestingness, Frequent Item set Mining algorithms-Apriori Algorithm, Partition Algorithm, Sampling algorithm, FP Growth Algorithm, Incremental Mining	Lecture Method using Board	Organizing data using preprocessing techniques and identifying frequent item sets	Solving problems by using FPM Techniques
III.	**CLASSIFICATION:** Classification- Basic Problem Definition, Applications, Evaluation of Classifiers, Other Issues, Classification techniques- Decision Trees, Naïve Bayes, Bayesian Belief Networks, K-Nearest Neighbors, Neural Networks, Regression	Lecture Method using Board	Performing classification of data by using different classification algorithms.	Solving Examples

IV.	**CLUSTERING:** Basic Problem definition, applications, Measurement of Similarity, Evaluation of clustering algorithms, classification of clustering algorithms, Partitioning methods- K-Means algorithm, PAM algorithm, Hierarchical methods- Agglomerative and Divisive approach , Linkage metrics, BIRCH algorithm, Density based methods- DBSCAN algorithm, Outlier detection	Lecture Method using Board and ICT tools	Implementing appropriate data mining methods on data sets	Assignment
V.	**PATTERN DISCOVERY IN REAL WORLD DATA:** Introduction, Relational data, Transactional Data, Multidimensional data, Distributed Data, Spatial Data, Data Streams, Time Series Data, Multimedia Data	Lecture Method using Board	Understanding the data models of real-world data like relational, spatial etc.	Group Discussion

List of References (Book / ICT / Weblinks):

1. Data Warehousing,1st Edition– Thareja Reema
2. Data Mining,1st Edition – Vikram Pudi P, Krishna Radha
3. https://youtu.be/pG7KQMvY85Y

Ms. Y. Rathna Deepthi Deepthi

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: ENGLISH **Class & Section: ACSML, ACSCC, ACSCS,ACS,ACSIT** **Course Code: EN23101**

Name of the Faculty Member: ASHA JOHN **Course Title: GENERAL ENGLISH-1**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Short Story – The Mystery Story Present Tense Past Tense Future Tense Paragraph Writing	Lecture Method using ICT Tools	To learn about the fundamentals Of communication	Solving mixed tense exercises Narrating mystic experiences Writing paragraphs on various topics
II.	Poem – Goodbye Party for Miss Pushpa T.S. Subject- Verb Agreement Punctuations Review Writing	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Explanation of the poem by students Grammar exercises Film review writing
III.	Lesson – Wit and Humour Nouns and Articles Homophones, Homonyms, Homographs Note making	Lecture Method using ICT Tools	To identify the different types of nouns and articles in a sentence composition and to learn the correct usage and spelling of different words which spell or sound similar.	Character sketch of the story characters Grammar exercises like fill in the blanks, multiple choice and true or false.
IV.	Lesson – India's Contribution to World Unity Adverbs Adjective and adverb Suffixes	Lecture Method using ICT Tools	To think critically, demonstrate an understanding of diverse cultures and historical movements.	Description of the message conveyed by the author and its relevance in the day today world.

	Formal letters and Curriculum Vitae		To recognize the different parts of speech	Practice in Formal letter and Curriculum Vitae writing
V.	Lesson – Sachin Tendulkar Adjectives, Comparison of Adjectives Common Errors, Commonly misspelt words, Commonly Confused words	Lecture Method using ICT Tools	To write grammatically correct sentences and to identify different degrees of comparison.	Text book exercises and worksheets

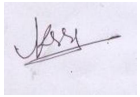
List of References (Book / ICT / Weblinks):

1. Skills Annexe. Functional English for Success. Orient Black Swan

SUGGESTED READING:

• Balasubramaniam, M. 1985 Business Communication. New Delhi: Vani Educational Books.
• Krishna Mohan and Meera Banerjee, 1990. Developing Communication Skills. New Delhi: Macmillan India Ltd.
• Krishnaswamy.N. and Sriraman, T. 1995. Current English for Colleges. Madras: Macmillan India Ltd.
• Narayanaswamy.V.R. 1979 Strengthen Your Writing. New Delhi: Orient Longman.
• Sharma.R.and Krishna Mohan. Business Correspondence. 1978. New Delhi. Tata McGraw-Hill Publishing Co

Name of the faculty member & Signature: ASHA JOHN

Approved by Head of the Department 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –2024

SEMESTER I

Department: B.Sc. Computer Science and Information Technology **Class & Section: ACSIT** **Course Code:VE18201**

Course Title: Value Education and Personality Development.

Name of the Faculty Member: Ms. A. Sandhria Thomas

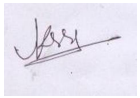
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to ethics (Reasons to have ethics, Norms and Dimensions of Human Development)	Lecture Method (Case Studies and Real-World Examples) and ICT Tools	Students will develop a heightened awareness of ethical issues and dilemmas, recognizing the importance of ethical considerations in personal and societal decision-making. To learn to differentiate between Accepted norms and Counter values and be able to identify the various dimensions of Human Development.	Scenario Selection: Choose a range of scenarios that relate to everyday life, workplace, or community situations where ethical decisions are crucial
II.	Approach to Life (Conscience and Pseudo-conscience , Happiness as Life- goal , Values revealed and lived in Religions, Experience of God , Love: The three components of love,Some of basic stages and issues of life: Family, Love, Sex, Marriage.)	Lecture Method (Debates and Discussions) and ICT Tools.	Students will synthesize ethical values from different religious traditions, exploring commonalities and differences to develop a comprehensive approach to life that integrates diverse moral principles.	Values Identification: Begin with a session on values identification. Guide students in reflecting on their core values and principles that influence their decisions and actions. Group Discussions: Facilitate group discussions where students share their identified values and discuss how these values shap

III.	Concern for others (Self and Another,Human context, Moral Problems of a Society.)	Lecture Method (Values Clarification Exercises ,Case-Based Learning).	Students will develop a sense of empathy, understanding and appreciating the perspectives, feelings, and challenges faced by both themselves and others in the context of societal moral problems.	Creative Solution Brainstorming: Challenge students to think creatively and brainstorm alternative solutions to the presented ethical dilemmas. Emphasize the importance of innovative thinking in addressing societal moral problems.
IV.	Transformation of Self (Definitions , Elements, Characteristics of Personality.Traits of a good personality. Self - identity, Self concept, Self discovery and Self acceptance)	Lecture Method (Mindfulness and Meditation Practices)	Students will develop a sense of self-awareness, recognizing their values, beliefs, and personal strengths as a foundation for the transformation of self.	Reflection Prompts:Offer the students a set of reflection prompts related to self-transformation. These prompts can include questions about personal values, aspirations, challenges, and growth areas. For example: Describe a moment in your life when you felt the need for personal change.
V.	Life Enrichment Skills(Purpose of life - Goal setting and it's characteristics, Building Relationships, Time Management, Stress Management, Emotion Management, Conflict Management and Team management (Group Dynamics)	Lecture Method (Reflection and Journaling)	Students will demonstrate proficiency in self-management skills, including effective time management, goal setting, and organization, contributing to a more enriched and balanced life.	Rotational Group Activities.

List of References (Book / ICT / Weblinks):

1. Human Values - Development Programme - AIACHE
2. In Harmony - Value Education at College level. By a Team of Ethics Teachers (G.M. James , B.J JAYARAJ , K.CANDASSAMY, BERNARD D'SAMI , S.J.A PACKIARAJ)

Name of the faculty member & Signature: Ms. Arasharial Sandhria Thomas

Approved by Head of the Department : 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

I-SEMESTER

Department:Computer Science &Information Technology **Class&Section:BSC(ACSIT)** **Course Code:BS19101**

Name of the Faculty Member:Pathri Shirisha **Course Title:Mathematics-I**

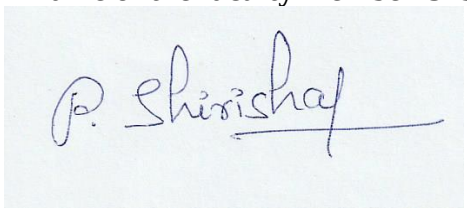
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**(Differential Equations of First order and First Degree)** 1.Exact differential equations – Integrating factors – Change of Variables (5) 2.Linear differential equations(5) 3.Differential Equations reducible to linear form Bernoulli's equation(5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Categories the differential equations with respect to their order and linearity. Solve differential equations of first order Using numerical and analytics methods such as integrating factors	Group Discussion ,Case Study
II.	**(Linear Differential Equations With Constant Coefficient)** 1.Auxiliary equation, Complementary function, Particular integral (5) 2.Working rule for finding P.I. when $X=e^{ax}$, Sinbx , Cosbx, $e^{ax}V$, x^m (5) 3. Cauchy's equation (5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Analyze and Solve basic Applications problems Described by first order differential equations Such as Orthogonal Trajectories	Written Test, Solving the problems by Using Different Methods
III.	**(Calculus)** 1.Mean Value theorems: Rolle's Theorem (5) 2. Lagrange's Mean Value theorem with their geometrical interpretations(5) 3. Cauchy's mean Value theorem and applications(5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Solve Second order Homogeneous Equations with Constant Coefficients, obtain exact and numerical solutions using Differential Equations technology	Quiz ,Solving Competitive Mathematical Questions

IV.	**(Infinite Series)** 1. Sequence: Definition of a sequence ,Limit ,Convergent divergent and oscillatory sequences Series- General Properties of series(5) 2. Necessary condition for convergence- Series of positive terms, Comparison tests- p-test(5) 3. D' Alembert's ratio test, Cauchy's Root Test, Alternating Series Without(Proof), Absolute and conditional convergence(5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Combine The necessary Laplace transform technique to solve second order ordinary differential equations solve the Laplace transform Standard Functions	Encouraging The Students to Participate workshops about Mathematical Sciences
V.	**(Fourier Series)** 1.Fourier Series of a function in an interval of length 2π (5) 2. Fourier Series for even and odd Functions (5) 3. Half range Sine series and Cosine Series (5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Analyze A Fourier series of a given periodic function By Evaluating Fourier Coefficients	Oral Test,Group Discussion

Listof References (Book/ICT/ Weblinks):

1. Zafar Ashan.**Differential Equations and Their Applications** 2nd edition Prentice hall of India (Units I,II,III)
2. B.S.Grewal 2014.**Higher Engineering Mathematics**. 3rd Edition Kanna Publishers (IV,V)
3. Iyengar T.K.V.B Krishna Gandhi ,Ranganatham Prasad M.V.S.S.N 2009 **Engineering Mathematics** Vol II S Chand

Name of the faculty member & Signature: Pathri Shirisha



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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –2024

SEMESTER I

Department: CSIT **Class & Section: ACSIT** **Course Code:CSIT18101**

Name of the Faculty Member: K.Lucas Reddy **Course Title: EDC**

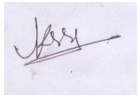
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Electronic components(passive and active) basic laws of electricity, Electrical power sources	Lecture Method using ICT Tools and board	To Learn about concepts of behavior of components, features of electrical power sources	Oral question and answers Drawing Diagrams Knowing the operation and working
II.	Semiconduters PN Junction Diode, zener diode Rectifiers and filters	Lecture Method using ICT Tools and Board And Demonstration	To learn the operation of semiconductors and functioning of diodes and operation of rectifiers	Oral question and answers Drawing Diagrams Knowing the operation and working
III.	BJT Structure working and its characteristics Transistor amplifier and its analysis using load line method	Lecture Method using ICT Tools and Board And Demonstration	To learn the concepts involved in operation of BJT and use it in amplifying electrical signals	Oral question and answers Drawing Diagrams Knowing the operation and working
IV.	Biasing of BJT,FET and selection of Quiescent point SSA and its DC and AC equitant circuits FET Structure operation and its charectarestics,FET amplifier	Lecture Method using ICT Tools and Board and Demonstration	To learn concept of biasing and build the SSA and its analysis FET amplifier and amplifying electrical signals.	Oral question and answers Drawing Diagrams Knowing the operation and working

V.	Different types of amplifiers (MSA,PA,TVA and feedback amplifiers) Oscillators (concepts ,Circuits and working analysis)	Lecture Method using ICT Tools and Board And Demonstration	To learn the different amplifiers and their features Concept of oscillators and their functioning	Oral question and answers Drawing Diagrams Knowing the operation and working

List of References (Book / ICT / Web links):

1. Basic electronics and Linear Circuits by Baraga ,Guptha,2006 Tata McGraw-hill

Name of the faculty member & Signature: K.Lucas Reddy

Approved by Head of the Department 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – I

Department: Computer science and information technology **Class & Section: ACSIT** **Course Code: BS19123**

Name of the Faculty Member: N.Nageshwari **Course Title: Problem solving through C**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• **Block diagram of computer** • **Software and its types** • **Algorithm and flowcharts** • **Structure of C** • **Files used in C** • **Compiling and executing C program**	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Understanding basics of C language	PPT presentation and assignments
II.	• C tokens • Data types in C • Enumerated data • Typedef and type casting • Variables and types • Operators and expressions	Lecturing using traditional methods, Lecturing Method using ICT Tools	How c program is structured and knowing about different data types , operators , expressions supported in C	PPT presentation and assignments
III.	• Conditional branching statements • Iterative statements • Arrays • Strings and manipulating functions in C	Lecturing using traditional methods, Lecturing Method using ICT Tools	Knowing how to introduced control statements while writing program	PPT presentation and assignments
IV.	• **Functions** • **Categories of functions** • Passing parameters to functions • Storage classes	Lecturing using traditional methods, Lecturing Method using ICT Tools	Explaining how functions work, and knowing different storage classes available	PPT presentation and assignments

	• Pointers • Dynamic memory allocation			
V.	• **Structures** • **Union** • **File handling – various modes** • **File operations** • **Random accessing file**	Lecturing using traditional methods, Lecturing Method using ICT Tools	Knowing difference between structure and union and how files are maintained and various operations on file	PPT presentation and assignments

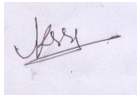
List of References (Book / ICT / Weblinks):

ESSENTIAL READING

Thareja reema 2016 programming in C 2nd edition

Kanetkar yashwanth 2018 Let us C 16th edition

Name of the faculty member & Signature: N.Nageshwari

Approved by Head of the Department 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-III

Department: Environmental Science **Class: NCSIT** **Course Code:ES23301**

Name of Faculty Member: S.BALACHANDAR **Course Title: EVS&GS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable & Non Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of natural resources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earth quakes, and Cyclones**	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge on solid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	**Rain-Water Harvesting, Water-shed Management** **Global Warming Ozone depletion, and Acid rains Environmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	Lecture Method using ICT Tools and Board	Apply the environmental science knowledge to improve the resources Evaluate and understand the sustainable environmental conditions and control methods	Oral question and answers To understand the environmental policies and regulations

IV.	**Why should we study gender issues?** **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	Lecture Method using ICT Tools and Board	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	Oral question and answers To develop students' sensibility with regard to issues of gender in contemporary India
V.	**Sexual harassment** **Say no eve teasing** **The caste based violence** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act(2005)**	Lecture Method using ICT Tools and Board	Understand the gender problems and ways of addressing them, including interactions across local to global scales in communities and overcome inequalities with legislation	Oral question and answers To expose the students to debate on the politics and economic works and on gender violence

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition. Chennai: Oxford University Press.

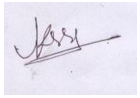
Dr D K Asthana and Dr Meera Asthana. 2014.

2.**A Text Book of Environmental Studies** Revised Edition. New Delhi: S. Chand & Company

3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). Print. **We Were Making History...Life Stories of Women in the Telangana People's Struggle**. New Delhi: Kali for Women.

4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.**Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993

Name of the faculty member & Signature: S.BALACHANDAR

Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: B.SC(COMPUTER SCIENCE &ENGINEERING) **Class & Section:NCS** **Course Code: BS18335**

Name of the FacultyMember: K.KIRANKUMAR **Course Title: DISCRETE MATHEMATICS**

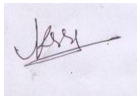
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Relations and ordering 2. Partial order relations - Partially ordered sets 3. Hasse diagrams 4. Lattices - Properties of lattices 5. Types of Lattices	Lecture Method using Blackboard.	**Develop** understanding of Logic Sets and Functions.	SEMINAR CONDUCTED,CLASS TEST
II.	1. Definition of a graph, Degree of vertex 2. First theorem of graph theory Paths and connection 3. Isomorphism of graphs 4. Some special simple graphs	USING GRAPH MODELS	**Evaluate** and apply the fundamental concepts in graph theory	CLASS TEST
III.	1.Trees and their properties 9 Binary trees, Binary search trees, Spanning trees, Kruskal's Algorithm- Prim's Algorithm 2.Planar graphs, Euler's formula	Lecture Method using ICT Tools,Blackboard	**Develop** understanding of how graph and tree concepts are used to solve problems arising in the computer science.	SEMINAR CONDUCTED, CLASS TEST
IV.	1.Euler graphs 2.Hamiltonian graphs- Grinberg theorem Chromatic numbers	Lecture Method using ICT Tools,Blackboard	**Express** the concepts and results of Number Theory.	GROUP DISCUSSION
V.	1.Divisibility- Division algorithm 2.Euclid' algorithm 2 3.Properties of G.C.D 4.Primes – Fundamental theorem of Arithmetic. 5.Congruence's – Properties	Lecture Method using ICT Tools,Blackboard	**Identify** methods and techniques used in number theory.	COMPUTER BASED TEST

	6.Fermat's theorem and its Applications Wilson's theorem and its Applications			

List of References (Book / ICT / Weblinks):

1. Tremblay, J.P and Manohar, R. 2007. **Discrete Mathematical Structures withapplications to Computer Science.** New Delhi: Tata McGraw-Hill.(For Unit I)
2. Mott, J.L and Kandel. 2007. **Discrete Mathematics for Mathematicians and Computer Scientists.** 2nd Edition. New Delhi : PHI. (For Units II, III & IV)

Name of the faculty member & Signature:K.KIRANKUMAR

Approved by Head of the Department: 

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER III

Department: Computer Science and Information Technology **Class & Section: NCSIT & 3rd sem** **Course Code:CSIT23301**

Course Title: PRINCIPLES OF INFORMATION SECURITY

Name of the Faculty Member: Shima AN

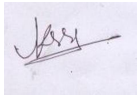
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Security, Critical Characteristics of Information, NSTISSC Security Model Components of Information Security ,Balancing Information Security and Access, Approaches to Information Security Implementation, System Development Life Cycle Security System Development Life Cycle, Information Security: Art of Science	Lecture Method using ICT Tools: Classroom Screen Website for an Interactive class.	To understand the concepts of confidentiality, availability and integrity in context of Information Security	Quiz, PPT presentation for students and small assignments
II.	Need for Security: Business Needs, Threats and category of threats Attacks and category of Attacks, Secure Software Secure Software Development	Interactive Learning Problem-Solving, Lecturing using traditional methods	To understand the risk in system and also types of threats and attacks	Regular Assessments ,group discussion and debate
III.	Firewalls: Processing modes, categorizations, Firewal Architecture, choosing a Firewall Configuring and Managing a Firewall, Firewall Rules, Protecting Remote Connections: Securing	Lecture-Based Teaching Flipping method-review materials independently before	Students become expertise in configuring host and network level technical security controls to include host firewalls, user access controls, host logging, network filtering, intrusion	Interactive methods like group discussion and PPT presentations

	Authentication with Kerberos, VPN: Transport and Tunnel Mode	class Lecture Method using ICT Tools Problem-Based Learning (PBL)	detection and prevention	
IV.	IDPS: terminology, types of IDPS, IDPS Detection Methods, IDPS Response Behavior, Strengths and Limitations of IDPS , Honeypots, Honey nets and Padded Cell Systems , Port Scanners, Firewall Analysis Tools Operating System Detection Tools, Vulnerability Scanners , Packet Sniffers Wireless Security Tools	Lecture Method using ICT Tools Lecture-Based Teaching	To acquire knowledge in systems, tools, methods, and techniques for securing digital information within an organization	Real-world Case Studies, Regular assessments, Security Case Studies
V.	Cryptography- Terminology ,Cryptographic tools, PKI, Digital Signature, Digital Certificate, and steganography, Protocol for secure Communications ,Securing Internet with SSL, Securing Email with S/MIME,PGP, Securing web transactions with SET, Securing wireless Network with WEP and WPA, Securing TCP/IP with IPSEC	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools Problem-Based Learning (PBL)	To understand the concepts of cryptographic tools with encryption and decryption techniques	Online Courses and Certification, Real-world Case Studies, Regular assessments

List of References (Book / ICT / Weblinks):

1. Whitman Michael, E. and Mattord Herbert, J. 2011. Principles of Information Security. 4th Edition. USA: Course Technology

Name of the faculty member & Signature: Shima AN

Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – III

Class & Section: NCSIT **Course Code: CSIT23302**

Department: Computer science and information technology

Name of the Faculty Member: N.Nageshwari **Course Title: Computer Networks**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• **Protocols and standards** • TCP/IP protocol suite • Analog and digital, transmission impairments • Transmission media • Digital transmission • Multiplexing, wavelength and time division	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Understanding basic protocols and signal transmission through different mediums	PPT presentation and assignments
II.	• Error detection and correction, • checksum, CRC , hamming code • Data link control • Stop and wait ARQ, piggybacking • HDLC , random access • Wired LANs • Type conversion and Typecasting	Lecturing using traditional methods, Lecturing Method using ICT Tools	Understanding error detection and corrections in transmission And knowing more protocols and their importance.	PPT presentation and assignments
III.	• IP address space • Classful and classless addressing • IPV4 datagram, fragmentation • Internet control protocols • Delivery , forwarding , unicast	Lecturing using traditional methods, Lecturing Method using ICT Tools	Understanding IP addresses and protocols and their importance	PPT presentation and assignments

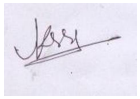
	routing protocols			
IV.	• Process-to-process delivery, UDP, checksum • UDP operations , use of UDP • TCP , numbering bytes , TCP services • Flow control , STD, congestion control	Lecturing using traditional methods, Lecturing Method using ICT Tools	Explaining about UDP and TCP And importance of STD	PPT presentation and assignments
V.	• DNS , Distribution of name space • TELNET , E-Mail architecture , SMTP • DNS in internet , resolutions , types of records • Message access agent • WWW and HTTP architecture	Lecturing using traditional methods, Lecturing Method using ICT Tools	Understanding about DNS , TELNET , and email , http architecture	PPT presentation and assignments

List of References (Book / ICT / Weblinks):
ESSENTIAL READING

Forouzan ,Beharouz .A. 2011 .Data Communications and Networking 3rd edition

Forouzan ,Beharouz .A. 2005. TCP/IP Protocol suite. 3rd edition

Name of the faculty member & Signature: N.Nageshwari

Approved by Head of the Department 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – I

Department: Computer science and information technology **Class & Section: DCE** **Course Code: CE21504**

Name of the Faculty Member: N.Nageshwari **Course Title: Linux administration**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• **Introduction to linux** • **Compressing files** • **Permissions and access control list** • **Links and removing links** • **User and group administration** • **Backing up files backup utilities** • **Uses of crond** • **NMTUI command**	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Understanding about linux platform And basic commands to files , users ,group permissions	PPT presentation and assignments
II.	• FTP connections, ftp and sftp clients • Configuration of VSFTPD , uploading and downloading files. • Sendmail ,outbound , inbound • Configuration of sendmail • Setting up mail server , mail logs • NFS, running NFS client • Mounting a remote directory configuring NFS using system config	Lecturing using traditional methods, Lecturing Method using ICT Tools	Understanding how to install and configuring specific packages and making required changes according to the user request	PPT presentation and assignments
III.	• SELinux config files • Getenforce and seteforce and set status commands • DHCP , working DHCP client • DHCP deamon n static ip address • Raid levels • Lvm • Web based administration	Lecturing using traditional methods, Lecturing Method using ICT Tools	Knowing about DHCP and working with different set of deamons	PPT presentation and assignments

IV.	• **SAMBA, samba utilities and deamons** • **Running samba clients** • **Shares from linux, working shares from windows** • **Setting up samba server configuration** • **DNS nodes and domains and subdomains , zones** • **Queries , DNS working** • **Adding resource records**	Lecturing using traditional methods, Lecturing Method using ICT Tools	Understanding about samba and working with samba and various set ups in fedora	PPT presentation and assignments
V.	• **Firewall configuration window** • **Building a firewall using system-config-firewall** • **Iptables , anotomy of iptables command** • **Apache server introduction , running apache server** • **Directory index contexts and containers** • **Disk quotas , emabling quotas on partition , creating quotas for user**	Lecturing using traditional methods, Lecturing Method using ICT Tools	Understanding firewall , apache server and disk quotas in detail	PPT presentation and assignments

List of References (Book / ICT / Weblinks):

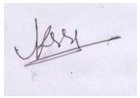
ESSENTIAL READING

Christopher negus , eric foster – jhonson 2009 . Fedora10 and red hat enterprise linux bible

Sobell – mark. G. 2014 . A Practical Guide to Fedira and Red Hat Enterprise Linux 7th edition

Vugt Sander van 2013. Red Hat Enterprise Linux 6 Administration : Real World Skills for Red Hat Administrators .

Name of the faculty member & Signature : N.Nageshwari

Approved by Head of the Department 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: B.Sc. computer systems & Engineering **Class & Section: DCE** **Course Code:BS18545**

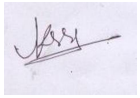
Name of the Faculty Member: Veera sree laxmi ramya teja **Course Title: Computer Networks**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Data communications, networks, OSI model, TCP/IP protocol suite, analog and digital, transmission media, multiplexing.	Lecture Method using Board.	Identify basic computer network topologies and protocols	Quiz
II.	Error detection and correction- parity, checksum, CRC, Data link control, Stop and wait ARQ, GO-BACK-N ARQ,ALOHA,CSMA,CSMA/CD, CSMA/CA, Wired LAN.	Lecture Method using ICT Tool.	Classify different error detecting techniques	Assessment
III.	IP address space, class full and classless addressing, subnetting and supernetting, IPV4 datagram, fragmentation, ICMP,IGMP,ARP,RARP.	Lecture Method using ICT Tool.	Construct subnetting and routing mechanisms.	Seminars
IV.	Process to process delivery, UDP operation, TCP services, Numbering bytes, Flow control, TCP connection, State transition diagram, congestion control.	Lecture Method using ICT Tool.	Sketch the routing protocols and analysis how to assign the IP address for the given network.	Assignment, Group Discussion
V.	DNS Name space, DNS internet, resolution, message, types of records, TELNET, Email architecture, www and HTTPS	Lecture Method using ICT Tool.	Develop network design and implementation.	Quiz

List of References (Book / ICT / Weblinks):

1. Forouzan, Beharouz. A. 2011 Data communication and networking 3rd edition
2. Forouzan, Beharouz. A. 2005 TCP/IP Protocol suite 3rd edition

Name of the faculty member & Signature:Veera sree laxmi ramya teja

Approved by Head of the Department: 

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LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: Computer Science and Information Technology **Class & Section:DCE and 5th sem** **Course Code:**CE21501B

Name of the Faculty Member: Shima AN **Course Title:** PRINCIPLES OF INFORMATION SECURITY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Security, Critical Characteristics of Information, Balancing Information Security and Access, Approaches to Information Security Implementation, System Development Life Cycle Security System Development Life Cycle, Information Security: Art of Science Need for Security: Business Needs, Threats, Attacks Secure Software Development-software Assurance, Software Design Principles, Software Development Security Problem	Lecture Method using ICT Tools: Classroom Screen Website for an Interactive class.	To understand the concepts of Security System Development Life Cycle and Need for Security in a system	Quiz, PPT presentation for students and small assignments
II.	Overview of Risk Management Risk Identification, Risk Assessment Risk Control Strategies, Selecting a Risk Control Strategy	Interactive Learning Problem-Solving, Risk Challenges, Lecturing using traditional methods	To identify and access the risks and learn how to control risks using different strategies.	Regular Assessments ,group discussion and debate on Risk management

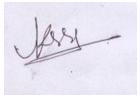
III.	Firewalls: Processing modes, categorizations, Firewall Architecture, choosing a Firewall Configuring and Managing a Firewall, Firewall Rules, Protecting Remote Connections: Securing Authentication with Kerberos, VPN: Transport and Tunnel Mode	Lecture Method using ICT Tools Lecture-Based Teaching	Students become expertise in configuring host and network level technical security controls to include host firewalls, user access controls, host logging, network filtering, intrusion detection and prevention	Interactive methods like group discussion and PPT presentations
IV.	IDPS: terminology, types of IDPS, IDPS Detection Methods, IDPS Response Behavior , Strengths and Limitations of IDPS , Honeypots, Honey nets and Padded Cell Systems , Port Scanners, Firewall Analysis Tools Operating System Detection Tools, Vulnerability Scanners , Packet Sniffers Wireless Security Tools	Lecture-Based Teaching Flipping method-review materials independently before class Lecture Method using ICT Tools Problem-Based Learning (PBL)	To acquire knowledge in systems, tools, methods, and techniques for securing digital information within an organization	Interactive methods like group discussion and PPT presentations, problem solving methods
V.	Proliferation of Mobile and Wireless Computing Era ,Trends in Mobility, Credit card Frauds in Mobile and Wireless Computing Era , Security Challenges posed by Mobile Devices, Registry Settings for Mobile Devices Authentication Service Security Organizational Security Policies and Measures in Mobile Computing Era ,Use of RFID in Mobile Commerce and Information Asset Protection	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools Problem-Based Learning (PBL)	To understand the concepts of Security Considerations in Mobile and Wireless Computing.	Quiz, PPT presentation for students and Interactive methods like group discussion

List of References (Book / ICT / Weblinks):

. 1.Whitman Michael, E. and Mattord Herbert, J. 2011. Principles of Information Security. 4th Edition. USA: Course Technology.

2. Nina Godbole. Information Systems Security: Security Management, Metrics, Frameworks and Best Practices. 2 nd Edition Wiley Publications

Name of the faculty member & Signature: Shima AN

Approved by Head of the Department: 

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: Computer Science and Information Technology **Class & Section:DCE &5th sem** **Course Code:** CE21505

Name of the Faculty Member:Shima AN **Course Title: Software Engineering**

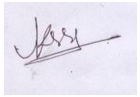
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	The evolving role of software, software, changing nature of software. Legacy Software, Software Myths, Software engineering-layered technology, Process Framework, CMMI, Process patterns, Personal and Team Process models. Process Models: waterfall, incremental, evolutionary process models, Agile process models	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	To understand to draw and design software through various process models	Quiz, interactive methods like group discussion and PPT presentations
II.	Requirements Engineering tasks, Initiating requirements engineering process , Eliciting requirements, Developing Use Cases, Building analysis model, Negotiating and validating requirements, Requirements analysis, analysis modeling approaches, Data modeling Concepts, Object oriented analysis, Scenario based modeling, Flow oriented modeling ,Class based modeling, creating behavioral model, Case Study	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools Problem-Based Learning (PBL)	Able to gain knowledge in Object Oriented concepts and various Models.	Debate, Interactive methods like group discussion and PPT presentation, Online Courses and Certification ions.
III.	Design Process and Quality , Design concepts and Design model , Pattern Based software design,Software architecture, Data design Architectural styles and Patterns , Architectural	Lecture Method using ICT Tools: Classroom Screen Website for an Interactive class	To Choose different software designs and architectures	Real-world Case Studies, Regular assessments, Security Case Studies

	design, Assessing alternative architectural design .Managing Data flow into Software architecture			
IV.	. Introduction to Component, Designing class based components ,Conducting component level design, Object constraint language, Design conventional components ,Golden rules, User Interface Analysis and Design, Interface analysis, Interface design steps ,Design Evaluation	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools Problem-Based Learning (PBL)	To understand the components, golden rules and design evaluation.	Quiz, interactive methods like group discussion and PPT presentations
V.	A Single approach to Software testing Strategic issues, Test strategies for Conventional Software, Validation testing, System Testing , Testing fundamentals, Black box and White Box Testing, Basis Path Testing, Control Structure Testing .Software quality Metrics for analysis model , Metrics for design model, Metrics for source code . Metrics for testing, Metrics for maintenance.	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	To understand how to select testing techniques and determine its quality.	Online Courses and Certification, Real-world Case Studies, Regular assessments

List of References (Book / ICT / Weblinks):

1. Pressman, Rogers S. 2015. Software Engineering, A practitioner's Approach. 6 th Edition. McGraw Hill Education
2. Deepak Jain. 2009. Software Engineering. New Delhi: Oxford University Press.
3.Rajib Mall. 2009. Fundamentals of Software Engineering. 3 rd Edition. New Delhi: PHI.
4. Sommerville. 2007. Software Engineering. 7 thEdition.New Delhi: Pearson Education

Name of the faculty member & Signature: Shima AN

Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department ENGLISH **Class & Section:** ACSCC, ACSCS, ACS, ACSIT **Course Code:** EN23101

Name of the Faculty Member: Asha John **Course Title:** GENERAL ENGLISH-2

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Flash Fiction- 'The Mice' by Lydia Davies (1)** Simple, Complex and Compound Sentences (3) Conversion of Sentences (3) Information Transfer (2)	Lecture Method using ICT Tools	To learn about the fundamentals Of communication	Solving mixed grammar exercises Narrating mystic experiences Writing paragraphs on various topics
II.	**Short Story- 'The Face on the Wall' by E V Lucas (2)** ● Active and Passive Voice (3) ● Conjunctions (2) Essay Writing (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Narration of short stories by students. Grammar exercises Essay writing exercises
III.	**From the text *Three Days to See* by Helen Keller** ● Explanation of the text (3) ● Grammar- Usage of Modal Auxiliary Verbs (2) ● Vocabulary – Collective Nouns, Technical Vocabulary (2) Writing Skill – Newspaper Report (2)	Lecture Method using ICT Tools	To recognize the moral element which underlies in the short story. To identify the different types of modal auxiliary verbs in a sentence composition and to learn the correct usage of Collective Nouns, Technical Vocabulary.	Character sketch of the story characters. Grammar exercises like fill in the blanks, multiple choice and true or false. Newspaper Report writing exercises.
IV.	**Short Story from the text 'Leela's Friend' by R.K. Narayan** ● Explanation of the text (3) ● Grammar- Phrasal Verbs, **Wh**-questions (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills.	Description of the different characters of the story. Grammar exercises Exercises exercises like fill in the

	• Vocabulary- Noun and Verb Suffixes (2) • Writing Skill- Writing a Narrative (2)			blanks, multiple choice and true or false. Practice in writing a narrative
V.	**From the text 'The Last Leaf' by O. Henry** • Explanation of the text (3) • Grammar- Prepositions (2) • Vocabulary – Idioms (2) Writing Skill – Precis Writing (2)	Lecture Method using ICT Tools	To write grammatically correct sentences and usage of idioms in sentences.	Textbook exercises and worksheets Precis' writing exercises.

List of References (Book / ICT / Weblinks):

Epitome of Wisdom, Maruthi Publications

SUGGESTED READING:

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges.* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing.* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Name of the faculty member & Signature: Asha John

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- II

Department: B. Sc. Computer Science & Information Technology **Class: ACSIT** **Course Code:IC-23101**

Name of the Faculty Member:Dr.Srujan Kumar G **Course Title: Indian Heritage and Culture**

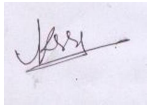
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture -contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation
IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the	Quiz and group presentation.

			constitution.	
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature: **Dr.Srujan Kumar G**

Approved by Head of the Department: **Mr. Seetha Rama Sastry** 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER II

Department:Computer Science and Information Technology **Class & Section:ACSIT** **Course Code:BS18201**

Name of the Faculty Member:Pathri Shirisha **Course Title: Mathematics II**

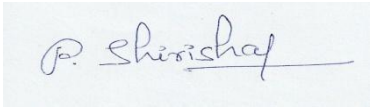
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. System of Linear Equations: Rank of a Matrix Rank-Echelon form (3) Normal form(3) Problems(4) 2. Solution of Linear Systems Homogeneous and non-Homogeneous Equations.(5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Formulate the solution set of a system of linear equations	Oral Test,quiz
II.	1.Eigen values - Eigen vectors: Eigen values-Eigenvectors–Properties(5) 2.Cayley Hamilton Theorem Inverse and powers of a matrix by Using Cayley-Hamilton theorem(5) 3. Quadratic forms- Reduction of quadratic form to canonical form(5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Solve the characteristic polynomial, eigenvectors, and eigenvalues	Written Test
III.	1.Vector Differentiation and the necessary and sufficient condition for vector function to have constant magnitude and constant direction.(5) 2.Vector Continuity- Differentiability- Vector Integration (5) 3. Gradient – Directional derivative of a scalar function- Equation of the Tangent and normal to a surface(5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Categorize the vector-valued functions of a real variable and their curves, Gradient vector fields and constructing potentials.	Case Sudy , Group Discussion
IV.	1.Divergence and Curl Operators (5) 2. Formulae involving these operators 3.Vector Identities- Simple Problems there on(5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Analyze the differential ideas of divergence, curl, and the Laplacian along with their physical interpretations	Oral Test

V.	1.Line Integrals-Surface integrals-Volume integrals (5) 2. Green‘s theorem ,Gauss theorem, Stoke‘s Theorem (Without proofs) (5) 3 .Problems on Green‘s theorem ,Gauss theorem, Stoke‘s Theorems (5)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Use the applications of Green‘s theorem in the plane, Gauss divergence theorem and Stoke‘s theorem.	Group Discussion

Listof References (Book/ICT/ Weblinks):

1. Vasistha, A.R and Vasistha, A.K.2014.Matrices. Meerut : Krishna Prakashan Media (For UNITS I, II)
2. Vasistha, A.R and Dr.Agarwal, D.C. 2015. Vector Calculus. 9 th Edition. Meerut: Krishna Publications. (For UNITS-III,IV andV)

Name of the faculty member & Signature : PATHRI SHIRISHA



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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER II

Department: CSIT **Class & Section: ACSIT** **Course Code: CSIT19201**

Name of the Faculty Member: K LUCAS REDDY **Course Title: LDC**

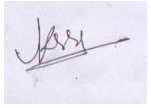
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Number systems, compliments Binary decimal codes, Boolean Algebra Boolean functions Logic gates universal gates	Lecture Method using ICT Tools and board	To Learn about concepts of number systems and binary codes and Logic gates and functions	Oral question and answers Drawing Diagrams Knowing the operation and working
II.	Simplification using K maps Combinational circuits design procedure (Arithmetic circuits, Code converters, Encoder, decoder, Mux and Demux	Lecture Method using ICT Tools and Board And Demonstration	To learn the operation of Logic family's simplification of Boolean functions maps	Oral question and answers Drawing Diagrams Knowing the operation and working
III.	Parity generation and checking Parallel Adder magnitude comparator multiplier interfacing of adders and comparators	Lecture Method using ICT Tools and Board And Demonstration	To learn the concepts of Design of various combinational circuits	Oral question and answers Drawing Diagrams Knowing the operation and working
IV.	Design procedure of sequential circuits – Flip flops Timing Diagrams, Counter design and analysis	Lecture Method using ICT Tools and Board And Demonstration	To learn the features of Flip flops and Registers	Oral question and answers Drawing Diagrams Knowing the operation and working

V.	Design of Registers, serial transfer timing signals, word time generation IC families and their charectarestics	Lecture Method using ICT Tools and Board And Demonstration	To learn the design and functioning of various types of Counters	Oral question and answers Drawing Diagrams Knowing the operation and working

List of References (Book / ICT / Web links):

1. **Digital Logic and Commuter design by M Morris Mano, TMH 2/e**

Name of the faculty member & Signature:

Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: CSIT **Class & Section:ACSIT** **Course Code:BS19221**

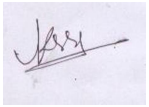
Name of the Faculty Member: k. sitarama sastry **Course Title: Engineering Physics**

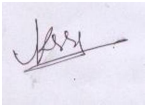
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**WAVE MECHANICS:** Matter waves – DeBroglie wavelength,Properties of wave function, Physical significance,Schrodinger time dependent and time independent wave equations,Particle in a 1-D box,Basic laws of electricity and magnetism,Maxwell's equations in integral and differential forms, EM waves and poynting theorem.	Lecture Method using ICT Tools	Analyze wave behavior of microscopic particles and to explain the Electromagnetic waves .	Quiz, and Brainstorming.
II.	Introduction – Propagation of light through an optical fiber, NA, Types of ofc,fibre drawing process double crucible method.	Lecture Method using ICT Tools	Apply physics principles for the development of Fiber optics and Lasers technology	Doing practical in physics lab.
III.	Introduction to Ultrasonic waves,Production of ultrasonic waves by Piezo - electric method,Properties and applications of Ultrasonics,Wavelength of Ultrasonic by Debye-Sears method,Dielectrics-Introduction,Expressions for portability,Frequency and temperature dependence of dielectric polarization,Ferro electricity-Barium titanate, applications of Ferroelectrics	Lecture Method using ICT Tools	Analyze dielectric materials and ultrasonic waves.	Quiz and problem solving through formulas.
IV.	Brief idea about semi conductors,Thermistor as a temperature sensor its V-I characteristics,Introduction - General properties	Lecture Method using ICT Tools	Explain semiconductors, superconductors and magnetic materials.	Doing practicals in lab.

	of super conductors – Applications, Hall effect 1 Type I and Type II superconductors 1 BCS theory (qualitative), Introduction to High Tc superconductors ,Missioner effect, types of magnetic materials, weiss theory of ferro-magnetism,Hysteresis curve,Soft and hard magnetic materials, Ferrites: Applications of ferrites.			
V.	Distinction between bulk and thin films,Thin film preparation techniques,Thermal evaporation methods, Electron beam evaporation, Construction and working of Solar cell – Applications Construction and working of Solar cell – Applications Construction and working of Solar cell – Applications, Introduction to nano materials and preparation of nano materials.	Lecture Method using ICT Tools	Design various thin films and nano materials for future applications	Groupdiscussion, brainstorming, PPTpresentation.

List of References (Book / ICT / Weblinks):

1. P.K.Palanisamy. 1998. **Engineering Physics**. 5th Edition. Scitech publications.
2. M.S. Avdhanulu and P.G. Kshirasagar. 1992. **Engineering Physics.** S.Chand & Co 1st Edition.
3. Dr.S.L.Guptha, Sanjeev Guptha. 2015. **Unified physics**. Vol-I,III,IV, 47th edition. Jai Prakash Nath Publications. India:Meerut.

Name of the faculty member & Signature: K.sitarama sastry. 

Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-II

Department: Comp. Sci & Info Technology **Class&Section: ACSIT** **CourseCode: BS22202**

Nameofthe FacultyMember: Mary perpetual **CourseTitle: C++ and Data Structures**

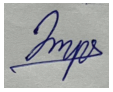
Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to object-oriented programming : Features, characteristics And applications of OOP's,Keywords, data types, variables and their declaration, reference variables, Scope resolution, member dereferencing & memory management operators, Manipulators, input and output objects (cin & cout),Functions : Definition, Function components, call by value, reference & address, Inline functions, functions with default arguments, Function overloading, Defining classes, defining member functions, nesting of member functions, Private member functions, Memory allocation for objects, static data members And static member functions, friend classes,Array of objects and Returning objects	Lecture Method using ICT Tools	**Explain** OOP's Concept	Group discussion on OOP's Concept
II.	Constructors, default and parameterized constructors, copy constructors, Constructor overloading, constructors with default arguments, Destructors Inheritance: Defining derived classes, single inheritance, making private members Inheritable, multilevel, multiple, hierarchical and hybrid inheritances,Virtual base classes, constructors in derived classes, abstract classes,Pointers to objects, this pointer, pointers to derived classes, virtual functions, Pure virtual functions,Operator overloading	Lecture Method using ICT Tools	**Understand** Constructors	Students analyzed Constructors

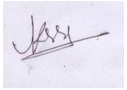
	using member functions and friend functions,Template: Template functions and Template classes			
III.	Stacks-Definition, implementing stack using arrays,applications of stack: infix, prefix and postfix expressions, conversion of infix to prefix and infix to postfix, evaluation of postfix expression,Queues-Definition, implementing queue using arrays, circular queue and double ended queue Sparse Matrix-definition, representation of sparse matrix in 3-tuple form	Lecture Method using ICT Tools	**Demonstrate:** Application of Stacks	Made a study on Stack and Queue
IV.	Linked list- Definition, single linked lists, operations on single linked list (Insertion & deletion), Stack and queue using linked list,Trees- Definition, linked representation of trees, Binary search tree, Tree Traversals (in-order, preorder and post order traversals) Linear search and binary search, sorting-Bubble, selection, insertion, quick and merge sort techniques	Lecture Method using ICT Tools	**Explain Linked list and Trees**	Students gave seminars on Linked list
V.	B-trees-insertion and deletion operations on B-trees,Graphs: Definition, Array and linked list representation of graphs,Graph traversals-BFS and DFS,Spanning tree and Kruskal‘s algorithm	Lecture Method using ICT Tools	**Classify BFS and DFS,Trees** .	Study done on BFS,DFS,Spanning tree and Kruskal’s algorithm

Listof References (Book/ICT/ Weblinks):
ESSENTIAL READINGS

Balaguruswamy, E. 2004. Object Oriented Programming with C++. 4 th Edition. New Delhi: Tata McGraw-Hill publications (For units I and II)

Kanetkar Yashwant, P. 2007. Data Structures through C++. 2nd Edition. New Delhi: BPB Publications(For units III, IV and V)

Name of the faculty member Signature: Mary perpetual 

Approvedby Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER - IV

Department: B.Sc (CSIT) **Class & Section :NCSIT** **Course Code: BS23401**

Name of the Faculty Member: M. Shailaja **Course Title: Probability and Statistics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Various measures of Central Tendency – Mean, Median & Mode Definitions, Merits, Demerit, Problems (grouped and ungrouped data) Various measures of dispersion - Standard Deviation and Variance Definitions, Merits, Demerit, Problems (grouped and ungrouped data) Probability Basic terminology, Addition theorem problems, Multiplication theorem problems,Bayes theorem problems	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	Calculate the mean, median, and mode of a set of data and identify the importance of measures of dispersion	Computer Based test.
II.	Random Variable: Discrete Random variable & Continuous Random variable Probability Mass & Density functions. Mathematical Expectation: Mathematical Exception, Addition Theorem of expectation, Multiplication theorem of expectation. (Excluding Derivations Theoretical Distributions: Discrete distributions: Binomial distribution, Fitting of binomial distribution, Poison distributions, Fitting of poisson distribution, Normal Distribution : Chief characteristics of the normal distribution, area of a property, Importance and fitting of a normal distribution.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Use discrete and continuous probability distributions, including requirements and making decisions.	Offline Quiz.
III.	Simple correlations(definitions and types) Karl Pearson coefficient of correlation Rank correlation Regression and regression lines	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Employee the principles of linear regression and correlation, including least square method, predicting a particular value of Y for a	Offline Quiz.

			given value of X and significance of the correlation coefficient..	
IV.	Testing of Hypothesis: Sampling distribution, the null hypothesis and type I and II errors, Critical region and level of significance. Tests of significance for large samples: Test of single proportion Test of significance of difference of proportions Test of significance for single mean and difference of means Test of significance for difference of standard deviations.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Knowledge about formulating and testing a hypothesis, using critical values to draw conclusions And determining probability of making errors in hypothesis tests, and about large sample tests..	Written Test.
V.	Small Sample Tests: Chi – Square test: Population Variance Goodness of fit Independence of attributes T- test : Single Mean Difference means and paired t-test F-test: Test of significance based on equality of two variances	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Understand and analyze various methods of small sample tests.	Written Test.

Listof References (Book/ICT/ Web links):

1. Gupta, S. C. (2011). Fundamentals of statistics (pp. 18-1). New Delhi, India: Himalaya publishing house.
2. Gupta, S. P. (1978). Statistical Methods 1978. 46 th Edition.
3. Deovre, J. (1987). Probability and statistics for engineering and science. Brooks/Cole, Belmont, CA.
4. Richard A. Johnson, Miller, Freund. Probability & Statistics for Engineers. PHI Publications

5. Spearman's rank correlation for repeated ranks - https://youtu.be/blAlbNcSd9g

6. Spearman's rank correlation for non-repeated ranks https://youtu.be/II_Qylg1SaM

Name of the faculty member &Signature:

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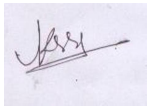


LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –2024

SEMESTER IV

Department: CSIT **Class & Section: NCSIT** **Course Code:BS20404**

Name of the Faculty Member: K.Lucas Reddy **Course Title: MPMC**

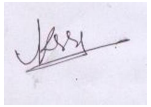
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	8080 Architecture, Functional block diagram, signal description,8086 based microcomputer and timing diagrams	Lecture Method using ICT Tools and board	To Learn about concepts of behavior and working of various modules and their interfacing	Oral question and answers Drawing Diagrams Knowing the operation and working
II.	Addressing modes standard programming structures ,8086 instructions and assembly language programming	Lecture Method using ICT Tools and Board And Demonstration	To write the programs to perform various data processing tasks	Oral question and answers Drawing Diagrams Knowing the operation and working
III.	Parallel data transfer,8255PPI block diagram its ports and modes, interfacing keyboards and display systems	Lecture Method using ICT Tools and Board And Demonstration	To learn the concepts involved in interfacing of keyboards and various displays	Oral question and answers Drawing Diagrams Knowing the operation and working
IV.	8086 interrupts inter pointer table ,8059 interrupt priority controller DMA, Asynchronous serial data communication(8251USART)	Lecture Method using ICT Tools and Board and Demonstration	To learn concept of interrupts, DMA and asynchronous serial data communication	Oral question and answers Drawing Diagrams Knowing the operation and working

V.	8051 Micro controller and its architecture and signal description,8051 flags and its memory organization	Lecture Method using ICT Tools and Board And Demonstration	To learn the architecture of 8051 microcontroller and its application in various practical modules	Oral question and answers Drawing Diagrams Knowing the operation and working

List of References (Book / ICT / Web links):

1.Microprocessor and Interfacing by Hall Douglas V,SSSP Rao. 3/e

Name of the faculty member & Signature: K.Lucas Reddy

Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Computer Science and Information Technology **Class&Section: NCSIT** **CourseCode:CSIT20402**

Name of the Faculty Member: Mr. Shaik Abdul Khadar **Course Title: Computer Organization**

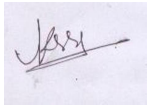
Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Instruction codes-direct and indirect mode. Computer registers, 16 bit common bus system. Computer instructions, Timing and Control, Instruction cycle, Input Output and interrupt, Memory reference instruction, Design of Basic Computer, Design of Accumulator Logic.	PPT Chalk & Board Discussion Based Learning	To have a thorough understanding of the basic structure and operation of registers and control memory.	Quiz, Solving Problems using the basic computer instruction.
II.	Programming Basic Computer: Machine Language, Assembly language, Assembler, Program loops, Programming Arithmetic and Logic Operations, Subroutines, Input Output programming.	PPT Chalk & Board Discussion Based Learning	To discuss in detail the programming languages, structure of assembly language and programming.	Quiz, Solving Problems using the basic computer instruction. Able to write assembly language programs.
III.	Micro programmed control: control memory, Address sequencing, Computer hardware configuration, Micro instruction format, Design of control unit and micro-program sequencer.	PPT Chalk & Board Discussion Based Learning	To study the computer hardware and different ways of micro instruction format.	Quiz, Solving Problems using the basic computer instruction
IV.	Pipeline and vector processing-parallel processing, Arithmetic pipeline, Instruction pipeline, Computer arithmetic-addition and subtraction, Floating point Arithmetic operation-consideration, configuration, addition and Subtraction, Multiplication algorithm- Booth algorithm, Array Multiplier, Division Algorithm-	PPT Chalk & Board Discussion Based Learning	To discuss in detail the operation of the arithmetic unit including the algorithms and· implementation of fixed-point and floating-point addition, subtraction and multiplication.	Quiz, Solving Problems using the basic computer instruction

	Hardware implementation, algorithm and divide overflow.			
V.	Peripheral devices, I/O interfaces, Modes of transfer, Direct Memory Access, I/O processor- CPU IOP Communication ,Memory organization-memory hierarchy ,Main memory-design of RAM and ROM chips , Auxiliary memory ,Cache and Associative memory	PPT Chalk & Board Discussion Based Learning	To study the different memories in computer system and hierarchical memory system	Quiz, Solving Problems using the basic computer instruction

List of References (Book/ICT/ Weblinks):

1. Mano Morris, M. 2007. Computer System Architecture. Prentice Hall of India.

Name of the faculty member & Signature: Mr. Shaik Abdul Khadar

Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-IV

Department: Comp. Sci & Info Technology **Class&Section: NCSIT** **CourseCode: CSIT23401**

Nameofthe FacultyMember: Mary perpetual **CourseTitle: Ethical Hacking**

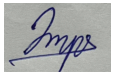
Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Information Security Overview, Information Security Threats and Attack Vectors,Hacking Concepts, Types, Scope and Phases, Informat Security Laws and Standards, Foot printing Concepts, Methodology, Tools Foot printing Countermeasures	Lecture Method using ICT Tools	**Explain** Foot printing Concepts	Group discussion on Foot printing Concepts
II.	Overview of Network Scanning,Understandin different techniques to check for Live System and open Ports,Understanding Various Scanning Techniques,Understanding various IDS Evasi Techniques,Understanding Banner Grabbing	Lecture Method using ICT Tools	**Understand Network mapping with six flags**	Students analyzed on Network mapping and flags

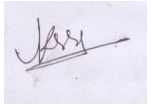
III.	Overview of Vulnerability Scanning,Using Proxies and Anonymizers for Attacks,Understanding IP Spoofing and Various Detection Techniques,Overview of Scanning Pen Testing,Overview of Sniffing Concepts,Understanding MAC Attacks, ARP Poisoning, MAC Spoofing Attacks	Lecture Method using ICT Tools	**Demonstrate: pen testing**	**Made study on pen testing**
IV.	Sniffing Tools,Sniffing Countermeasures Understanding various Techniques to Detect Sniffing Overview of Social Engineering Concepts Understanding various Social Engineering Techniques,Understanding Insider Threats	Lecture Method using ICT Tools	**Explain** social engineering concept	Students gave seminars on social engineering concept
V.	Overview of of DOS and DDOS and its techniques,DoS and DDoS attack tools Understanding the Botnet Network Understanding Session Hijacking Concepts,Application level Session Hijacking Network Level Session Hijacking	Lecture Method using ICT Tools	**Classify** DOS and DDOS .	Study done on DOS,DDOS and Session Hijacking

Listof References (Book/ICT/ Weblinks):

Ethical Hacking and Countermeasure V9,by EC-Council.

Mc Clure, Stuart, Scambray, Joel and Kurtz, George. 2009. Hacking Exposed.7" Edition. New Delhi: McGraw Hill.

Name of the faculty member & Signature: Mary perpetual 

Approved By HeadoftheDepartment: 

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: Computer Science and Information Technology **Class & Section: NCSIT** **Course Code:BS18430**

Name of the Faculty Member: Shima AN **Course Title:** OPERATING SYSTEM

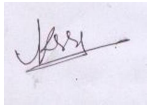
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction -Define Operating System, mainframe system, desktop systems, Multiprocessor systems, distributed systems, clustered systems , Real time systems , hand held systems Operating system structures-system components Operating system services, system calls, system programs, system structures , virtual machines	Lecture Method using ICT Tools: Classroom Screen Website for an Interactive class.	To understand the concepts of different types of systems.	Quiz, PPT presentation for students and small assignments
II.	Process concept-process concept, process scheduling ,Operation on processes, cooperating processes, Inter process communication ,Process scheduling-basic concepts, scheduling criteria, scheduling algorithms	Interactive Learning Problem-Solving, Lecturing using traditional methods	To understand the concept of process ,PCB and how inter -process communication and different CPU scheduling algorithm	Regular Assessments ,group discussion and debate
III.	Process synchronization-critical section problem, Semaphores, monitors, Deadlocks-deadlock characterization, methods for handling deadlocks , Deadlock prevention, Deadlock avoidance, Deadlock detection	Lecture-Based Teaching Flipping method-review materials independently before class Lecture Method using ICT Tools	Students become expertise in the concept of deadlocks in system	Interactive methods like group discussion and PPT presentations

		Problem-Based Learning (PBL)		
IV.	File system-file concept, access methods, Directory structure, file system mounting, file system sharing, File system implementation-file system structure, file system implementation, Directory implementation, allocation methods, free space management	Lecture Method using ICT Tools Lecture-Based Teaching	To acquire knowledge in the file system and the directory concepts	Real-world Case Studies, Regular assessments, Security Case Studies
V.	Memory management-swapping, contiguous memory allocation Fragmentation-internal and external fragmentation, Paging, segmentation, segmentation with paging, Virtual memory management-demand .paging Page replacement algorithms, Thrashing and working set model.	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools Problem-Based Learning (PBL)	To understand the concepts of paging and segmentation and page replacement algorithms	Online Courses and Certification, Real-world Case Studies, Regular assessments

List of References (Book / ICT / Weblinks):

1.Silber Schatz Abraham ,Galvin Peter ,B and Gange Greg 2006. Operating System Concepts. 6th Edition .India :Wiley

Name of the faculty member & Signature: Shima AN

Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: BSc Computer Science and Information Technology **Class & Section: NCSIT** **Course Code:** CE20405

Name of the Faculty Member: A.S.Praneetha **Course Title:** Python Programming

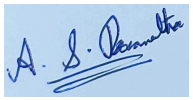
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Basics of Python Programming: Features of Python, History of Python, Future of Python, writing and executing first python program,Literalconstants-Numbers, strings • Variables and Identifiers, Data types, Input Operation, comments, Reserved words • Operators and Expressions in Python, Other Data types-Tuples, dictionary, list. Type conversion. • Decision control statements- if statement, if-else statements, Nested if, if-elif else • Basic Loop structure- while loop, for loop, selecting an appropriate loop, Nested loops, Break statement, continue statement, pass statement, else statement used with loops	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Understanding the basics of Python Programming concepts	Quiz, interactive methods like group discussion and PPT presentations
II.	• Functions and modules-Need for functions, function definition, function call, variable scope and life time, Return statement, function definition using required argument, keyword argument, Default argument • Lambda functions, Recursive functions- Greatest common Divisor, finding exponents Fibonacci series • Modules—The from…import statement, Name of module, making your own module. The dir( ), the Python module, modules and Namespaces	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Understanding the concept of using functions by dividing the larger problems into smaller ones	Debate, Interactive methods like group discussion and PPT presentation

	• Packages in Python, Standard Library modules, Function redefinition			
III.	• Python String: Introduction—concatenating, Appending, multiplying strings, Strings are Immutable, string formatting operator.Built-in String methods and functions, slice operation • Ord( ) and chr( ) functions, in and not in operators, comparing and iterating strings,The String module, Regular Expressions—match( ),search( ),sub( ), findall( ), Finditer( ) functions, flag options. Meta characters in Regular expressions • Data Structures-Sequence, Lists, Functional programming: filter(),map() and reduce()function, Tuple, sets • Dictionaries—creating dictionary, adding, modifying ,sorting and deleting item in dictionary, looping and nested dictionary, built-in dictionary functions, difference between list and dictionaries	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Apply the concept of data structures for Problem Solving	Quiz, interactive methods like group discussion and PPT presentations, Regular assessments
IV.	• Classes and objects-Introduction, defining classes, creating objects, data abstraction,Class method and self argument, The __init__() method, class variables and object variables, The __del__() method, other special methods, public and private data members, private methods • Calling a class method from another class method, built-in functions to check, Get, Set and Delete Class Attribute, Built-in class attribute • Inheritance : Introduction, inheriting classes in Python, Types of Inheritance. • Composition or containership or complex objects, abstract classes and interfaces Meta class • Operator overloading—Introduction, Implementing operator overloading, reverse Adding	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Apply object-oriented programming features for solving a given problem.	Real-world Case Studies, Regular assessments
V.	• Error and Exception Handling- Introduction to errors and exceptions, handling exceptions, Multiple except blocks, multiple exception in a single block, except block without exception	Lecture Method using ICT Tools Lecture Method, Discussion based Learning	To select an appropriate exception handling depending on application and design file operations using Python	Real-world Case Studies, Seminars and active learning,

	• Raising Exceptions, Instantiating exceptions, handling exceptions in invoked functions, Built-in and user defined exceptions, the finally block. • File Handling-Introduction, File path, Types of Files-ASCII text file ,Binary file, opening and closing files • Reading and writing files-write(), writelines(),append(),readline() • File positions, renaming and deleting files, Directory methods	Flipping method-review materials independently before class	standard library.	Regular assessments

List of References (Book / ICT / Weblinks):

1. Thareja, Reema. 2017. Python Programming. 3rd Edition. New Delhi: Oxford HED

Name of the faculty member & Signature:A.S.Praneetha 

Approved by Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-IV

Department: Comp. Sci & Info Technology **Class&Section: DCE** **CourseCode: CE21603**

Nameofthe FacultyMember: Mary perpetual **CourseTitle: Cryptography and N/w security**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to Security , Critical Characteristics of Information, The OS Security Architecture, Security Attack Security Services and Mechanisms , model for Network Security , NSTISS Security Model, Components of Information Security ,CLASSICAL ENCRYPTION TECHNIQUES Symmetric cipher model ,Substitution Techniques-Caesar Cipher, Mono alphabetic cipher , Play fair cipher, Hi cipher, Polyalphabetic cipher, Transposition Techniques, The DES encryption, Details of Single Round, Key Generation , DES Decryption, Th Avalanche Effect, The Strengths of DI	Lecture Method using ICT Tools	**Explain** Security Attacks,Security Services and Mechanisms	Group discussion on Security Attacks Security Services and Mechanisms
II.	Multiple Encryption and Triple DES Key Distribution, Random Number	Lecture Method using ICT Tools	**Understand** RSA algorithm	Students analyzed on RSA algorithm

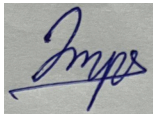
	Generation PUBLIC-KEY CRYPTOGRAPHY AND RSA The principles of public-key cryptosystems and essential steps of Public key Cryp systems, Public key encryption to provide Authentication, Applications Public key cryptosystems, Requiremer for public-key cryptography, Public-k cryptanalysis,The RSA algorithm-Description of algorithm, computational Aspects, Key generatio and Security of RSA,RC4 stream ciph			
III.	Distribution of public keys, public announcement of Public keys, publicly available directory, public-key Authority, public-key Certificates, Distribution of secret keys using public-key cryptography,Diffie-Hellman key exchange,MESSAGE AUTHENTICATION- Authentication Requirements, Authentication Functions-Message Encryption, Message Authentication code, Hash Functions-Requirements for a hash function, Simple Hash Functions, Birthday Attacks, Block Chaining Techniques, Security of Hash functions and MACS-Brute-force attacks, Message Authentication codes	Lecture Method using ICT Tools	**Demonstrate:** Diffie-Hellman key exchange	**Made study on** Diffie-Hellman key exchange
IV.	Secure Hash Algorithm (SHA), MD5 Algorithm. Kerberos, X.509	Lecture Method using ICT Tools	**Explain** MD5 Algorithm	Students gave seminars on MD5 and SHA algorithm

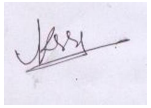
	Authentication Services, Digital Signatures ,Whirlpool			
V.	E –Mail System, Pretty Good Privacy, S/MIME, IP SECURITY- Overview, Architecture, Authentication Header, Encapsulating security payload, combining security associations, key management, Modes of IPSEC,WEB SECURITY, Web Security Considerations , Secure Socket Layer (SSL) and Transport Layer Security (TLS), Secure Electronic Transaction.	Lecture Method using ICT Tools	**Classify** Pretty Good Privacy .	Study done on Pretty Good Privacy

Listof References (Book/ICT/ Weblinks):
ESSENTIAL READINGS

Stallings, William. 2005. Cryptography and Network Security Principles and Practices. 4 th Edition. New Delhi: Prentice Hall of India.

Forouzan, Behrouz A. 2008. Cryptography and Network Security. Special Indian Edition. New Delhi: Tata McGraw-Hill.

Name of the faculty member Signature: 

Approved By Head of the Department: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

EVEN SEMESTER

Department: BSC computer system and engineering

Class & Section: DCE

Course Code: CE21602A

Name of the Faculty Member: Ch. TEJA SRIYA

Course Title: Web Application Testing

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction of Web Applications, Benefits and Security of Web Applications • The New Security Perimeter and The Future of Web Application Security • Core Defence Mechanisms: Handling User Access, Handling User Input • Approaches to Input Handling Sanitization • Web Application Technologies : The HTTP Protocol and Web Functionality	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Understanding the fundamentals, benefits, security considerations, and future trends of web applications, including core defense mechanisms like user access handling and input sanitization, within the context of HTTP protocol and web functionality.	Quiz, interactive methods like group discussion and PPT presentations
II.	• Mapping the Application, Enumerating Content and Functionality • Analyzing the Application identifying Entry Points for User Input • Bypassing Client-Side Controls, Transmitting Data Via the Client • Capturing User Data: HTML Forms and Browser Extensions • Handling Client-Side Data Securely	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Learning to assess web applications by mapping their content and functionality, identifying entry points for user input, bypassing client-side controls, capturing user data through HTML forms and browser extensions, and securely handling client-side data.	Debate, Interactive methods like group discussion and PPT presentation, Online Courses and Certifications.

III.	• Attacking Authentication ,Authentication Technologies • Design Flaws in Authentication • Implementation Flaws in Authentication • Attacking Session Management, Weaknesses in Token Generation • Weaknesses in Session Token Handling and Securing Session Management	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Understanding the methods and vulnerabilities associated with attacking authentication and session management systems, including authentication technologies, design flaws, implementation flaws, weaknesses in token generation, token handling, and securing session management.	Online Courses and Certification, Real-world Case Studies, Regular assessments
IV.	• 1. Attacking Data Stores: Bypassing a Login ,Injecting into SQL • 2. Exploiting a Basic Vulnerability, Injecting into Different Statement Types • 3. Finding SQL Injection Bugs, Finger printing the Database • 4. Injecting into NoSQL (MongoDB) and Injecting into XPath • 5. Subverting Application Logic, Informed And Preventing XPath Injection	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Understanding various techniques for attacking data stores, including bypassing login systems, injecting SQL and NoSQL databases, exploiting vulnerabilities such as SQL injection and XPath injection, and implementing preventive measures against these attacks.	Real-world Case Studies, Regular assessments, Security Case Studies
V.	• 1. Attacking Application Logic: The Nature of Logic Flaws • 2. Real-World Logic Flaws, Avoiding Logic Flaws • 3. Attacking Users: Cross-Site Scripting • 4. Varieties of XSS, Reflected XSS Vulnerabilities • 5. Stored XSS Vulnerabilities and DOM-Based XSS Vulnerabilities	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Understanding the nature of application logic flaws, real-world instances, prevention strategies, and various types of Cross-Site Scripting (XSS) vulnerabilities including reflected, stored, and DOM-based XSS attacks.	Real-world Case Studies, Seminars and active learning, Regular assessments

List of References (Book / ICT / Weblinks):

1. Dafydd Stuttard, Marcus Pinto. 2011. The Web Application Hacker's Handbook Finding and Exploiting Security Flaws. 2nd Edition. John Wiley & Sons Inc.
2. Gupta, Richa. 2021. Hands-on Penetration Testing for Web Applications. 1st Edition. BPB Publications. India: New Delhi

Name of the faculty member & Signature: **Approved by Head of the Department:**

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: CSIT **Class & Section:DCE** **Course Code:CE21601B**

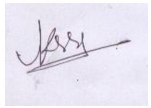
Name of the Faculty Member: k. sitarama sastry **Course Title: Internet Of Things**

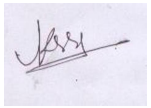
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to IOT, definition and characteristics,physical and logical design of iot, iot enabling technologies, iot levels and deployment templates and domain specific iots.	Lecture Method using ICT Tools	The importance of iot and its applications.	Quiz, and Brainstroming.
II.	Iot and M2M, Iot system management with NETCONF-YANG Iot design methodology	Lecture Method using ICT Tools	Differentiate between IOT &M2M, SDN &NFV	Group discussion and ppt presentation.
III.	Building blocks of IOT device , raspberry-pi board and programming with python.	Lecture Method using ICT Tools	Understand building of IOT and Raspberry-pi devices.	Doing small projects on raspberry-pi board or on iot board.
IV.	Introduction to cloud storage models and communication API,wamp-Autobahn,python web-application framework Django,design of rest-full API and AWS for IOT.	Lecture Method using ICT Tools	Explain the working of cloud servers and AWS.	Developing small applications using python code.
V.	Case studies and data analytics for iot.	Lecture Method using ICT Tools	Understand applications and analytics for iot.	Ppt presentations and case-study.

List of References (Book / ICT / Weblinks):

1. Bahga, Arshdeep and Madisetti, Vijay. 2015. **Internet of Things - A Hands-on Approach.** Universities Press ISBN: 9788173719547
2. Richardson, Matt and Wallace, Shawn. 2014. **Getting Started with Raspberry Pi.** O'Reilly (SPD). ISBN: 9789350239759

1. https://www.youtube.com/@ajaykumarbadhan7149

Name of the faculty member & Signature: K.sitarama sastry. 

Approved by Head of the Department: 

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LOYOLA ACADEMY
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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: Computer Science and Information Technology **Class & Section:DCE and 6th sem** **Course Code:**CE21601A

Name of the Faculty Member: Shima AN **Course Title:** CLOUD COMPUTING

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Eras of Computing, parallel vs distributed computing, Elements of parallel computing ,Elements of distributed computing . Technologies for distributed computing-RPC, distributed object frameworks	Lecture Method using ICT Tools: Classroom Screen Website for an Interactive class.	To understand the concepts of basics of cloud computing and about parallel and distributed environment.	Quiz, PPT presentation for students and small assignments
II.	Cloud Computing Overview - Introduction, Cloud Components Infrastructure Services , Benefits – Scalability, Simplicity, Knowledgeable Vendors , More Internal Resources, Security, Limitations - Your Sensitive Information, Applications Not Ready, Developing Your Own Applications, Features of cloud platform, System models for advanced computing clusters of cooperative computing, grid computing and Cloud computing	Interactive Learning Problem-Solving, Risk Challenges, Lecturing using traditional methods	To identify and aware about the benefits and limitations of cloud computing in detail	Regular Assessments, group discussion and debate on Risk management
III.	Introduction, The cloud reference model: Architecture, Infrastructure-and Hardware-as-a-service, Platform as a service, Software as a service. Types of clouds: Public clouds, Private clouds, Hybrid clouds, Community clouds, Economics of	Lecture Method using ICT Tools Lecture-Based Teaching	Students gain in depth knowledge in services offered by cloud like IaaS,PaaS,SaaS	Interactive methods like group discussion and PPT presentations

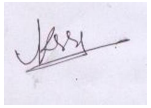
	Cloud . Open challenges: Cloud definition, Cloud interoperability and standards, Scalability and fault tolerance, Security, trust, and privacy, Organizational aspects			
IV.	Introduction and characteristics of virtualized environments: Increased Security, Managed Execution, Portability , Taxonomy of Virtualization techniques: Execution virtualization, other types of Virtualization, Virtualization and Cloud Computing ,Pros and Cons of Virtualization, Technology examples- Xen: para virtualization, VMware: full virtualization, Microsoft Hyper V	Lecture-Based Teaching Flipping method-review materials independently before class Lecture Method using ICT Tools Problem-Based Learning (PBL)	To acquire knowledge in the virtualization concept in cloud computing	Interactive methods like group discussion and PPT presentations, problem solving methods
V.	Risks, consequences for cloud computing, Cloud Certifications and Audit, SLA with Cloud Service providers, Host security for SAAS, IAAS, PAAS, Data security in the cloud. Application Security in the cloud , Security as a service :benefits, concerns ,providers	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools Problem-Based Learning (PBL)	To understand the concept of different cloud certifications and SLA	Quiz, PPT presentation for students and Interactive methods like group discussion

List of References (Book / ICT / Weblinks):

. 1.Buyya Raj Kumar,vecchiola,Christian and selvi Thamarai S.2012.Mastering Cloud Computing .New Delhi :TMH(Unit 1,2,3,4)

2. Cloud Computing ,The Black book,Dream Tech press (Unit 5)

Name of the faculty member & Signature: Shima AN



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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER V

Department:CSAI **Class&Section:DCE** **CourseCode:** CE21602B

Name of the Faculty Member:Sarashri **CourseTitle: BIG DATA ANALYTICS**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	What is Big Data ?,History of Data Management-Evolution of Big Data 1 ,Structuring Big Data, Elements of Big Data,Big Data Analytics, Careers and Future of Big Data **Exploring the Use of Big Data in Business Context:** Use of Big Data in Social Networking 1 Preventing Fraudulent Activities 1 **Introducing Technologies for Handling Big Data:** Distributed and Parallel Computing for Big Data Introducing Hadoop, Cloud Computing and Big Data 2 **Understanding Big Data Technology Foundations:** Exploring the Big Data Stack, Virtualization and Big Data 2 Virtualization Approaches	Chalk and board method	What is Big Data ?,History of Data Management, **Introducing Technologies for Handling Big Data**	Solving Distributed and Parallel Computing for Big Data, Introducing Hadoop
II.	**Understanding Hadoop Ecosystem** Hadoop Ecosystem, Hadoop Distributed File System,	Chalk and board method,ICT tools	**Understanding Hadoop Ecosystem, Understanding Map Reduce Fundamentals andHBase**	Group Discussion on Hadoop Ecosystem, Hadoop Distributed File System

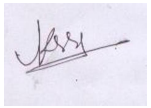
	HBase-Architecture,R egions, **Understanding Map Reduce Fundamentals andHBase** The Map Reduce Frame work, Uses of Map Reduce, Role of HBase in Big Data Processing			
III.	**Processing your Data with Map Reduce** Developing Simple Map Reduce Application **Customizing Map Reduce Execution and Implementing Map Reduce program** Controlling Map Reduce Execution with Input Format, Reading Data with Custom Record Reader, Organizing Output Data with Output Format, Customizing Data with Record Writer, Optimizing Map Reduce Execution with Combiner, Controlling Reducer Execution with Partitioner	Chalk and board method,ICT tools	**Processing your Data with Map Reduce, Customizing Map Reduce Execution and Implementing Map Reduce program**	Assignment on Controlling Map Reduce Execution with Input Format, Reading Data with Custom Record Reader
IV.	**Understanding Hadoop YARN Architecture:** Background and Advantages of YARN, YARN Architecture, Working of YARN, YARN Schedulers, YARN Configurations, YARN Commands, YARN Containers **Exploring HIVE:** Introducing Hive, Getting started with Hive, Data Types and Built-in functions in Hive ,Hive DDL, Data manipulation in Hive, Data Retrieval Queries, Using Joins in Hive	Chalk and board method,ICT tools,PPT	**Understanding Hadoop YARN Architecture, Exploring HIVE**	Viva on Yarn and hive Built-in functions in Hive ,Hive DDL, Data manipulation in Hive

V.	**Analyzing Data with Pig** Introducing Pig ,Running Pig, Getting Started with Pig Latin, Working with Operators in Pig, Working with Functions in Pig, Debugging Pig, Error Handling in Pig **No SQL Data Management** Introduction to No SQL, Types of No SQL Data Models, Schema-Less Databases ,Materialized Views, Distribution Models ,Shading	Chalk and board method,ICT tools,PPT	**Analyzing Data with Pig, No SQL Data Management**	Class Activity on Pig commands in lab

Listof References (Book/ICT/ Weblinks):

1. DT Editorial Services.2016. **Big Data Black Book**. Dream tech Press.
2. White, Tom.2012.**Hadoop: The Definitive Guide**.3rd Edition. O'Reilly Media.
3. https://www.youtube.com/@education4u

Name of the faculty member Signature: Sarashri

Approved by HeadoftheDepartment: 

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department:ENGLISH

Class&Section: AAI, ACDS, ACSCS, ACSIOT

CourseCode: EN23201

Nameofthe FacultyMember: P. SARITHA

CourseTitle:GENERAL ENGLISH-1

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Short Story – The Mystery Story Present Tense Past Tense Future Tense Paragraph Writing	LectureMethodusing ICT Tools	Tolearnaboutthefundamentals Of communication	Solving mixed tense exercises Narrating mystic experiences Writing paragraphs on various topics
II.	Poem – Goodbye Party for Miss Pushpa T.S. Subject- Verb Agreement Punctuations Review Writing	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Explanation of the poem by students Grammar exercises Film review writing
III.	Lesson – Wit and Humour Nouns and Articles Homophones, Homonyms, Homographs Note making	Lecture Method using ICT Tools	To identify the different types of nouns and articles in a sentence composition and to learn the correct usage and spelling of different words which spell or sound similar.	Character sketch of the story characters Grammar exercises like fill in the blanks, multiple choice and true or false.

	Lesson – India's Contribution to World Unity Adverbs Adjective and adverb Suffixes Formal letters and Curriculum Vitae	Lecture Method using ICT Tools	To think critically, demonstrate an understanding of diverse cultures and historical movements. To recognize the different parts of speech	Description of the message conveyed by the author and its relevance in the day today world. Practice in Formal letter and Curriculum Vitae writing
V.	Lesson – Sachin Tendulkar Adjectives, Comparison of Adjectives Common Errors, Commonly misspelt words, Commonly Confused words	Lecture Method using ICT Tools	To write grammatically correct sentences and to identify different degrees of comparison.	Text book exercises and worksheets

Listof References (Book/ICT/ Weblinks):

1. Skills Annexe. Functional English for Success. Orient Black Swan

SUGGESTED READING:

• Balasubramaniam, M. 1985 Business Communication. New Delhi: Vani Educational Books.

• Krishna Mohan and Meera Banerjee, 1990. Developing Communication Skills. New Delhi: Macmillan India Ltd.

• Krishnaswamy.N. and Sriraman, T. 1995. Current English for Colleges. Madras: Macmillan India Ltd.

• Narayanaswamy.V.R. 1979 Strengthen Your Writing. New Delhi: Orient Longman.

• Sharma.R.and Krishna Mohan. Business Correspondence. 1978. New Delhi. Tata McGraw-Hill Publishing Co

Nameofthefacultymember&Signature: P. SARITHA

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER - I

Department: B.Sc (CDS&DAE)

Class & Section :ACDS

Course Code: VE18001

Name of the Faculty Member: SUDHAKAR

Course Title:VALUE EDUCATION & PERSONALITY DEVELOPMENT

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	INTRODUCTION TO ETHICS 1. Why Value Education? 2. Reasons to have Ethics for Life 3. Accepted Norms and Counter Values 4. Dimensions of Human Development: Physical, Intellectual, Emotional, Moral, Spiritual and Social	Ict method	Students will be able to Differentiate Accepted norms and Counter valuesand be able to identify the various Dimensions of Human Development.	Computer Based test.
II.	APPROACH TO LIFE 1. Conscience and Pseudo-Conscience 2. Happiness as Life-goal 3. Values revealed and lived in Religions 4. Experience of God 5. Love: The three components of Love 6. Some of the basic stages and issues of Life: Family, Love, Sex, Marriage	Chalk and board	Students will be able to Demonstrate Love and Experience of God andidentify the Basic Issues of Life and Happiness as a life goal.	Assignments

III.	CONCERN FOR OTHERS 1. Self and Another 2. Human Context 3. Moral Problems of a Society / True Society : Social Desire, Social Fear, Social Silence, Social Indifference	Ppt presentations	They will able to Understand the importance of Concern for others and critique the various problems that deter the growth of the society.	Quiz.
IV.	TRANSFORMATION OF SELF 1. Definitions of personality 2. Characteristics of personality 3. Elements of personality 4. Traits of good personality 5. Self-Identity, self concept 6. Self-Discovery, self-acceptance 7. Self-Esteem WORK SHEET (1): Self Estimation	Chalk and board	The students will be able to **Recognize** the traits of a good personality and practice Self-exploration.	Written Test.
V.	LIFE ENRICHMENT SKILLS 1. Purpose of life - Goal setting 2. Characteristics of Goals 3. Building Relationships 4. Time Management 5. Stress Management 6. Emotional Management 7. Conflict Management 8. Team Management (Group Dynamics)	Ppt presentations	**Students will be able to Interpret the Purpose of Life and Goal Setting and demonstrate Self-management.**	Group discussion

Listof References (Book/ICT/ Web links):

1. *Human Values - Development Programme - AIACHE*
2. *In Harmony*

Name of the faculty member &Signature: SUDHAKAR
Approved by Head of the Department:



LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-I

Department: B.Sc.CDS & DAE **Class &Section:ACDS** **CourseCode:BS22101**

Name of the Faculty Member: Tegulla Rekha **Course Title: Fundamentals of Information Technology**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Computers 1. Definition - Characteristics and limitations of computers 2. Block diagram of a computer, CPU 3. Primary and secondary storage 4. Input and output devices Data Representation and Storage 1. Data representation in computers, bits and bytes 2. Number systems (Binary, Octal and Hexadecimal) 3. Conversion from decimal to binary, octal, hexadecimal and vice versa 4. Secondary storage 5. Random Vs Sequential access, Tracks and Sectors 6. Storage characteristics 7. Increasing data storage capacity through compression (disk compression and file compression)	Lecture based using Power point presentations etc	Understand basic computer terminology and number systems.	Conducted Group Discussion on latest technologies,Applications and use of Technology in todays generation.
II.	Operating Systems 1. Meaning, Definition, Functions 2. Types of operating systems: Desktop OS, Server OS, Mainframe OS, Hand-held OS &	Collaborative Group work and used ICT tools	Learn about operating systems, and its types.	Conducted Computer based test,Assignments

	Embedded OS 3. Multi Tasking and Multi threading 4. Multi User multi processor support 5. Miscellaneous tasks 6. Batch Processing systems 7. Real time systems, Time sharing systems User Interfaces 1.GUI, Pen based, Touch Screen & Conversational interfaces 2. Common Operating Systems: DOS, Windows 95/98 and UNIX			
III.	Applications of Information Technology 1. Application programs 2. Horizontal Market Applications, Vertical Market Applications 3. Customs Applications, Shareware and Public domain software Transaction Processing 1. Centralized transaction processing 2. Client Server software, Distributed computing and Replication 3. Information tools for management control: DSS, EIS, GIS, OLAP 4. Data Warehousing and Data Mining IT in Business and Industry 1. Home and at play, Education and Training, Entertainment and Arts 2. Science, Engineering and Math, Computers in hiding IT Enabled Services 1. BPO, KPO & Call centers	Lecture Method using ICT Tools	Learn about the applications of Information technology	Conducted Quiz
IV.	Systems Development 1. The six phases of Systems Analysis & Design The challenges of Digital Age 1. Security issues: Threats to	Real world case studies	Importance of system development and the phases of SDLC	Conducted Seminars

	Computers & Communications 2. Security: Safeguarding Computers & Communications 3. Quality of Life Issues 4. The ethics of using databases: concerns about accuracy & privacy 5. Five generations of programming languages			
V.	Modern Communications 1. Communications, FAX 2. Voice Mail and Information Services, Email Group Communications 1.News groups, Mailing lists, IRC, Network games 2. Video conferencing 3. File exchange, bandwidth 4. Modem, Network topologies 5. Network Types – LAN, MAN and WAN 6. Dialup Access	Interactive Multimedia Presentations	Use of modern means of communications, types of networks and topologies	Conducted Viva

List of References (Book/ICT/ Weblinks):

1. Computer Fundamentals, Concepts, Systems and Applications. 4 th edition. BPB Publications
2. Bharihoke Deepak. 2000. Fundamentals of Information Technology. 2 nd edition. Excel books

Name of the faculty member & Signature: T. Rekha

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year

2023–2024 SEMESTER I

Department: CDS

Class &Section: ACDS

Course Code: DS19102

Name of the Faculty Member: Muskan Goyal

Course Title: Differential Equations and Numerical Analysis

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Solving Exact differential Equations, Equations reducible to Exact differential, Integrating factors, Orthogonal trajectories - Cartesian Coordinates, Polar coordinates,	Board	Classify the differential equations with respect to their order and linearity. Solve differential equations of first order using numerical and analytical methods such as Integrating Factors	Problem Solving using Basics of Differentiation and integration
II.	Linear Differential Equations with constant coefficients, Auxiliary equation, Rules for finding the Complementary function, Rules for finding the Particular integral, Working rule for finding P.1.when X=e^ax, Sinax, Cosbx, x^m, e^ax.v, x^m.v	Board	Analyze and Solve basic application problems described by first order differential equations, such as orthogonal trajectories.	Assignments
III.	Calculus of finite differences Definition, Forward Difference, Backward Difference, Shift operator, Difference formulae ~The difference table, To express any value of the function in terms of Leading function and the leading difference of a difference table, Simple problems on Δ, ∇ *and* E, Newton - Gregory Forward and backward Interpolation formulae.	Board	Solve second order homogeneous Equations with Constant Coefficients. Obtain exact and Numerical solutions using differential equations technology.	Seminar

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IV.	Newton's divided difference interpolation, Lagrange's Interpolation formula for unequal intervals, Central difference Interpolation formulae, Gauss Interpolation formula, Stirling's Interpolation formula, Bessel's Interpolation formula	Board	Analyze and evaluate the accuracy of common numerical method	Presentations
V.	Determination of First second and third order derivatives of tabulated function using Newton forward And backward Interpolation formulae Differentiation using Central difference Interpolation formulae. Numerical Integration using Simpson's 1/3rule,Trapezoidal rule, Simpson's 3/8 rule.	Board	Select appropriate numerical methods to apply to various Types of problems in engineering and science in consideration of the mathematical operations.	Group Discussions.

List of References (Book/ICT/ Weblinks):

1. Ahsan, Zafar. 2006 Differential Equations and their Applications.
2. Dr. Gupta, PP. Malik, G.S.2004. Calculus of Finite Differences and Numerical Analysis

Nameofthefacultymember&Signature: Muskan Goyal

Muskan

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER I

Department: BSc.CDS&DAE **Class &Section:** ACDS **Course Code: BS19025**

Name of the Faculty Member: M.Sailaja

Course :DESCRIPTIVE STATISTICS & PROBABILITY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Concept of primary and secondary data. Methods of collection and editing of primary data. Designing a questionnaire and a schedule Sources and editing of secondary data Classification and tabulation of data Measures of central tendency (Mean, Median, Mode, Geometric mean and harmonic mean) with simple applications.	Traditional Board and Marker	**Organize**, manage and present data and Analyze statistical data using measures of central tendency	Assignments
II.	Absolute and relative measures of dispersion. Importance of moments– Central and non central moments and their interrelationships. Sheppard's corrections for moments for ungrouped data - Skewness and Kurtosis	Traditional Board and Marker	**Analyze** the statistical data using dispersion and location.	Problem Solving sessions

List of References (Book/ICT/ Weblinks):

1. V.K. Kapoor and S.C. Gupta 2007. **Fundamentals of Mathematical Statistics.** New Delhi: Sultan Chand& Sons .
2. Goon AM, Gupta MK, Das Gupta B.2007 **Fundamentals of StatisticsVol-I**. Kolakota: The world press Pvt.Ltd.
3. M.JaganMohan Rao and Papa Rao, 2010 **A Text book of Statistics Paper-I.** Tenali: Deepti Publications

Name of the faculty member &Signature: M.Sailaja M. Sailaja

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: CDS **Class&Section: ACDS** **CourseCode:BS22103**

Nameofthe FacultyMember: V.Hiranya laxmi **CourseTitle: PROBLEM SOLVING AND PROGRAMMING THROUGH 'C'**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Flow chart and algorithms, Computer Languages, Introduction to C programming, History of 'C' Language, Program Development, Creating and running programs, Structure of C program, Data types and constants and variables, Scope of a variable, Operators and expressions, Type Casting, Assignment statements	ICT Tools	Understand the basic introduction of computer and programming language.	Quiz,SolvingProblemsusing thebasiccomputerinstruction
II.	Data input and output, Decision Making and branching if-else, switch, goto, Decision Making and looping while, do-while, for, nested loops, break, continue, More example programs	ICT Tools	Identify the basic introduction of computer and programming language.	Quiz
III.	Arrays, Single dimensional, Multi dimensional, Functions Types of functions- User defined functions, Standard Functions, Calling Functions, Strings String handling functions	ppt and board	Categorize 'C' control structures, arrays and strings concept.	Quiz, Assignment,Seminars
IV.	Pointers Declaration, passing pointer to functions, Pointers and arrays, Dynamic memory allocations,	ppt and board	Explain 'C' function, recursion, pointers and dynamic memory allocation.	Presentations

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	structures and Unions, Simple structures, Array of structures, Pointer to structures, Unions			
V.	File handling, Various modes of operations imput output functions, Manipulating data using getchar(),putchar().getc(),putc(), Manipulating numeric data using getw(),putw(), Write and read using fprintf() and fscanf(), File Status Functions, Positioning Functions, File Programs	Ppt and board	Express the concept of structures, union and file handling in 'C'.	Seminars

Listof References (Book/ICT/ Weblinks):

1. Behrouz A. Forozan Computer Science , A Structured Programming Approach using, 3rd Edition.
2. Thareja, Reema.2016. Programming in C. India: OUP.
3. https://www.youtube.com/watch?v=SK5gBnwN4dg

Nameofthefacultymember&Signature: V. Mirayalaxmi

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department ENGLISH

Class & Section: ACSIOT, AAI, ACDS, ACSC

Course Code: EN23201

Name of the Faculty Member: P. Saritha

Course Title: GENERAL ENGLISH-2

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Flash Fiction- 'The Mice' by Lydia Davies (1)** Simple, Complex and Compound Sentences (3) Conversion of Sentences (3) Information Transfer (2)	Lecture Method using ICT Tools	To learn about the fundamentals Of communication	Solving mixed grammar exercises Narrating mystic experiences Writing paragraphs on various topics
II.	**Short Story- 'The Face on the Wall' by E V Lucas (2)** • Active and Passive Voice (3) • Conjunctions (2) Essay Writing (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Narration of short stories by students. Grammar exercises Essay writing exercises
III.	**From the text *Three Days to See* by Helen Keller** • Explanation of the text (3) • Grammar- Usage of Modal Auxiliary Verbs (2) • Vocabulary – Collective Nouns, Technical Vocabulary (2) Writing Skill – Newspaper Report (2)	Lecture Method using ICT Tools	To recognize the moral element which underlies in the short story. To identify the different types of modal auxiliary verbs in a sentence composition and to learn the correct usage of Collective Nouns, Technical Vocabulary.	Character sketch of the story characters. Grammar exercises like fill in the blanks, multiple choice and true or false. Newspaper Report writing exercises.

IV.	**Short Story from the text 'Leela's Friend' by R.K. Narayan** • Explanation of the text (3), • Grammar- Phrasal Verbs, **Wh-** questions (2) • Vocabulary- Noun and Verb Suffixes (2) • Writing Skill- Writing a Narrative (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills.	Description of the different characters of the story. Grammar exercises Exercises exercises like fill in the blanks, multiple choice and true or false. Practice in writing a narrative
V.	**From the text 'The Last Leaf' by O. Henry** • Explanation of the text (3) • Grammar- Prepositions (2) • Vocabulary – Idioms (2) Writing Skill – Precis Writing (2)	Lecture Method using ICT Tools	To write grammatically correct sentences and usage of idioms in sentences.	Textbook exercises and worksheets Precis' writing exercises.

List of References (Book / ICT / Weblinks):

Epitome of Wisdom, Maruthi Publications

SUGGESTED READING:

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges.* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing.* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Name of the faculty member & Signature: P. Saritha

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- II

Department: B. Sc. Computer Data Science & Data Analytics Engg.

Class : ACDS

Name of the Faculty Member:Dr.Srujan Kumar G

Course Code:IC-23101

Course Title: Indian Heritage and Culture

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation

IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the constitution.	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr.Srujan Kumar G

Approved by Head of the Department:

Mrs. V. Shirisha

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER II

Department: CDS & DAE **Class &Section: ACDS** **Course Code: DS18201**

Name of the Faculty Member: Muskan Goyal **Course Title: Abstract Algebra**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Binary Operations - Definition and properties, Groups – definition and elementary properties,Finite groups and group composition tables, Sub groups, Cosets, Lagrange's theorem and its applications.	Board	**Demonstrate** important mathematical concepts in abstract algebra such as definition of a group, order of a finite group and order of an element.	Assignments
II.	Normal subgroups, simple groups, Homomorphism of groups, isomorphism, definition and elementary properties, How to show that groups are isomorphic, fundamental theorem of homomorphism	Board	**Analyze** different types of subgroups such as normal subgroups, cyclic subgroups and understand the structure and characteristics of these subgroups	Group Discussion
III.	Functions and permutations, Examples, Groups of permutations, cycles and cyclic notation, Even and odd permutations, Cyclic groups – Elementary properties, The classification of cyclic groups, sub groups of finite cyclic groups, Cayley's theorem, inner automorphism	Board	**Demonstrate** an understanding of cyclic groups by identifying their properties and applying them to various mathematical contexts.	Viva
IV.	Rank of a Matrix Rank-Echelon form, Normal form – Solution of Linear Systems,Homogeneous and non Homogeneous Equations	Board	Utilize the various forms to efficiently solve system of linear equations.	Problem Solving sessions

2023-2024

V.	Eigenvalues -Eigenvectors–Properties–Cayley-Hamilton Theorem, Inverse and powers of a matrix by using Cayley-Hamilton theorem, Quadratic forms- Reduction of quadratic form to canonical form	Board	Apply the concepts to solve the problems, analyze matrices and understand their significance in various mathematical contexts.	Problem Solving sessions.

List of References (Book/ICT/ Weblinks):

1. Venkateswara Rao, V.Krishna Murthy, B.V.S.S.Sarma, S.Anjaneya Sastry,2016.**B.Sc. Mathematics Volume- II .**New Delhi:S.Chand and Company.
2. T.K.V. Iyengar, B. Krishna Gandhi, S. Ranganatham,M.V.S.S.N Prasad, A Textbook of **Engineering Mathematics Volume- II :** S.Chand

Name of the faculty member & Signature: Muskan Goyal

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the AcademicYear 2023–2024

SEMESTER-II

Department:B.Sc.CDS & DAE **Class&Section:ACDS** **Course Code:DS19204**

Name of the Faculty Member:Tegulla Rekha **Course Title:Operating System**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Introduction-What is an operating system, mainframe system, desktop systems 2. Multiprocessor systems, distributed systems, clustered systems 3. Real time systems, hand held systems 4. Operating system structures-system components 5. Operating system services, system calls 6. System programs, system structures, virtual machines	Lecture based using power point presentations	• Identify main components of OS and its functions	Conducted Quiz
II.	1. Process concept-process concept, PCB, process scheduling 2. Operation on processes, cooperating processes 3. Inter process communication 4. Process scheduling-basic concepts, scheduling criteria, Scheduling algorithms.	Traditional chalk and board method	• Analyze issues in IPC and role of OS in IPC	Assignments
III.	1. Process synchronization-critical section problem 2. Semaphores, monitors 3. Deadlocks-deadlock characterization, methods for	Lecture based using ICT Tools	• Deadlock characterization and methods for handling deadlocks.	Conducted Viva

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER - II

Department: B.Sc (CDS&DAE)

Class & Section :ACDS

Course Code: BS22211

Name of the Faculty Member: M. Sailaja

Course Title: PROBABILITY DISTRIBUTTIONS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Uniform, Bernoulli 2 Binomial 3 and Poisson distributions – Properties of these distributions 3 (such as m.g.f., c.g.f, and p.g.f, characteristic function.) moments up to fourth order and their real life applications 2 Reproductive property wherever it exists 2 Poisson approximation to Binomial distributions 3	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	Use discrete and continuous probability distributions, including requirements, mean and variance, and making decisions	Computer Based test.
II.	Negative Binomial 4 Geometric and Hyper 4 Geometric (mean and variance only) distributions. Properties of these distributions such as m.g.f., c.g.f, and p.g.f, characteristic function, Moments up to fourth order and their real life applications Reproductive property wherever it exists 2 Binomial approximation to Hyper-Geometric 3 Poisson approximation to negative Binomial distributions. 2	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Identify** the characteristics of different discrete distributions.	Offline Quiz.
III.	Rectangular and Normal distributions 4 Normal distribution as limiting case of Binomial and Poisson distributions 3 Properties of these distributions such as m.g.f., c.g.f, and characteristic function 3 Moments up to fourth order	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Apply** the normal probability distribution including standard normal curve calculations of appropriate areas.	Offline Quiz.

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Teaching Plan for the Academic Year 2023–2024

SEMESTER - II

Department: B.Sc (CDS&DAE)

Class & Section :ACDS

Course Code: BS22211

Name of the Faculty Member: M. Sailaja

Course Title: PROBABILITY DISTRIBUTTIONS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Uniform, Bernoulli 2 Binomial 3 and Poisson distributions – Properties of these distributions 3 (such as m.g.f., c.g.f, and p.g.f, characteristic function.) moments up to fourth order and their real life applications 2 Reproductive property wherever it exists 2 Poisson approximation to Binomial distributions 3	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	Use discrete and continuous probability distributions, including requirements, mean and variance, and making decisions	Computer Based test.
II.	Negative Binomial 4 Geometric and Hyper 4 Geometric (mean and variance only) distributions. Properties of these distributions such as m.g.f., c.g.f, and p.g.f, characteristic function, Moments up to fourth order and their real life applications Reproductive property wherever it exists 2 Binomial approximation to Hyper-Geometric 3 Poisson approximation to negative Binomial distributions. 2	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Identify** the characteristics of different discrete distributions.	Offline Quiz.
III.	Rectangular and Normal distributions 4 Normal distribution as limiting case of Binomial and Poisson distributions 3 Properties of these distributions such as m.g.f., c.g.f, and characteristic function 3 Moments up to fourth order	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Apply** the normal probability distribution including standard normal curve calculations of appropriate areas.	Offline Quiz.

	and their real life applications			
IV.	Exponential, Gamma 6 Beta of two kinds: definitions, mean and variance 3 Properties of these distributions such as m.g.f., c.g.f, and characteristic function moments up to fourth order and their real life applications 3 Reproductive property wherever it exists.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Choose** exponential, beta and Gamma distributions to solve statistical problems.	Written Test.
V.	Cauchy Distribution (Definition and characteristic function only) 5 Definition of convergence law, in probability and with probability one or almost sure convergence 4 Definition of Weak law of large numbers (WLLN) and Strong law of large numbers (SLLN) 3 Central limit theorem for identically and independently distributed (i.i.d.) random variables with finite variance	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Develop** different distributions to solve various statistical problems.	Written Test.

Listof References (Book/ICT/ Web links):

1. Gupta, S. C. (2011). Fundamentals of statistics (pp. 18-1). New Delhi, India: Himalaya publishing house.
2. Gupta, S. P. (1978). Statistical Methods 1978. 46 th Edition.
3. Deovre, J. (1987). Probability and statistics for engineering and science. Brooks/Cole, Belmont, CA.
4. Richard A. Johnson, Miller, Freund. Probability & Statistics for Engineers. PHI Publications
5. **Spearman's rank correlation for repeated ranks - https://youtu.be/blAlbNcSd9g**
6. **Spearman's rank correlation for non-repeated ranks https://youtu.be/II_Qylg1SaM**

Name of the faculty member &Signature: M. Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER II

Department:CDS

Class&Section:ACDS

CourseCode: BS18202

Nameofthe FacultyMember: Bhanu sree S

CourseTitle: Data structures through "c"

Unit	Topics to be covered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to Data Structures,stack-defination operation ,queue-operations Stack applications Notations - Prefix, Postfix , Infix, Conversions – Infix to Postfix , Infix to Prefix	ppts.flow charts,ict tools	Choose appropriate data structures to represent data items in real world problems	Class activity of making charts on different data structures
II.	Data Representation, Concept of linked list, Advantages of Linked List, Types of linked list, Linear Linked list Various operations performed on singly linked list, Doubly Linked List Various operations performed on singly linked list, Circular Linked List, Applications of Linked Lists	ppt ,real world examples of an application,ict tools	Illustrate non-linear data structures like linked list	Group discussion on real world usage of data structures
III.	Trees Definition and properties, Binary Trees, Definition and Representation of Binary trees, Operations: insertion, deletion, search Tree traversal techniques- in order, pre order, post order, AVL trees, Definition and representation of AVL Trees, Operations on AVL trees-insertion, deletion	Ppt ,ict tools	Organize the data using sorting in various linear data structures and determine time complexity	Presentations on trees and traversal techniques

IV.	Sorting methods- Bubble sort, Insertion sort, Selection sort, Merge sort, Quick sort, Searching methods, Linear search,Binary search, Comparison and Analysis	PPT, flow charts,ict tools	Construct data with nonlinear data structure using trees.	Viva on sorting methods
V.	Graphs Terminology & Representations, Definition and representation of graph, Graph Traversal -BFS, DFS, B-Trees Definition and representation of B-Trees, Operations on B- Tree-insertion, deletion, search Operations on B- Tree-insertion, deletion, search, Sequential Files, Indexing and Hashing, Primary indices, Secondary indices Indexing and Hashing Comparisons.	PPT, ict tools	Explain the concept of graphs and b trees	Presentations

Listof References (Book/ICT/ Weblinks):

1. Kanetkar,Yashvanth.2008. **Data Structures through C**.India: BPB Publications.
2. Tanenbaum,A.M.Langsam,Y.Augenstein,M.J.**Data Structures Using C**. New Delhi: PearsonEducation.

Nameofthefacultymember&Signature: , Bhanu Sree S

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023-2024

SEMESTER-III

Department: Environmental Science **Class:** NCDS **CourseCode:ES23301**

NameofFaculty Member: Dr. G. Sudhakar **CourseTitle: EVS&GS**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable & Non Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	LectureMethodusing ICT Tools and Board	UnderstandtheimportanceofEnvironmentaleducation, conservationofnaturalresources& understandtheimportance ofecosystemsandbiodiversity	Oral question and answers TounderstandtheimportanceofecologicalbalanceforSustainableDevelopment
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earth quakes, and Cyclones**	LectureMethodusing ICT Tools and Board	Understand thepollutionproblemsand applytheenvironmentalsciencekn owledgeonsolidwastemanagement,disastermanagement	Oral question and answers Tounderstandtheimpactsofdevelopmentalactivitiesandmitigationmeasures
III.	**Rain-Water Harvesting, Water-shed Management** **Global WarmingOzone depletion, and Acid rainsEnvironmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	LectureMethodusing ICT Tools and Board	Applytheenvironmentalsciencekn owledgetoimprovetheresources Evaluateandunderstandthesustainableenvironmentalconditionsandcontrolmethods	Oral question and answers Tounderstandtheenvironmentalpoliciesandregulations

IV.	**Why should we study gender issues?** **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	LectureMethodusing ICT Tools and Board	Identifytheinteraction sandintersectionsofide ntities(e.g., gender,race, ethnicity, class, sexuality, and so on)	Oral question and answers Todevelopstudents'sensibilitywithr egardtoissuesofgenderincontempo raryIndia
V.	**Sexual harassment** **Say no eve teasing** **The caste based violence** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act(2005)**	LectureMethodusing ICT Tools and Board	Understand the gender problems and ways of addressing them, including interactionsacrosslocaltoglobals calesincommunitiesandovercom einequalitieswithlegislation	Oral question and answers Toexposethestud entstodebateont hepoliticsand economicworksa ndongenderviole nce

Listof References (Book/ICT/ Weblinks):

1.RajagopalanR.2015.**EnvironmentalStudies-fromCrisistoCure.**ThirdEdition.Chennai:OxfordUniversityPress.

DrDKAsthanaand DrMeeraAsthana. 2014.

2.**AText BookofEnvironmentalStudies**RevisedEdition.New Delhi:S.Chand&Company

3.Sen Amartya**More Than One Million Women Are Missing.** New York Review **ofBooks 37.20 (20 December 1990). Print. We Were Making History...Life Stories ofWomenin theTelangana People'sStruggle**.NewDelhi: Kali for Women.

4.Shatrughna, Veena.**Women'sWorkanditsImpact onChildHealthandNutrition.Hyderabad:** NationalInstituteofNutrition,IndianCouncilofMedicalResearch.1993

(Dr.G.Sudhakar)

Nameofthefacultymember&Signature:

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-III

Department: CDS

Class&Section: GE

Course Code: G23DS1T

Name of the Faculty Member: P.Bala seshu kumari

Course Title: GE-Python Programming

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**1. Introduction to Python:** Python, Features of Python, Execution of a Python Program, ,Memory Management in Python, Comparisons between C and Python, Comparisons between Java and Python. **2. Writing Our First Python Program:** Writing Our First Python Program, Executing a Python Program - Using Python's Command Line Window, and Using Python's IDLE Graphics Window. **3.** Data types in Python, Operators in python	Lecture Method using ICT Tools	**Implement** the structure and components of a Python program	Coding challenges
II.	**1. Control Statements**: The if Statement, A Word on Indentation, The if … else Statement, The if … elif … else Statement, The while Loop, The for Loop, Infinite Loops, Nested Loops, The else Suite, The break Statement, The continue Statement, The pass Statement, The assert Statement, The return Statement. **2. Lists and Tuples**: List, Creating	Lecture Method using ICT Tools, PPT Presentation	**Express** how to write loops and decision statements in Python	Assignments

	Lists using range() Function, Updating the Elements of a List, Concatenation of Two Lists, Repetition of Lists, Membership in Lists, Aliasing and Cloning Lists, Methods to Process Lists, Finding Biggest and Smallest Elements in a List, Sorting the List Elements, Number of Occurrences of an Element in the List. **Tuples**: Creating Tuples, Accessing the Tuple Elements, Basic Operations on Tuples, Functions to Process Tuples, Nested Tuples, Inserting Elements in a Tuple, Modifying Elements of a Tuple, Deleting Elements from a Tuple. **Dictionaries**: Operations on Dictionaries, Dictionary Methods, Using for Loop with Dictionaries, , Converting Lists into Dictionary, Converting Strings into Dictionary			
III.	**1. Strings** - Sequences, Strings, Strings and Operators, String-Only Operators, Built-in Functions, String Built-in Methods, Special Features of Strings **2. Functions**- Introduction, Calling Functions, Creating Functions, Passing Functions, Formal Arguments, Variable Length Arguments, Functional Programming, Variable Scope, Recursion, Generators	Lecture Method using ICT Tools, board and chalk	**Interpret** how to write functions and pass arguments in Python	Seminars
IV.	**1. Modules**- Modules, Namespaces, Importing Modules, Features of Module Import, Built-in Functions, Packages. **2. Exception**- Exceptions in Python, Detecting and Handling	Lecture Method using ICT Tools, PPT Presentation	**Explain** how to build Python package modules for reusability	Computer based test

	Exceptions, raise Statement, Assertions-assert statement, Standard Exceptions, Creating Exceptions.			
V.	**1. Files and Input/Output**- File Objects, File BIF and Methods, Built-in Attributes, Standard Files, Command Line Arguments. **2. Graphical User Interface:** GUI in python, using tkinter, sample programs using Tkinter	Lecture Method using ICT Tools, PPT	**Create** files and GUI programs	Viva

Listof References (Book/ICT/ Weblinks):

1. Rao, Dr. R. Nageswara. Core Python Proramming. 2nd Edition. Dreamtech Press.
2. Chun, Wesley J. **Core Python Programming.** 2nd Edition. USA: Pearson Education

Name of the faculty member & Signature: P.Bala seshu Kumari .

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-III

Department: B.Sc.CDS & DAE **Class &Section:NCDS** **Course Code:DS20301**

Name of the Faculty Member: Tegulla Rekha **Course Title: Python Programming**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Introduction to Python: Python, Features of Python, Execution of a Python Program, Viewing the Byte Code, Flavors of Python, Python Virtual Machine,Frozen Binaries, Memory Management in Python, Garbage Collection in Python, Comparisons between C and Python, Comparisons between Java and Python. 2. Writing Our First Python Program: Writing Our First Python Program, Executing a Python Program - Using Python's Command Line Window, Using Python's IDLE Graphics Window, Running from System Prompt, Getting Help in Python, Getting Python Documentation Help. 3.Data types in Python: Comments in Python, Doc Strings, How Python Sees Variables, Data types in Python, Built-in Data Types, Bool Data type, Sequences in Python, Sets, Literals in Python, Determining the Data type of	Lecture-Based using power point and installations of softwares.	Implement the structure and components of a Python program.	Conducted Quiz on programming languages and conducted Computer based test.

	a Variable What about Characters, User-defined Data types, Constants in Python, Identifiers and Reserved words, Naming Conventions in Python. 4.Operators in Python: Arithmetic Operators, Assignment Operators, UnaryMinus Operator, Relational Operators, Logical Operators, Boolean Operators,Bitwise Operators, Membership Operators, Identity Operators, Operator Precedence and Associativity, Mathematical Functions, Using IDLE Window,Using Command Line Window. Input and Output: Output statements, Input Statements, Command Line Arguments			
II.	1. Control Statements: The if Statement, A Word on Indentation, The if … else Statement, The if .. elif .. else Statement, The while Loop, The for Loop, Infinite Loops, Nested Loops, The else Suite, The break Statement, The continue Statement, The pass Statement, The assert Statement, The return Statement. 2. Arrays in Python: Array, Advantages of Arrays, Creating an Array, Importing the Array Module, Indexing and Slicing on Arrays, Processing the Arrays, Types of 2 Arrays. Working with Arrays using Numpy, Creating arrays witharray(),linspace(),logspace(),arange(),zeros() and ones() functions.	Using Powerpoint Presentations and traditional chalk and board method.	Choose appropriate data structures.	Coding Challenges,Assignments

	3. Strings and Characters: Creating Strings, Length of a String, Indexing in Strings,Slicing the Strings, Repeating the Strings, Concatenation of Strings, CheckingMembership, Comparing Strings, Removing Spaces from a String, Finding Sub Strings, Counting Substrings in a String, Strings are Immutable, Replacing a String with another String, Splitting and Joining Strings, Changing Case of a String, Checking Starting and Ending of a String, String Testing Methods, Formatting the Strings, Working with Characters, Sorting Strings, Searching in the Strings, Finding Number of Characters and Words, Inserting Sub String into a String, Regular Expressions, Sequence Characters, Quantifiers and Special Characters in Regular Expression 4. Functions: Difference between a Function and a Method, Defining a Function,Calling a Function, Returning Results from a Function, Returning Multiple Values from a Function, Functions are First Class Objects, Pass by Object Reference,Formal and Actual Arguments, Positional Arguments, Keyword Arguments, Default Arguments, Variable Length Arguments, Local and Global Variables, The GlobalKeyword, Passing a Group of Elements to a Function, Recursive Functions, Anonymous Functions or Lambdas, Function Decorators, Generators,			

Internal Quality Assurance Cell 2023-2024

	StructuredProgramming, Creating our Own Modules in Python, The Special Variable name.			
III.	1. Lists and Tuples: List, Creating Lists using range() Function, Updating the Elements of a List, Concatenation of Two Lists, Repetition of Lists, Membership in Lists, Aliasing and Cloning Lists, Methods to Process Lists, Finding Biggest and Smallest Elements in a List, Sorting the List Elements, Number of Occurrences of an Element in the List, Finding Common Elements in Two Lists, Storing Different Types of Data in a List, Nested Lists, Nested Lists as Matrices, List Comprehensions. Tuples: Creating Tuples, Accessing the Tuple Elements, Basic Operations on Tuples, Functions to Process Tuples, Nested Tuples, Inserting Elements in a Tuple, Modifying Elements of a Tuple, Deleting Elements from a Tuple. 2. Dictionaries: Operations on Dictionaries, Dictionary Methods, Using for Loop with Dictionaries, Sorting the Elements of a Dictionary using Lambdas, Converting Lists into Dictionary, Converting Strings into Dictionary, Passing Dictionaries to Functions, Ordered Dictionaries. 3. Introduction to OOPs: Problem in Procedure Oriented Approach, Specialty of Python Language, Features of Object Oriented Programming System(OOPs)-	Lecture Method using ICT Tools	Interpret how to write classes and create objects.	Conducted Quiz

	• Logic Microoperations		

	Classes and Objects, Encapsulation, Abstraction, Inheritance, Polymorphism. 4. Classes and Objects: Creating a Class, the Self Variable, Constructor, Types of 4 Variables, Namespaces, Types of Methods- Instance Methods, Class Methods, Static Methods, Passing Members of One Class to another Class, Inner Classes.			
IV.	1. Inheritance and Polymorphism: Constructors in Inheritance, Overriding Super Class Constructors and Methods, The super() Method, Types of Inheritance, Single Inheritance, Multiple Inheritance, Method Resolution Order(), Polymorphism, DuckTyping Philosophy of Python, Operator Overloading, Method Overloading, Method Overriding. 2. Exceptions: Exceptions in Python Program, Exceptions, Exception Handling, Types of Exceptions, The Except Block, The assert Statement, User-Defined Exceptions, Logging the Exceptions. 3. Threads: Single Tasking, Multitasking, Difference between a Process and a Thread,Concurrent Programming and GIL, Uses of Threads, Creating Threads in Python-Creating a Thread without using a class, Creating a Thread by Creating a Sub Class to Thread	Pair Programming	Explain how to use Inheritance and Threads.	Conducted Seminars

	Class, Creating a Thread without Creating a Sub Class to Thread Class,Thread Class Methods – Single Tasking using a Thread, Multitasking using Multiple Threads, Thread Synchronization, - Locks, Semaphores, Deadlock of Threads,Avoiding Deadlocks in a Programs, Communication between Threads using notify(), wait() methods and using Queue, Daemon Threads			
V.	1. Files in Python: Files, Types of Files in Python, Opening a File, Closing a File,Working with Text Files Containing Strings, knowing whether a File Exists or Not,Working with Binary Files, The with Statement, Pickle in Python, The seek() and tell() Methods, Working with Directories. 2. Graphical User Interface:GUI in Python, The Root Window, Fonts and Colors,Working with Containers, Canvas, Frame, Widgets, Button Widget,Arranging Widgets in the Frame, Label Widget, Message Widget, Text Widget,Scrollbar Widget, Checkbutton Widget, Radiobutton Widget, Entry Widget, Spinbox Widget, Listbox Widget, Menu Widget, Creating Tables. 3. Python's Database Connectivity: DBMS, Advantages of DBMS over Files, Types of Databases used in Python, Working with MySQL Database, Using MySQL from Python, Retrieving All Rows from a	Socratic Method- Where students try to discover answers on their own by asking guiding questions if they have any queries	Create basic GUI programs and Database Connectivity	Conducted Viva

- Bus and Memory Transfer
- Arithmetic Microoperations
- Logic Microoperations

	Table, Inserting Rows into a Table, Deleting Rows from a Table, Updating Rows in a Table, Creating Database Tables through Python.			

List of References (Book/ICT/ Weblinks):

1. Rao, Dr. R. Nageswara. Core Python Proramming. 2 nd Edition. Dreamtech Press.
2. Chun, Wesley J. Core Python Programming. 2 nd Edition. USA: Pearson Education

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – I

Department: Computer Data Science and Data Analytics Engineering **Class & Section: NCDS** **Course Code: DS18302**

Name of the Faculty Member: Dr L.Radhika Rani **Course Title: COMPUTER ORGANIZATION**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Digital Logic Circuits:** • Digital Computers & Logic Gates • Boolean Algebra & Map Simplification • Combinational Circuits • Flip-Flopsand Sequential Circui **Digital Components:** • Integrated Circuits & Decoders • Multiplexers • Registers and Shift Registers • Binary Counters & Memory Unit **Data Representation:** • Data Types & Complements • Fixed- and Floating-Point Representation • Other Binary Codes and Error Detection Codes	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Understand basic Circuit designing and number systems	PPT presentation and assignments
II.	**Register Transfer and Microoperations:** • Register Transfer language & Register Transfer • Bus and Memory Transfer • Arithmetic Microoperations • Logic Microoperations	Lecturing using traditional methods, Lecturing Method using ICT Tools	Explain about how data transferred from one register to another register	PPT presentation and assignments

	Operations			
V.	**Input-Output Organization:** • Peripheral Devices & I/O Interface • Asynchronous Data Transfer • Modes of Transfer • Direct Memory Access • Input-Output Processor-CPU IOP Communication • Serial Communication **Memory Organization:** • Memory Hierarchy • Main Memory • Auxiliary Memory • Associative Memory • Cache Memory	Lecturing using traditional methods, Lecturing Method using ICT Tools	Categorize all peripheral devices and memory	PPT presentation and assignments

List of References (Book / ICT / Weblinks):

ESSENTIAL READING

1. ManoMorris,M. 1993. **Computer System Architecture**. 3rd Edition. Asia: Pearson Education

SUGGESTED READING

Stallings,William. 2003. **Computer Organization and Architecture. 6th Edition. New Jersey: Pearson Education.**

Name of the faculty member & Signature: D.V.Rallika Rani

Approved by Head of the Department

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER - III

Department: B.Sc (CDS&DAE) **Class & Section :NCDS** **Course Code:BS20038**

Name of the Faculty Member: M. Sailaja **Course Title: STATISTICAL METHODS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Bivariate Data, Scattered Diagram . Principle of Least Squares, Fitting of a Straight Line, Quadratic and Power Curves. Concept of Correlation, Computation of Karl Pearson's Correlation Coefficient for Grouped Data and Ungrouped Data and its Properties . Correlation Ratio, Spearman's Rank Correlation Coefficient, its Properties.	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	**Interpret** the correlation between two variables.	Computer Based test.
II.	Simple Linear Regression, Correlation versus Regression . Properties of Regression Coefficients . Fitting ofConcepts of Partial and Multiple Correlation coefficients (only for three variables)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Distinguish** the principles of linear regression and correlation, including least square method, predicting a particular value of Y for a given value of X and significance of the correlation coefficient.	Offline Quiz.
III.	Analysis of Categorical Data, Independence and Association and Partial Association of Attributes . Various Measures of Association(Yule's) for Two Way Data and Coefficient of Contingency (Pearson and Tcherprow). Coefficient of Colligation	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Show** the association between the attributes. .	Offline Quiz.

IV.	. Concepts of Population, Parameter, Random Sample, Statistic Sampling Distribution and Standard Error, Standard Error of Sample Mean(s) and Sample Proportion(s) . Exact Sampling Distributions, Statement and Properties of $\chi 2$. t and F Distributions and their Interrelationships . Independence of Sample Mean and Variance in Random Sampling from Normal Distributions . Criteria of Good Estimator – Consistency, Unbiasedness, Efficiency and Sufficiency with examples	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Generalize** the properties of estimators.	Written Test.
V.	Statement of Neyman's Factorization Theorem Derivations of Sufficient Statistics in case of Binomial, Poisson, Normal and Exponential (one parameter only) Distributions . Estimation by Method of Moments . Maximum Likelihood (ML), Statements of Asymptotic Properties of MLE . Concept of Interval Estimation. Confidence Intervals of the Parameters of Normal Population by Pivot Method	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Differentiate** Maximum likely hood estimation and method of moments	Written Test.

Listof References (Book/ICT/ Web links):

1. Gupta, S. C. (2011). Fundamentals of statistics (pp. 18-1). New Delhi, India: Himalaya publishing house.
2. Gupta, S. P. (1978). Statistical Methods 1978. 46 th Edition.
3. Deovre, J. (1987). Probability and statistics for engineering and science. Brooks/Cole, Belmont, CA.
4. Richard A. Johnson, Miller, Freund. Probability & Statistics for Engineers. PHI Publications

Name of the faculty member &Signature: M. Sailaja

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER-III

Department: CDS **Class&Section: NCDS** **Course Code:BS23301**

Name of the Faculty Member: P.Bala seshu Kumari **CourseTitle: DataBase Management Systems**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Database-System Applications, Purpose of Database Systems, View of Data, Database Languages, DDL, DML, Relational Databases, Object-Based and Semi structured Databases, Data Storage and Querying, Transaction Management, Database Architecture, Database Users and Administrators, Enhanced entity relationship model Generalization, Specialization, Aggregation, Design Considerations. **E-R Model**: Entity Relationship Model, Constraints Entity Relationship Diagrams, Design Issues Weak Entity Sets, Extended E-R Features	Lecture Method using ICT Tools, Board and chalk method	To learn about Databases and their History and Entity Relationship ER model	Group discussion on Data Base Models
II.	**Relational Model**: Structure of Relational Databases, Fundamental Relational-Algebra Operations Additional Relational Algebra Operations, Extended Relational- Algebra Operations, Null Values, Modification of the	Lecture Method using ICT Tools, PPT Presentation	To learn about Relation Model, reduction to relatlion schema, and Normalization Process.	Developed Relational Tables using Normalization.

	Database . **Normalization**: First, second ,Third Normal forms and BCNF.			
III.	Data Definition, Basic Structure of SQL queries, Set operations, Aggregate functions, Null Values, Nested Sub queries, Joins, Modifications of the database, Views, Integrity Constraints.**PL/SQL** : Functions, Procedures ,Triggers, Cursors, Exception Handling, Packages, Authorization in SQL, Granting, Revoking of privileges, Roles, Authorization on Views, Functions and Procedures, Audit Trail, Application Security.	Lecture Method using ICT Tools	To learn SQL- the standard language of relational databases and PL/SQL programming.	Writing different queries using sql commands to maintain database and retrieval of data. Developing PL/SQL blocks to achieve different tasks.
IV.	**Storage and File Structure**: Overview of Physical Storage Media,Magnetic Disks, Physical Characteristics of Disks, Performance Measures of Disks, Optimization of Disk-Block Access. **Storage Access:** Buffer Manager, Buffer Replacement Policies, File Organization, Organization of Records in Files **Indexing and Hashing**: Basic Concepts, Ordered Indices B+ Tree Index Files-Structure of a B+ Tree, Queries on B+ Trees, Updates on B+ Trees, B+ Tree File Organization ,Static Hashing, Dynamic Hashing ,Comparison Ordered Indexing and Hashing	Lecture Method using ICT Tools, Board and chalk method.	To understand the storage and file structure, storage access, indexing and hashing techniques of the database	Assignment on Storage and File structure, indexing and hashing techniques.
V.	Why no SQL: The value of relational Databases, Impedance Mismatch, Application & Integration Databases, Attack of the clusters, The	Lecture Method using ICT Tools, Board and chalk method.	To understand the need for NoSql databases and their characteristics, the concepts of NoSQL databsed.	Quiz on NoSQL and Aggregate, Distributed database Models.

	Emergence of No SQL. Aggregate Data Models: Aggregates, Column-Family Stores, Summarizing Aggregate-Oriented Databases. More Details on Data Models: Relationships, Graph Databases, Schema less Databases, Materialized Views, Modeling for Data Access. Distribution Models : Single Server, Sharding, Master-Slave Replication, peer-to-peer Replication, Combining Sharding and Replication. Consistency: Update Consistency, Read Consistency, Relaxing Consistency, Relaxing Durability, Quorums.			

List of References (Book/ICT/ Weblinks):

1. Silberschatz, Abraham. Korth, H.F. Sudharshan, S.**Database System Concepts**. 5th Edition. New York: McGraw Hill.
2. Bayross, Ivan.**SQL,PL/SQL (The programming language of oracle).**3rd Revised Edition. Mumbai:BPB Publications.
3. Mc Fadden,FredR. Hoffer,Jeffrey A.Prescott, Mary B. 1999. **Modern Database Management**. 5th Edition. Amsterdam: Addison-Wesley Longman.

Name of the faculty member&Signature: P.Bala Seshu Kumari

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: B.Sc (Computer Data Science and Data Analytics Engineering)

Class & Section: NCDS

Course Code: DS23401

Name of the Faculty Member: Aparna. K

Course Title: Accounting and Financial Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction: Principles of Double entry Book Keeping Accounting equation Accounting concepts and conventions Importance and scope of Financial Accounting Journal Ledger Trial Balance	Lecture Based Instruction	Understand the basic principles of Accounting and preparation of Journal, ledger and trial balance	Problem- Based Learning, Interactive Learning Activities
II.	Cash Book and Final Accounts: Cash Book Preparation of Final Accounts without adjustments Preparation of Final Accounts with adjustments	Lecture Based Instruction	Understand the preparation of Cash book and final accounts	Problem- Based Learning, Interactive Learning Activities
III.	Differential Cost & CVP Analysis: Differential cost-Meaning-Characteristics Differential Costing Vs Marginal Costing Marginal cost contribution Key factor-Profit planning CVP Analysis	Lecture Based Instruction	Analyze the relationship between Cost, Volume and Profit and application of Marginal costing techniques	Problem- Based Learning, Interactive Learning Activities

	Break Even Analysis-Break Even chart Advantages and limitations of Marginal Cost Application of Marginal costing Techniques Decisions involving alternative choices			
IV.	Capital Budgeting: Capital Budgeting Process Analysis of Capital Budgeting decisions Nature of Investment decisions Investment Evaluation criteria Net Present Value Profitability Index Internal Rate of Return Pay Back Period Accounting Rate of Return	Lecture Based Instruction	Understand the process of Capital budgeting and analyze the investment decisions	Problem- Based Learning, Interactive Learning Activities
V.	Budgeting and Budgetary Control: Meaning of Budget, Budgeting & Budgetary control Types of Budget and Key factor Cash Budget Flexible Budget	Lecture Based Instruction	Understand the preparation of various budgets	Problem- Based Learning, Interactive Learning Activities

List of References (Book / ICT / Weblinks):

1. Khan, M.Y. Jain, P.K. Financial Management. India: Tata McGraw Hill.
2. Introduction to Book Keeping& Double Entry Book Keeping. India: Sultan Chand & Sons.

Aparna.K Aparna

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the AcademicYear 2023–2024

SEMESTER-IV

Department:B.Sc.CDS & DAE **Class&Section:NCDS** **Course Code:** DS18402

Name of the Faculty Member:V.Shirisha **Course Title:R Programming**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	UNIT – I 1. Introduction to Data Science's in Various Fields, Impact of DS 2. Major Activities, Toolkit, Data Scientist, Data Science Team 3.Introduction to R: What is R, Features of R, Simple Math, R as a Calculator 4.Reading and Getting Data into R :Reading Data, Reading a File of Data from a Disk, Reading Bigger Data Files 5. The read.csv() Command, Alternative Commands for Reading Data in R 6. Saving Data Files to Disk and Reading Data from the Disk	Lecture based using power point presentations	• Understand basic concept of R.	Conducted Quiz
II.	UNIT – II 1.Series and Control Statements: Assignment, Modes, Operators, Basic Functions, Generating Data sets, Control Structures	Traditional chalk and board method	Demonstrate programming concepts and data structures in R.	Assignments

	2.Graphics: Introduction, Types, Packages, Basic Graph, Histograms, Stem Leaf Graph, Box Plots, Bar Plots			
V.	UNIT – V 1.Linear Regression: Inferential Statistics, Types of Learning, Linear Regression, Simple Linear Regression, Coefficients, Confidence Interval, RSE, R2 Implementation in R, lm, Functions on 1m, Predict, Plotting, Fitting Regression Line Exercises 2.Multiple Linear Regression: Introduction, Comparison with Simple Linear Regression, Correlation Matrix, F Statistic, Response Vs Predictors, Deciding Important Variables, Model Fit, Predictions, Generating a Model Interactive terms, Non Linear Transformations, ANOVA, lm with Polynomial Exercises	Collaborative learning	Choose the type of regression based on data set. .	Conducted Seminar

Listof References (Book/ICT/ Weblinks):

1.Dr.Gardener, Mark.2012. **BeginningR The Statistical Programming Language.** Indiana:John Wiley & Sons.

2.Cotton, Richard. 2013. **Learning R**. USA: O'Reilly

Name of the faculty member&Signature: Shirisha.V

Approved by Head of the Department: Shirisha.V

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

Department: BSc ComputerData Science and Data Analytics Engineering

EVEN SEMESTER

Class&Section: NCDS

CourseCode: DS20403

Nameofthe FacultyMember: A.S.Praneetha

CourseTitle: Data Mining and Data Warehousing

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	• Introduction to Data Warehousing • Fundamentals and Data Characteristics • Data warehouse components, Building data marts and data warehouse. • ETL • Logical Data Modelling schemes and designs for Dimensional Modelling • OLAP	LectureMethodusing ICT Tools Lecture Method,Discussion basedLearning Flipping method-review materials independently before class	Understanding the concepts of Data Warehousing andits importance	Quiz, interactive methods like group discussion and PPT presentations
II.	• Introduction to Motivation, Data Warehousing and Data Mining, Technologies • Data Models • Data Warehousing and OLAP: User's Perspective • Other issues, Future Trends • Frequent pattern Matching • Mining association rules, Applications • Variations, Interestingness, FIM algorithms • Incremental mining, Conciseness of results, Sequential rules	LectureMethodusing ICT Tools Lecture Method,Discussion basedLearning Flipping method-review materials independently before class	Analyzing different Data Mining methods using frequent pattern mining algorithms.	Debate, Interactive methods like group discussion and PPT presentation

III.	• Introduction to Classification, Basic problem definition, Applications • Evaluation of Classifiers, Other issues • Classification Techniques • Optimal Classification Algorithms • Regression	LectureMethodusing ICT Tools Lecture Method,Discussion basedLearning Flipping method-review materials independently before class	Understanding Classification of data and different Classification algorithms	Real-world Case Studies, Regular assessments
IV.	• Clustering: Introduction, Basic problem definition • Measuring of Similarity • Evaluation and Classification of Clustering Algorithms • Different methods of Clustering and Outlier Detection	LectureMethodusing ICT Tools Lecture Method,Discussion basedLearning Flipping method-review materials independently before class	Understanding Clustering and Clustering methods	Real-world Case Studies, Regular assessments,Security Case Studies
V.	• Introduction to Text Data Mining • General and Functional Architecture • Overview of text mining • Core mining operations and Pre-Processing Techniques • Tokenization, Lemmatization, Morphological Analysis • Delimiters, Stop words and Keyword search	LectureMethodusing ICT Tools Lecture Method,Discussion basedLearning Flipping method-review materials independently before class	Understanding Text Data Mining, Tokenization and Lemmatization	Real-world Case Studies, Seminars and active learning, Regular assessments

Listof References (Book/ICT/ Weblinks):

1. Pudi, Vikram P, Krishna, Radha 2009. Data Mining, 1st Edition. New Delhi: Oxford University Press
2. Theraja, Reema. 2009. Data Warehousing. Oxford University Press
3. Weiss, Sholom. Indurkhya, Nitin Zhang, Tong. Damerau, Fred.2010. The Text Mining Handbook: Advanced Approaches in analyzing unstructured data

A.S.PRANEETHA

Name of the faculty member & Signature: A.S.Praneetha

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the AcademicYear 2023–2024

SEMESTER-IV

Department:B.Sc.CDS & DAE **Class&Section:NCDS** **Course Code:BS20409**

Name of the Faculty Member:Tegulla Rekha **Course Title:Computer Networks**

Unit	Topics to becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1. Data Communications, Networks, Protocols and Standards 2. OSI Model, Layers in OSI Model, TCP/IP Protocol Suite 3. Analog and Digital, Transmission Impairments 4. Transmission Media-Guided media, Connecting Devices(Hubs, Repeaters, Bridges, Routers-Only Definitions) 5. Digital Transmission-Digital-to-Digital Conversion 6. Multiplexing: Frequency-Division, Wavelength and Time Division	Lecture based using powerpoint presentations	• Identify basic computer network topologies and protocols. • Functions of OSI and its protocols	Conducted Quiz
II.	1. Error Detection and Correction-Parity, Check Sum, CRC, Hamming Code 2. Data Link Control: Framing, Flow and Error Control 3. Stop-and-Wait ARQ, Go-Back-N ARQ, Selective Repeat ARQ, Piggybacking 2 4. HDLC, Random Access- ALOHA, CSMA, CSMA/CD, CSMA/CA 5. Wired LANs- Ethernet	Traditional chalk and board method	Classify different error detecting techniques	Assignments

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023–2024

SEMESTER - IV

Department: B.Sc (CDS&DAE) **Class & Section :NCDS** **Course Code: BS20040**

Name of the Faculty Member: M. Sailaja **Course Title: STATISTICAL INFERENCE**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Concepts of Statistical Hypotheses, Null and Alternative Hypothesis, Critical Region, Two types of Errors, Level of Significance and Power of a Test. . One and Two Tailed Tests, Test Function (non-randomized and randomized) . Neyman-Pearson's Fundamental Lemma for Randomized tests. . Examples in case of Binomial . Poisson, Exponential . Normal Distributions and their Powers of Test Functions	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	Knowledge about formulating and testing a hypothesis, using critical values to draw conclusions And determining probability of making errors in hypothesis tests, and about large sample tests..	Computer Based test.
II.	Use of Central Limit Theorem in Testing . Large Sample Tests and Confidence Intervals for Mean(s) . Proportion(s) . Standard Deviation (s)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Analyze** hypotheses tests of means, proportions and variances using both one-and two sample data sets.	Offline Quiz.
III.	Fisher's Z – Transformation for Population Correlation Coefficient(s) and Testing the same in case of One Sample and	Discussion and Demonstration, Practical activity, whiteboard, Marker,	**Explain** Chi-Squared test for independence of attributes and goodness of fit.	Offline Quiz.

	Two Sample. Definition of Order Statistics and Statement of their Distributions . Tests of Significance based on $\chi 2$, $\chi 2$ test for Specified Variance. Goodness of Fit . Test for Independence of Attributes (r × s, 2 × k and 2 × 2 contingency tables)	PPT Presentation, Projector.		
IV.	Fisher's Z – Transformation for Population Correlation Coefficient(s) and Testing the same in case of One Sample and Two Samples. Definition of Order Statistics and Statement of their Distributions 2 3. Tests of Significance based on $\chi 2$ - $\chi 2$ test for Specified Variance 2 4. Goodness of Fit 3 5. Test for Independence of Attributes (r × s, 2 × k and 2 × 2 contingency tables)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Understand and analyze various methods of small sample tests.	Written Test.
V.	Non-Parametric tests-their advantages and disadvantages . Comparison with parametric tests .Measurement scale-nominal, ordinal, interval and ratio . One sample runs test, sign test . Wilcoxon-signed rank tests (single and paired samples) . Two independent sample tests: Median test . Wilcoxon – Mann-Whitney U test . Wald Wolfowitz's runs test.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	**Design** the test statistic to be used when the nature of the distribution is unknown.	Written Test.

Listof References (Book/ICT/ Web links):

1. Goon, AM. Gupta, MK. Gupta, Das B. 2007. **Fundamentals of StatisticsVol-I**. Kolakota: The World Press Pvt.Ltd.
2. The World Press Pvt.Ltd.
3. Hoel, P.G. 2005. **Introduction to Mathematical Statistics.**India: Asia Publishing House.
4. Hogg and Craig.2005. **Introduction to Mathematical Statistics**.New Delhi : Printis Hall.

Name of the faculty member &Signature: M. Sailaja

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-IV

Department: B.Sc(CDS) **Class&Section: NCDS** **Course Code: BS18436**

Name of the Faculty: P.Bala Seshu Kumari **Course Title: Java Programming**

Unit	Topics o be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Object Oriented Programming:** Introduction, Object Oriented Paradigm, Basic concepts, Benefits of OOP, Applications of OOP, Introduction to Java, Features of Java, Simple Java Program, Java Program Structure, Java Tokens, Java Statements, JVM, Variables, Data Types, Operators and Control statements, Simple Java Program. **Classes, Objects and Methods:** Defining Class, Adding Variables, Methods, Constructors, and Finalizer Methods.	Lecture Method Using ICT Tools, Board and chalk method	To learn about History of Java, Comparison between other object oriented programs, knowledge about fundamental concepts of Java. To learn about Java statements, Control and Conditional statements, creation of classes and objects	Group discussion on Object Oriented Languages. Writing small programs with different logics.
II.	Method Overloading, Static Members, Nesting of Methods, Inheritance, Overriding Methods, Final Variables and Methods, Final Classes, Abstract Methods and Classes, Visibility Control, Arrays, Strings and Vectors, Wrapper classes. **Interfaces:** Defining Interfaces, Extending and Implementing Interfaces, Accessing Interface variables **Packages:** Java API Packages, Using system Packages, Naming	Lecture Method Using ICT Tools, Board and chalk method	To learn about concepts Inheritance, Interfaces, Arrays Strings and Wrapper Classes and Packages.	Developing programs using concepts Inheritance, Interfaces, Arrays Strings and Wrapper Classes Writing Small programs using predefined packages. Developed programs to Create own Packages.

	JTextField, Joptionpane.			

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING 1. Schin Malhotra, Sourab Choudhary 2017 Programming in JAVA, Oxford University Press.

2. CAMPINE WALRAH, HUML, 1999 The Java Tutorial Continued, Sun Micro Systems.

3. Naughton Patrick, Schildt Herbert, The complete Reference Java 2, Third Edition Tata McGraw Hill Publications.

4. Balaguruswamy E, Programming with Java, Third Edition (Units I, II, III & IV) Tata McGraw Hill Publications.

Name of thefaculty member&Signature: P.Bala seshu kumari

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - V

Department: CDS & DAE **Class&Section :DCDS** **CourseCode: BS21048**

Nameofthe FacultyMember: M. Sailaja **CourseTitle: Operations Research**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to OR- origin, nature, applications and limitations Linear programming problem and fundamrental theorem of lpp, Graphical method and simplex method.	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	To learn how to use the various decision making tools OR to solve real life problems.	Computer Based test.
II.	Artificial variables and solution to Big M method and two phase method. (procedures), degeneracy. Duality, dual simplex method , primal dual relationship.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	The reasons are that the inclusion of the big number M may cause round-off error and other computational difficulties The dual simplex method is a technique used to solve linear programming problems. It produces a sequence of dual feasible tables. It is an algorithm of an iterative process for solving linear programming problems.	Offline Quiz.

III.	Transportation problem and its applications IBFS- using north west corner rule Matrix minimum method Vogel's approximation method Unbalanced transportation problem Degeneracy Optimality test	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	ToLearnabout basic feasible solution using various methods and describe suitable method for maximizing the objective function.	Offline Quiz.
IV.	Assignment problem- Hungarian method Balanced and unbalanced AP-problems Restricted AP Travelling sales man problem	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to formulate and solve the assignment problem .	Written Test.
V.	Sequencing problem, Johnson's algorithm of n-jobs on 2 machines and 3 machines.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Sequencing helps students understand and organize material they've learned as well as helps them solve problems..	Written Test.

Listof References (Book/ICT/ Weblinks):

1. Gupta, P. K., &Hira, D. (2010). Operations Research. S. Chand & Company Ltd.
2. Sharma, J. K. (2013). Operations Research (5th ed.). Mcmillan Publishers IndiaLtd.
3. Taha : An Introduction to Operations Research, PHI
4. https://youtu.be/1CnFjNOewEU
5. https://youtu.be/ILWbaWrjgU4
6. https://www.youtube.com/watch?v=z3zjieArlAE
7. https://www.youtube.com/watch?v=rrfFTdO2Z7I
8. https://www.youtube.com/watch?v=WrAf6zdteXI
9. https://www.youtube.com/watch?v=-Kza-8JmqHU

M. Sailaja

Nameofthefacultymember&Signature: M. Sailaja

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -V

Department: B.Sc. Computer Science and Artificial Intelligence **Class&Section:DCDS** **CourseCode:** DS21501

Nameofthe Faculty Member: ASWINI KUMAR MANDADAPU

CourseTitle: Data Visualization Tools

Unit	Topics tobe covered	Teaching Pedagogy	Learning Outcome	SkillDevelopmentActivity
I.	Ways of Representing Visual Data, Techniques Used for Visual Data Representation, Types of Data Visualization, Visualizing Big Data, Tools Used in Data Visualization, Tableau Products.	LectureMethodusing ICT Tools	ToLearnaboutthe way of representing visual data and its applications	Interactive session on representing visual data.Techniques used to represent data.
II.	Creating Combination of Charts, Creating a Combo Chart with Secondary Axis, Discriminating Series and Category Axis, Chart Elements and Chart Types, Data Labels, Quick Layout ,Using Picturesin ColumnCharts, Band Chart ,Thermometer Chart, Gantt Charts, Water fall Chart, Spark lines , Pivot Charts, Pivot Charts with Pivot Tables, Pivot ChartswithoutPivot Tables.	LectureMethodusing ICT Tools	To learn data visualization using combinationof variouscharts.	Discussionon Creating different charts on sample data.
III.	Plotting and Visualization:A Brief Matplotlib API, Plotting with Pandas and Sea born, Python Visualization Tools. Basic Visualization using Python: Pie Chart, Bar Chart, Histogram, Line Chart, Area plot, Box	LectureMethodusing Black Board & ICT Tools	To learn apply visualizing techniques using matplotlib package	Seminars and practicing programs.

	WhiskerPlot, Scatter Plot, Heat Maps.			
IV.	Creating Your First Visualizations and Dashboards: Connecting to Data, Foundations for Building Visualizations, Visualizing Data, Creating Bar Charts, Line Charts, Geographic Visualizations.Show Me. Tableau Paradigm, Connecting to Data, Data Source Meta data, Extracts. Tableau File Types, Joins and Blends, Filtering Data.	LectureMethodusing ICT Tools	Designeffective graphical analysis in Tableau	Interactive Session practice tableau
V.	Visualizing Dates and Times, Visualizing Distributions, Compare Different Measures,LOD,types of calculations,parameters,Adhoc calculations,Quick table calculations,scope and direction,custom table calculations, data Densification.	LectureMethodusing Black Board & ICT Tools	ImplementTable level Calculations	Solving calculations using the application.

List of References (Book/ICT/ We blinks):

1. DT Editorial Services.2016. **Big Data Black Book**. Dream tech Press.
2. Wes,Mc Kinny.2018.**Python for Data Analysis.**2nd Edition. O'Reilly Media
3. Motwani, Dr. Bharati. 2019.**Data Analytics with R.** Wiley India Pvt. Limited
4. Milligan, Joshua N.2016.**Learning Tableau**.2nd Edition. PacktPublishingLtd.

Nameofthefacultymember&Signature: Ashwin Kumar

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-V

Department: CDS

Class&Section: DCDS

CourseCode:DS21502B

Nameofthe FacultyMember: V.Hiranya laxmi

CourseTitle: TEXT DATA ANALYTICS

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Text categorization, Definition, Document Representation, Feature Selection, Decision Tree Classifiers, Rule-Based Classifiers, Classification of Linked and Web Data, Meta-Algorithms	ICT Tools	Students will be able to identify the different features that can be mined from text and web documents and can use available open source classification and clustering tools on some standard text data sets.	Quiz
II.	Text Clustering: Clustering, Definition, Vector space Models, Distance-Based Algorithms, Word and Phrase-Based Clustering, Semi-Supervised Clustering, Transfer Learning	ICT Tools	Students will be able to identify the different features that can be mined from text and web documents and can use available open source classification and clustering tools on some standard text data sets.	Quiz
III.	Information Retrieval, Information Retrieval and Text Mining, Keyword Search, Nearest Neighbour Methods, Similarity, Web Based Document search, Matching, Inverted Lists, EvaluationI	ppt and board	Students will be able to identify the different features that can be mined from text and web documents and can use available open source classification and clustering tools on some standard text data sets.	Quiz, Assignment, Seminars

	Information Extraction: Information Extraction, Architecture, Co-reference, Named Entity and Relation Extraction Template Filling and Database Construcion, Applications, Inductive, Unsupervised Algorithms for Information Extraction, Text Summarization Techniques, Topic Representation, Influence of Context – Indicator Representations	ppt and board	Students will be able to identify the different features that can be mined from text and web documents and can use available open source classification and clustering tools on some standard text data sets.	Presentations
V.	Recent Trends: Visualization Approaches, Architectural Considerations, Visualization Techniques in Link Analysis, Mining Text Streams- Text Mining in Multimedia, Text Analytics in Social Media, Opinion Lexicon Expansion, aspect-Based Sentiment Analysis, Opinion spam Detection, Text Mining applications	ppt and board	Students will be able to identify the different features that can be mined from text and web documents and can use available open source classification and clustering tools on some standard text data sets.	Seminars

Listof References (Book/ICT/ Weblinks):

1. Weiss, Sholom. Indurkhya, Nitin. Zhang, Tong. Damerau,Fred.2010. The Text Mining Handbook: Advanced Approaches in Analyzing Unstructure Data. Springer.
2. Aggarwal, Charu C,Zhai, Cheng Xiang. 2012. Mining Text Data. Springer.
3. https://www.youtube.com/watch?v=fA2UHS2kBBs&t=12s

Nameofthefacultymember&Signature: V. Hisanya Lakshmi

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -V

Department: CDS **Class & Section:DCDS** **Course Code:DS21502A**

Name of the Faculty Member:P.BALA SESHU KUMARI **Course Title: SOFTWARE ENGINEERING**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	The evolving role of software, software, changing nature of software Legacy Software, Software Myths Software engineering-layered technology, Process Framework CMMI, Process patterns, Personal and Team Process models, Process technology, product and Process Process Models	Lecture Method using ICT Tools	To Learn about software, software, changing nature of software Legacy Software, Software Myths Software engineering-layered technology, Different models of Software development	Group discussion on framework and process models
II.	System Engineering-Computer Based Systems, Hierarchy , Business Process Engineering, Product Engineering, System Modeling Requirements Engineering tasks, Initiating Requirements Engineering Process Eliciting Requirements Developing Use Cases, Building Analysis Model Negotiating and Validating Requirements Requirements Analysis, Analysis Modeling Approaches, Data Modeling Concepts Object Oriented Analysis, Scenario Based Modeling, Flow Oriented Modeling Class Based Modeling, Creating Behavioral Model	Lecture Method using ICT Tools	System Engineering ,Business Process Engineering, Product Engineering, Eliciting Requirements Developing Use Cases, Building Analysis Model Negotiating and Validating Requirements	Interaction section on System Business and Product Engineering,Modeling Concepts Object Oriented Analysis, Scenario Based Modeling.

	Design Process and Quality Design Concepts and Design Model Pattern Based Software Design Software architecture, Data design Architectural styles and Patterns Architectural design, Assessing alternative architectural design Managing Data flow into Software architecture	Lecture Method using ICT Tools	, Data design Architectural styles and Patterns Architectural design, Assessing alternative	Assignment on Assessing alternative architectural design Managing Data flow into Software architecture
IV.	Introduction to Component, Designing Class Based Components Conducting Component Level Design, Object Constraint Language Design Conventional Components Golden Rules, User Interface Analysis and Design Interface Analysis, Interface Design Steps DesignEvaluation	Board and chalk method	Designing Class Based Components Conducting Component Level Design, Object Constraint Language	Quiz on , User Interface Analysis and Design Interface Analysis, Interface Design Steps Design Evaluation
V.	A Single Approach to Software Testing Strategic Issues, Test Strategies for Conventional Software Validation Testing, System Testing, Testing Fundamentals, Black Box and White Box Testing Basis Path Testing, Control Structure Testing Software Quality Metrics for Analysis Model Metrics for Design Model, Metrics for Source Metrics for Testing, Metrics for Maintenance	Board and chalk method	Testing Fundamentals, Black Box and White Box Testing Basis Path Testing	Class activity on Black Box and White Box Testing

List of References (Book / ICT / Weblinks):

1. Pressman, Rogers S. 2019.**Software Engineering,** A practitioner's Approach.8thEdition.Mc Graw Hill Education
2. Sommerville.2007.**Software Engineering.7thEdition.**NewDelhi: Pearson Education

Name of the faculty member & Signature: **P.BALA SESHU KUMARI**

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-V

Department: CDS

Class&Section: DCDS

CourseCode:DS18503

Nameofthe FacultyMember: V.Hiranya laxmi

CourseTitle: MACHINE LEARNING TECHNIQUES

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to Machine Learning, Introduction. Learning, Types of Machine Learning, The Machine Learing Process. Testing Machine Learning Algorithms- Overfitting, Training , Testing and Validation Sets,The Confusion Matrix, some Basic Statistics. Applications	ICT Tools	Have a good understanding of the fundamental issues and challenges of machine learning: data, model selection, model complexity, etc.	Quiz
II.	Neurons, Neural Networks, and Linear Discriminants, The Brain and The Neuron, Neural Networks, The Perceptron, Linear Separability, Linear Regression	ICT Tools	Classify the learning algorithms and apply to the given data set.	Quiz
III.	The Multi-Layer Perceptron, Going Forwords, Going Backwards: Back-Propagation of Error, The Multi-Layer Perceptron in Practice, Example of Using MLP, A Recipe for Using MLP, Deriving the Back Propagation	ppt and board	Identify the underlying mathematical relationships within and across Machine Learning algorithms and the paradigms supervised of un-supervised learning.	Quiz, Assignment, Seminars
IV.	Dimensionality Reduction: Linear Discrimnant Analysis (LDA), Principal Components Analysis(PCA)-Relation with MLP, Factor Analysis, Independent	ppt and board	Evaluate and interpret the results of the algorithms.	Presentations

	Components Analysis (ICA), Support Vector Machines: Optimal Separation, Kernels, The Support Vector Machine Algorithm			
V.	Learning With Trees: Using Decision Trees, Constructing Decision Trees, Classification and Regression Trees(Cart), Unsupervised Learning: The K-Means Algorithm, Vector Quantization, The Self-Organizing Feature Map	Ppt and board	Design and implement machine learning solutions to classification, regression and clustering problems.	Seminars

Listof References (Book/ICT/ Weblinks):

1. Marsland, Stephen. 2009. Machine Learing –An Algorithmic Perspective. CRC press.
2. Mitchell, Tom. 1997 .Machine Learning. McGraw-Hill.
3. https://www.youtube.com/watch?v=azXCzI57Yfc

Nameofthefacultymember&Signature: V. Hiranya laxmi

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Teaching Plan for the AcademicYear 2023–2024

SEMESTER-V

Department :B.Sc. CDS & DAE **Class & Section: DCDS** **Course Code:DS21504**

Name of the Faculty Member: Tegulla Rekha **Course Title: Artificial Intelligence**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction 1. Introduction to AI 2. applications of AI 3. History of AI 4. Types of AI, Intelligent agents 5. Types of agents 6. Agent environment 7. Turing test in AI	Lecture Method using power point Presentations	Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning.	Conducted Group Discussion on latest technologies, Applications and use of Technology in todays generation.
II.	Search Algorithms - Types of Search Algorithms 1. Uninformed Search –Breadth First Search, Uniform Cost Search 2. Depth First Search, and Depth Limited Search 3. Iterative Deepening Depth First Search, Bidirectional Search 4. Informed search -Best first search, A* search	Traditional Lecture method using chalk and board	Understand predicate logic and transform the real life information in different representation.	Conducted Computer based test,Assignments
III.	Adversarial search – Types of Games in AI 1. MIN –MAX Algorithm and its Working 6 2. Alpha Beta Pruning and its Working	Lecture Method using ICT Tools	Understand formal methods of knowledge representation	Conducted Quiz

IV.	Knowledge Representation: 1. Knowledge Base Agents 2. Knowledge Representation Techniques 2 3. The Wumpus World 4. Propositional Logic 5. First Order Logic 6. Forward Chaining and Backward Chaining	Case Studies	Analyze the underlying mathematical relationships and build expert system	Conducted Seminars
V.	Subset of AI: 1. Expert systems 2. Machine learning and NLP 3. Future of A	Project based AI Learning-students try to apply concepts like ML and NLP	Demonstrate Knowledge representation techniques	Conducted Viva

List of References (Book/ICT/ Weblinks):

1. Kaushik, Saroj. 2011. Artificial Intelligence. First Edition. Cengage Learning India.
2. Russell, Norvig. 2004. Artificial Intelligence: A Modern Approach. 3 rd Edition.Pearson Education

Name of the faculty member & Signature: T. Rekha

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Teaching Plan for the Academic Year 2023 – 2024

V SEMESTER

Department: B. Sc. Computer Data Science & Data Analytics Engg.	**Class:** DCDS	**Course Code:** DS21507
Name of the Faculty Member: KAKANI KETANA	**Course Title:** Applied Statistics	

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Components of time series analysis. Determination of trend	Lecture method	Can determine which time series method can be used for any data depending on its patterns	Quiz, problem solving.
II.	Determination of seasonal variations using different methods and also estimation of parameters using growth curves	Lecture method	Can predict the future of an event by minimizing the regular patterns in the data	Quiz, problem solving.
III.	Introduction to bivariate analysis – particularly bivariate normal distribution. Determining mean and variance of bivariate normal distributions	Lecture method	Determine mean, variance and conditional, marginal distribution of bivariate normal distributions	Quiz, problem solving.
IV.	Introduction to multivariate normal distribution, partial and multiple correlation coefficients, discriminant and PCA	Lecture method	Determine the relation between multiple random variables	Quiz, problem solving.
V.	Classification of states and chains of Markov chain, stationary probability and limiting behavior of Markov chain	Lecture method	Determine the state of a Markov chain and predicting the probabilities of stationary distributions	Quiz, problem solving.

List of References (Book / ICT / Weblinks):

1. Gupta S.C. Kapoor. V.K. 2015 Fundamentals of Applied Statistics New Delhi: Sultan Chand & Sons (Unit I and II)
2. Anderson, T.W. (2003): An introduction to Multivariate Statistical Analysis, 3rd Edition, John Wiley. (Units – III and IV)
3. Medhi. J (2009): Stochastic Processes, New Age International Publishers. (Unit V)
4. Rao, C.R. (2000): Linear Statistical Inference and its applications, 2nd edition, Wiley. (Units I and II).
2. Bhat B.R. (2000): Stochastic Models: Analysis and Applications, New Age International Publishers. (units III and IV).
3. Willam Feller.1990 Introduction to Probability theory and its applications. Volume –I, New Delhi. Wiley Publications.

(KAKANI KETANA)

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Teaching Plan for the Academic Year 2023–2024

SEMESTER - VI

Department: B.Sc (CDS&DAE) **Class & Section :DCDS** **Course Code:** DS21602B

Name of the Faculty Member: V.Shirisha **Course Title:MARKETING DATA ANALYTICS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Market Research:** 1. Definition, Classification of Research design 2. Types of Research: Exploratory, Descriptive, and Causal 3. Overview, Survey Methods, Mode of Administering Survey: Personal, Telephone, Mail, Electronic methods 4. Observational Methods: Structured Vs Unstructured 5. Observational Methods Based on Mode of Administration 6. Comparison between Survey and Observation 7. How is survey data different from database data?	Ict method	**Understand** market research methods	Computer Based test.
II.	**Consumer Behavior and Marketing Strategy:** 1. Introduction, Overview of Consumer Behavior 2. Overview of Marketing Strategy	Chalk and board	**Analyze** consumer behavior and marketing strategy	Assignments

	3. Who is most likely to buy and How do I target? 4. What are the things that drive Demand? 5. Modeling Elasticity: Business Case			
III.	**Market Basket Analysis:** 1. Conceptual Overview of Market Basket Analysis.What is market Basket? 2. How to estimate/ predict market Basket? 3. Logistics Regression: Business Case	Ppt presentations	**Identify** market basket analysis	Quiz.
IV.	**Survival Analysis:** 1. When are my customers likely to buy? 2. Conceptual overview of survival Analysis 3. Business Case: Model output and Interpretation	Chalk and board	**Examine** survival analysis	Written Test.
V.	**Customer Segmentation:** 1. Introduction to Segmentation 2. What is segmentation? What is a segment? 3. Why segment? Strategic uses of Segmentation 4. The 4p's of strategic marketing 5. Segmentation :Tool and Techniques 6. General Analytical Techniques: Business Case	Ppt presentations	**Classify** customer segmentation	Group discussion

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Listof References (Book/ICT/ Web links):

1. Hardoon, David R. Shmueli, Galit. 2013. **Getting Started With Business Analytics-Insightful Decision Making.** Taylor & Francis Group

Name of the faculty member &Signature: Shiisha. V

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Teaching Plan for the AcademicYear 2023–2024

SEMESTER-VI

Department:B.Sc. CDS & DAE **Class&Section:DCDS** **Course Code:DS18601A**

Name of the Faculty Member:V.Hiranya Laxmi **Course Title:DATA SECURITY**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Attacks on Computers and Computer Security:** 1. Introduction, The Need for Security, Security Approaches, Principles of Security, Types of Security Attacks 2. Security Services, Plain Text and Cipher Text, Stream Ciphers, Block Ciphers 3. Security Mechanisms, A Model for Network Security **Cryptography:** 4. Encryption and Decryption, Substitution Ciphers, Ceaser Cipher, Mono-Alphabetic Cipher, Play-Fair Cipher, Hill Cipher, Poly-Alphabetic Cipher, Transposition Techniques, One-Time Pads 5. Introduction to Symmetric and Asymmetric Key Cryptography and Its Applications 6. Cryptanalysis, Types of Keys, Key Range and Key Size, Possible Types of Attacks	Lecture based using power point presentations	Identify some of the factors driving the need for data security	Conducted Quiz

	Symmetric Key Cryptography: 1. Block Cipher Principles, Symmetric Encryption Principles & Algorithms 2. DES Algorithm, Strength of DES, Triple DES 3. AES Algorithm, Overview of AES, Iterations in AES 4. Stream ciphers, RC4 Algorithm 5. Block cipher modes of operation, Electronic Code Book Mode (ECB), Cipher Block Chaining Mode (CBC), Cipher Feedback Mode (CFB), Counters Mode (CTR) **Asymmetric key Cryptography**: 6. Principles of Public Key Cryptography, RSA Algorithm	Traditional chalk and board method	Examine and classify particular examples of attacks	Assignments
III.	**Intruders, Virus and Firewalls:** 1. Introduction to Intruders, Intrusion Detection Systems 2. Password Management, Password Protection, Password Selection Strategies 3. Viruses, Threats, Worms, Nature of Viruses, Types of Viruses, Malicious Program 4. Virus Counter Measures, Anti-Virus Approaches, Generic Decryption, Digital Immune System, Behavior-Blocking Software 5. Firewall Design Principles, Firewall Characteristics, Types of Firewalls, Firewall Configurations. 6. Trusted Systems, Data Access Control, Concept of Trusted Systems	Lecture based using ICT Tools	Classify the terms vulnerability, threat and attack	Conducted Viva

	1. Introduction to Information Hiding, Steganography, and Watermarking 2. Importance of Digital Watermarking, Importance of Steganography 3. Applications of Watermarking, Applications of Steganography 4. Properties of Watermarking Systems, Evaluating Watermarking Systems 5. Properties of Steganography and Steganalysis Systems. Evaluating and Testing Steganographic Systems 6. Robust Watermarking, Approaches, Robustness to Volumetric Distortions	Lecture based using ICT Tools	Analyse physical points of vulnerability in simple networks	Conducted Seminar
V.	**Case Studies on Cryptography and Security:** 1. Secure Inter-branch Payment Transactions 2. Cross site Scripting Vulnerability 3. Virtual Elections 4. Common Criteria for Information Technology Security Evaluation Biometrics: 5. Components, Enrollment, Authentication, Techniques, Accuracy, Applications 6. Internet Standards, Internet Society, Internet Organizations, Internet Standard Categories, RFCs	Lecture based using ICT Tools	Compare and contrast symmetric and asymmetric encryption systems and their vulnerability to attack, and explain the characteristics of hybrid systems.	Conducted Seminar

Listof References (Book/ICT/ Weblinks):

1. Stallings,William. **Cryptography and Network Security**. 4thEdition. New Delhi: Pearson Education.
2. Forouzan,Behrouz A. **Cryptography and Network Security**. Mc Graw Hill Edition.
3. Cox,Ingemar. Miller,Matthew. Bloom, Jeffrey and Fridrich, Jessica. Digital **Watermarking and Steganography**.2ndEdition. India: TMH.

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Name of the faculty member & Signature: Vattisangalasmi Vattisangalasmi

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER VI

Department:CDS **Class&Section:DCDS** **CourseCode: DS18601B**

Nameofthe FacultyMember: Bhanu sree S **CourseTitle: Cloud Computing**

Unit	Topics to be covered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to distributed systems, resource sharing and web , challenges, system models, networking and internetworking ,networking principles	ppts.flow charts,ict tools	Understand distributed systems for cloud computing	Group discussion on internet protocols
II.	Introduction to cloud computing ,infrastructure, system models for advanced computing , software for advanced computing	ppt ,real world examples of an application,ict tools	Identify cloud servers, types and components	Hands on aws
III.	TheCloudReferen Model:Architectur e, Infrastructure and Hardware-as-a-service, Platform as a Service, Software as Service Types of clouds: Public Clouds, Private Clouds, Hybrid Clouds, CommunityClouds Open Challenges: Cloud Definition, Cloud Interoperability and Standards, Scalability and Fault Tolerance, Security, Trust and Privacy, Organizational Aspects	Ppt ,ict tools	Analyse cloud architectural information in the present generation of market	Hamds on aws

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IV.	Hardware and Infrastructure: Clients, Mobile, Thin, Thick, Local Clouds and Thin Clients: Virtualization in Your Organization: Why Virtualize? , How to Virtualize, Concerns, Security, Server Solutions: Microsoft Hyper-V, VMware, VMware Infrastructure, Thin Clients: Sun, Hewlett Packard, Dell Cloud Storage: Overview: The Basics, Storage as a Service, Providers, Security, Reliability, Advantages, Cautions	PPT, flow charts,ict tools	Compare types of clients in the cloud and virtualization	Viva on cloud aplications
V.	Introduction and Characteristics of Virtualized Environments: Increased Security, Managed Execution, Portability, Taxonomy of Virtualization Techniques: Execution Virtualization, Other Types of Virtualization, Virtualization and Cloud Computing,, Technology Examples: Xen: Paravirtualization, VMware: Fullvirtualization, Microsoft Hyper-V	PPT, ict tools	Examine virtual machines the market and usage	Presentations

Listof References (Book/ICT/ Weblinks):

1. Geoffrey C Fox, Kaittwang and DongrraElsevier, Jack J. 2012. **Distributed and Cloud Computing.** India
2. Coulouris G, Dollimore Jand Kindberg T. **Distributed Systems Concepts and Design.**
   4th Edition. Pearson Education

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: B.Sc. Computer Science & Data Analytics Engineering

Class & Section: DCDS

Course Code: DS21603

Name of the Faculty Member: V. Hiranya Laxmi

Course Title: BIG DATA ANALYTICS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Getting an Overview of Big Data: What is Big Data? History of Data Management -Evolution of Big Data, Structuring Big Data, Elements of Big Data, Big Data Analytics, Careers and Future of Big Data Exploring the use of Big Data in Business Context: Use of Big Data in Social Networking, Preventing fraudulent Activities, Introducing Technologies for Handling Big Data: Distributed and parallel Computing for Big Data, Introducing Hadoop, Cloud Computing and Big Data Understanding Big Data Technology Foundations: Exploring the Big Data Stack, Virtualization and Big Data, Virtualization Approaches	ICT and Board	Explain the motivation for big data systems and identify the main sources of big data in the real world	Quiz
II.	Understanding Hadoop EcoSystem Hadoop Ecosystem, Hadoop Distributed File System, Hbase-Architecture, Regions Understanding MapReduce	ICT Tools, Board and chalk method	Develop technical skills in predicative modelling to support business decision- making	Assignment

	Fundamental and HBase The Map Reduce framework, Uses of MapReduce, Role of HBase in Big Data Processing			
III.	Processing your Data with MapReduce Developing Simple MapReduce Application Customizing MapReduce Execution and Implementing MapReduce program Controlling MapReduce Execution with InputFormat, Reading Data with Custom RecordReader, organizing Output Data with OutputForamat, Customizing Data with RecordWriter, Optimizing MapReduce Execution with Combiner, Controlling reducer Execution with Partitioner	ICT and Board	Implement several Data Intensive tasks using the Map Reduce Paradigm	Quiz , Assignments
IV.	Understanding Hadoop YARN Architecture: Background and Advantages of YARN, YARN Architecture, Working of YARN, YARN Schedulers, YARN Configurations, YARN Commands, YARN Containers Exploring HIVE: Introducing Hive, Getting started with Hive, Data Types and Built- in functions in Hive, Hive DDL, Data manipulation in Hive, Data Retrieval Queries, using Joins in Hive	ICT and Board	Understand Hadoop ecosystem such as YARN and HIVE-QL for structured databases	Assignment, Seminar
V.	Analysing Data with Pig Introducing Pig, Running pig, Getting Started with Pig Latin, working with Operators in Pig, Working with	ICT and Board	Demonstrate an ability map-reduce programming using PIG and NoSQL databases for storing purpose and process for Big Data	Seminar

	Functions in Pig, Debugging Pig, Error Handling in Pig NoSQL Data Management: Introduction to NoSQL, Types of NoSQL Data Models, Schema-Less Databases, Materialized Views, Distribution Models, Sharding		Analytics	

List of References (Book / ICT / Weblinks):

1. DT Editorial Services. 2016. Big Data Black Book. Dreamtech Press.
2. White, Tom. 2012. Hadoop: The Definitive Guide. 3rd Edition. O'Reilly Media.

Name of the faculty member & Signature: V. Hiranya Laxmi

V. Hiranya Laxmi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: B.SC(ComputerScience &Cognitive System) **Class & Section:ACSC** **Course Code: CSC23102**

Name of the Faculty Member:K.HIMABINDU **Course Title: OPERATING SYSTEMS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1.Introduction-Definition of operating system, mainframe system, desktop systems 2.Multiprocessor systems, distributed systems, clustered systems 3.Real time systems , hand held systems 4.Operating system structures-system components 5.Operating system services, system calls 6.system programs, system structures , virtual machines	Lecture Method using ICT Tools,Blackboard	**Explain** functions, types and structures of operating system	Computer based test ,Seminars
II.	1.Process concept-process concept, process scheduling 2.Operation on processes, cooperating processes 3.Inter process communication 4.Process scheduling-basic concepts, scheduling criteria, scheduling algorithms.	Lecture Method using ICT Tools	**Analyze** various process management concepts including scheduling and synchronization	Seminars conducted
III.	1.Process synchronization-critical section problem 2.Semaphores, monitors 3.Deadlocks-deadlock characterization, methods for	Lecture Method using ICT Tools	**Demonstrate** process synchronization and dead locks	Seminars conducted

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	handling deadlocks Deadlock prevention, Deadlock avoidance, Deadlock detection			
IV.	1.File system-file concept, access methods 2.Directory structure, file system mounting, file system sharing. 3.File system implementation-file system structure, file system implementation. 4.Directory implementation, allocation methods, free space management	Lecture Method using ICT Tools	**Solve** issues related to file system interface	Computer based test, Seminars
V.	Memory management-swapping, contiguous memory allocation Fragmentation-internal and external fragmentation Paging, segmentation, segmentation with paging. Virtual memory management-demand paging Page replacement algorithms, Thrashing and working set model.	Lecture Method using ICT Tools,Blackboard	**Choose** an appropriate Page replacement algorithm	Seminars conducted

List of References (Book / ICT / Weblinks):

1. Silberschatz Abraham, Galvin Peter,B. and Gagne• Greg.2006.**Operating System Concepts.** India: Wiley.
2. Tanenbaum Andrew, S. 2001. **Modern Operating Systems**. Asia: Pearson Education.

https://drive.google.com/drive/folders/1PfTvqyVGqvvjqy3XdQ_ZZ0hxbZTSAvxI?usp=drive_link

Name of the faculty member & Signature: K.HIMABINDU

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER I

Department:ENGLISH

Class&Section: AAI, ACDS, ACSCS, ACSIOT, ACSC

CourseCode: EN23101

Nameofthe FacultyMember: P. SARITHA

CourseTitle:GENERAL ENGLISH-1

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Short Story – The Mystery Story Present Tense Past Tense Future Tense Paragraph Writing	LectureMethodusing ICT Tools	Tolearnaboutthefundamentals Of communication	Solving mixed tense exercises Narrating mystic experiences Writing paragraphs on various topics
II.	Poem – Goodbye Party for Miss Pushpa T.S. Subject- Verb Agreement Punctuations Review Writing	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Explanation of the poem by students Grammar exercises Film review writing
III.	Lesson – Wit and Humour Nouns and Articles Homophones, Homonyms, Homographs Note making	Lecture Method using ICT Tools	To identify the different types of nouns and articles in a sentence composition and to learn the correct usage and spelling of different words which spell or sound similar.	Character sketch of the story characters Grammar exercises like fill in the blanks, multiple choice and true or false.

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IV.	Lesson – India's Contribution to World Unity Adverbs Adjective and adverb Suffixes Formal letters and Curriculum Vitae	Lecture Method using ICT Tools	To think critically, demonstrate an understanding of diverse cultures and historical movements. To recognize the different parts of speech	Description of the message conveyed by the author and its relevance in the day today world. Practice in Formal letter and Curriculum Vitae writing
V.	Lesson – Sachin Tendulkar Adjectives, Comparison of Adjectives Common Errors, Commonly misspelt words, Commonly Confused words	Lecture Method using ICT Tools	To write grammatically correct sentences and to identify different degrees of comparison.	Text book exercises and worksheets

Listof References (Book/ICT/ Weblinks):

1. Skills Annexe. Functional English for Success. Orient Black Swan

SUGGESTED READING:

- Balasubramaniam, M. 1985 Business Communication. New Delhi: Vani Educational Books.
- Krishna Mohan and Meera Banerjee, 1990. Developing Communication Skills. New Delhi: Macmillan India Ltd.
- Krishnaswamy.N. and Sriraman, T. 1995. Current English for Colleges. Madras: Macmillan India Ltd.
- Narayanaswamy.V.R. 1979 Strengthen Your Writing. New Delhi: Orient Longman.
- Sharma.R.and Krishna Mohan. Business Correspondence. 1978. New Delhi. Tata McGraw-Hill Publishing Co

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Teaching PlanfortheAcademicYear2023–242024

SEMESTER

Department:Economics **Class&Section:ACSC** **CourseCode:VE18001**

Nameofthe FacultyMember: Larissa Sequeira **CourseTitle:Value Education and Personality Development**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to Ethics	LectureMethod	ToLearnto differentiate between accepted and Counter norms and to be able to identify the various Dimensions of Human Development	Group discussion to understand the value system in the society.
II.	Approach to Life	LectureMethod	To Learn to demonstrate Love and experience of God and to be ableto identify the Basic issues of Life and the Happiness as Life's goal.	Debate on the topics covered
III.	Concern for others	LectureMethod	To Understand the importance of concern for others and critic the various problems that deter the growth of the society	Scenario discussion
IV.	Transformation of Self	LectureMethod	To be able to recognize the traits of a good personality and practice self exploration	Self reflection and discovery of one's true self.
V.	Life Enrichment Skills	LectureMethod	To learn to be able to interpret the purpose of life and goal setting and demonstrate self management.	Exploring of personal skills through peer discussions.

Listof References (Book/ICT/ Weblinks):

1. Human Values – Development Programme – AIACHE
2. In Harmony – Value Education at College level. By a Team of Ethics Teachers (G.M. James , B.J JAYARAJ , K.CANDASSAMY, BERNARD D

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2023-2024

S.J.A PACKIARAJ)

Nameofthefacultymember&Signature:
Mrs. Larissa Sequeira

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Comp. Sci & Cognitive System **Class&Section: ACSC** **CourseCode: CSC23101**

Nameofthe FacultyMember: A.VaraLakshmi **CourseTitle:Introduction to WorkSheets**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introductorty Concepts of MS-Excel Spread Sheet.	LectureMethodusing ICT Tools	**Explain** the concepts of MS-Excel	Analyzing the importance of excel concepts and its applications in real time environment
II.	**Introduction to Visual Basic for application** **Working with VB Editor** **VBA fundamentals**	Lecture Method using ICT Tools	**Understand** basic concepts of VBA	Practiced form designing in VBA
III.	Arrays, Built-in functions, Manipulating objects and collectionsControlling code execution-GoTo, If Then, Select Case Looping block of instructions-For Next, Do While, Do Until Working with VBA Sub procedures-about procedures, Executing Sub Procedures, Error handling techniques	Lecture Method using ICT Tools	**Develop** basic programming using VBA	Exercised programming concepts by implementing control structures and usage of sub procedures
IV.	**Creating functions procedures** String Handling functions, Date time functions,Introducing User forms-handling custom dialog boxes, inserting and addingcontrols user formToolbox controls, control's propertiesDisplaying, closing and creating a user form	Lecture Method using ICT Tools	**Divide** large programs into functions and create user forms	Understanding the concepts of function procedures. Practiced programming concepts with string handling functions and usage of tools in toolbox

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V.	Leveraging Custom Dialog boxes, Working with charts	Lecture Method using ICT Tools	**Create** charts using VBA code Usage of Msgbox() and Dialogue	Practiced inputbox() msgbox() and

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Alexander, Michael and Kulseika, Richard. 2019. **Excel 2019 Power Programming with VBA**. 1st Edition. John Wiley and Sons. Indiana: IndianaPolis.
2. Walkenbach, John. 2013. **Excel VBA Programming for Dummies**. 3rd Edition. John Wiley and Sons. NJ:Hoboken.

SUGGESTED READING

1. Dr. Liew Voon Kiong. 2010. **Excel VBA Made Easy**. CreateSpace Independent Pub.

Nameofthefacultymember&Signature:
A.Varalakshmi

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Teaching Plan for the Academic Year 2023–2024

I SEMESTER

Class & Section: ACSC Course Code: CSC20104

Department: Computer Science & Cognitive Systems

Name of the Faculty Member: M Ravi

Course Title:
PROBLEM SOLVING&PROGRAMMING IN C

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT-1:** Introduction to Programming languages Generation of programming languages Algorithms and Flow charts Introduction to C programming Structure of C program Files used in a C program Compiling and executing C program	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Fundamentals of Programming Languages	Assignments, creating awareness on various programming languages and reasons for development
II.	**UNIT-2** C tokens, Constants, Character set in C Keywords, Identifiers, Data Types in C Enumerated data types, typedef Variables and scope of a variables Data input and output statements in C Operators in C, Type conversion and Type Casting	Lecture Method Using ICT Tools (Projector) Black board	**Analyze** C Language Basic Concepts which helps in developing C programs and and demonstration of various operators and i/o functions to collect various user inputs	Various Coding exercises which helps to improve their programming skills

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III.	**UNIT-3** Conditional Branching Statement – if, if-else, if-else-if, switch case Iterative Statements – while loop, do-while loop, for loop Nested loops, break and continue statements, goto statement Arrays - Single and double dimensional arrays String- string input output functions, string manipulation functions	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** various control statements to develop decision oriented, arrays, strings programs	Seminars, Practical implementation of various control statements related programs in lab to develop advanced programs
IV.	**UNIT-4** Function- Declaring, defining and invoking functions Categories of functions-Built-in functions Passing parameters to functions – call by value & call by reference Storage classes Recursion Pointers - Declaration, passing pointer to functions Pointers and one dimensional arrays Dynamic memory allocations	Lecture Method Using ICT Tools (Projector) Black board	**Understand** concepts to develop our own functions as per our business requirements and concepts to develop programs based on address of arguments using pointers	Presentations,, Practical implementation of various programs to develop our own functions, to use memory effectively using pointers and dynamic memory allocation
V.	**UNIT-5** Structures - Simple structures, nested structure, Array of structures,Unions Differences between Structures and Unions File handling - Various modes, File operations – fopen(), fclose( ) File input output functions – fputc(), fgetc(), fputs(), fgets(),getw(), putw(), getc(), putc(), fprintf(), fscanf(), getchar(), putchar( ) Random accessing file- fseek(), ftell(), rewind( )	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** the structures,unions which are used to develop our own datatypes and storing data permanently using File Concepts and File Functions	Practical implementation of various programs to develop our own data types, and programs to store and retrieve data from a file which stores data permanently

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of Reference books :

1. TharejaReema. 2015. Programming in C. 2 nd Edition. New Delhi:BPB.
2. Kanetkar Yashwant. 1995. Let us C. New Delhi:BPB.
3. Gottfried Byron. 2010. Programming with C (Schaum's Outline Series) 3 rd Edition New Delhi: McGraw Hill Education

Name of the faculty member & Signature: M. RAVI M. Ravi

Approved by Head of the Department:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

IISEMESTER

Department: BSc Computer Science &Cognitive Systems

Class&Section: ACSC

CourseCode: CSC23103

Name of the Faculty Member: K Nandini

CourseTitle: COMPUTER FUNDAMENTALS

Unit	Topics to be covered	Teaching Pedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**INTRODUCTION TO COMPUTERS** 1. Definition, characteristics, stored program concept, history and classification 2 Applications and basic organization of computer **INPUT AND OUTPUT DEVICES** 3. Input devices- keyboard, pointing, handheld, optical, Audio-visual, card readers Digitizers 4. Output Devices- soft copy devices, Monitor and types, Hardcopy devices Voice response systems, biometric devices	LectureMethod using ICT Tools Blackboard Inquiry based	**Understand** various I/O devices and functionality of computer	Assignments
II.	**COMPUTER MEMORY** 1. Introduction, memory organization, hierarchy, sequential and random access 2. Process Registers, Primary memory and cache memory 3. Secondary storage devices, Magnetic tapes, Hard disks- external, optical disks USB flash drives, Memory Cards, Mass storage devices COMPUTER SOFTWARE 4. Introduction, classification, System	Lecture Method using ICT Tools Blackboard Inquiry based	**Understand** types of memory and software	Seminars

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	oftware, application software 5. Firmware, middle ware, procuring computer software			
III.	**NUMBER SYSTEMS AND COMPUTER CODES** 1. Introduction, binary number system-working with binary numbers 2. Octal number system-conversion 3. Hexadecimal number system-conversions, addition and subtraction 4. Signed number representation in binary form 5. BCD and other codes	Lecture Method using ICT Tools Blackboard	**Solve** arithmetic operations using different types of number systems	Group discussions,
IV.	**COMPUTER NETWORKS** 1. Introduction, types of networks 2. Physical components of a network 3. Wired media and wireless media 4. Networking devices 5. Networking topologies 6. Data transmission modes	Lecture Method using ICT Tools Blackboard	**Distinguish** different types of networks, networking devices and topologies	Presentations
V.	**THE INTERNET** 1. Internet-history, intranet and extranet, differences 2. IP address-types 3. Domain Name System, Uniform resource locator, Internet browsers 4. Internet services 5. Types of Internet connections 6. Internet Security	Lecture Method using ICT Tools Blackboard Inquiry based	**Explain** various IP addressing mechanisms	Group activities

List of References (Book/ICT/ Weblinks):

1. Thareja, Reema. 2020. Fundamentals of Computers, 2nd Edition. Oxford Higher Education.
2. Sinha Pradeep, K. and Sinha Preeti. 2007. Computer Fundamentals, Concepts, Systems an Applications, 4 edition. BPB Publications
3. Rajaraman. 2006. Fundamentals of Computers, 4o edition. PHI Publications.
4. Bharihoke Deepak. 2000. Fundamentals of Information Technology. 2 edition. Excel Books

Name of the faculty member & Signature: K. Nandini & K

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Teaching PlanfortheAcademicYear2023–2024 IISEMESTER

Department: Cognitive Systems **Class&Section: NCSC** **CourseCode: CSC21303**

Nameofthe FacultyMember: Madhuri Hepseba **CourseTitle: VIRTUALIZATION AND CLOUD**

Unit	Topics to be covered	Teaching Pedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Distributed Systems**: Distribute a system –Distributed algorithm, Distributed Data Stores – Distributed Computing, File Systems – Distributed Messaging, Distributed Applications – Distributed Transaction	LectureMethodusing ICT Tools Blackboard Inquiry based	**Understand** Distributed Systems and its Application	Assignments, Pratical implementation in the lab
II.	**Cloud Concepts:** Introduction Cloud Computing - Advantages of Cloud, Three service models - Four deployment models, Cloud Vendors, Traditional Infrastructure setup and Challenges, AWS	LectureMethodusing ICT Tools Blackboard Inquiry based	**Analyze** Cloud Service Models and Deployment Models	Seminars, Pratical implementation in the lab
III.	**Virtualization :**Introduction to vSphere and the Software. Defined Data Center Creating Virtual Machines, VCenter Server - Configuring and Managing, . Virtual Machine Management	LectureMethodusing ICT Tools Blackboard	**Demonstrate** Virtual Networks Configuring and Managing Virtual Storage	Group discussions, Pratical implementation in the lab
IV.	**Virtual Machines**: vSphere HA. DRS,Fault tolerance, Update Manager, Network Scalability, Securing Virtual Machines	LectureMethodusing ICT Tools Blackboard	**Understand** vSphere Update Manager and Host Maintenance	Presentations, Pratical implementation in the lab

V.	**Datacenter:** Data center overview - Components – Provisions, Need of Data Center, Data Center Architecture, Data center architecture for cloud computing, Different Racks	LectureMethodusing ICT Tools Blackboard Inquiry based	**Demonstrate** Role of data center in cloud computing	Group activities

Listof References (Book/ICT/ Weblinks):

1. Jean Dollimore formerly of Queen Mary, Tim Kindberg, "Distributed Systems Concepts and Design", 5th Edition Cambridge University, University of London
2. VenkataJosyula , Malcolm Orr , Greg Page, "Cloud Computing: Automating the Virtualized Data Center", 1st Edition.
3. Brian J.S. Chee, Curtis Franklin Jr., "Cloud Computing: Technologies and Strategies of the Ubiquitous Data Center", 1st Edition.

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Hepseba

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER - III

Department:Computer Science and Cognitivesystem

Class & Section: NCSC

CourseCode:CSC21304

Nameofthe FacultyMember: A.Jyothi

CourseTitle:Python Programming

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Basic of Python Programming: Features of Python, History of Python, Future of writing and Executing first python program, Literal constants-Numbers, strings, Variables and Identifiers, Data types, Input Operation, Comments, Reserved words, Operators and Expressions in python, Other Data type- Tuples, dictionary,list. Type conversion, Decision control statements- if statement, if-else statements, Nested if, if-elif-else, Basic Loop structure- while loop, for loop, selecting an appropriate loop, Nested loops, Break statement, continue statement, pass statement, else statement used with loops.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn about the basics of python programming constructs.	Online Quiz.
II.	Functions and modules-Need for functions function definition function call, variable scope and life time, Return statement, function definition using required argument, keyword argument, and Default argument. Lambda functions, Recursive	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn about the sub divides larger problems into smaller ones using functions.	Computer Based test.

	functions-Greatest common Divisor, finding exponents Fibonacci series, Modules-The from… import statement, Name of module, making your own module, The dir ( ), the python module, module and Namespaces. Packages in python, standard Library modules, Functions redefinition.			
III.	Python String: Introduction-concatenating, Appending, multiplying strings, strings are Immutable, String formatting operator. Built-in sting methods and functions slice operation. Ord ( ) and chr( ) functions, in and not in operators, comparing and iterating strings. The string module, Regular Expressions-match ( ), Search ( ), sub ( ), find all ( ), Finditer ( ), functions, flag options, Meta characters in Regular expressions. Data Structures: Sequence, Lists, Functional programming: filter ( ), map( ) and reduce ( ) function, Tuple, sets, Dictionaries-creating dictionary, adding, modifying, sorting and deleting item in dictionary, looping and nested dictionary, built-in dictionary functions, difference between list and dictionaries.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to apply various data structures for problem solving.	Offline Quiz.
IV.	Class and objects-Introduction, defining classes, creating objects, data abstraction, Class method and self-argument, the __init__( ) method, class variables and object variables, The del ( ) method, other special methods, public and private data members, private methods. Calling a class method from another	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to apply object-oriented programming features for solving a given problem.	Written Test.

	class method, built-in functions to check, Get, Set and Delete Class Attribute, Built-in class attribute. Inheritance: Introduction, inheriting classes in python, Types of Inheritance Composition or containership or complex objects, abstract classes and interfaces Meta class. Operator overloading-Introduction, Implementing operator overloading, reverse adding.			
V.	Error and Exception Handling-Introduction to errors and exceptions, handling exceptions, Multiple except blocks, multiple exceptions in a single block, except block without exception. Raising Exceptions, Instantiating exceptions, handling exceptions in invoked functions, Built-in and user defined exceptions, the finally block. File Handling-Introduction, File path, Types of Files-ASCII text file, Binary file, operating and closing files. Reading and writing files-write( ), write lines ( ), Append ( ), read line ( ). File positions, renaming and deleting files, Directory methods. GUI Programming: Graphical User Interfaces, Using the thinker Module, Display text with Label widgets, Organizing widgets with Frames. Button Widgets and Info Dialog Boxes, Getting Input with Entry widget, Using labels as output fields, Radio Buttons, Check Buttons.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to select an appropriate exception handling depending on application and design file operations using python standard library.	Practical Test.

Listof References (Book/ICT/ Weblinks):

1. Thareja, Reema. 2017 Python Programming 3rd Edition. New Delhi Oxford HED.
2. Tony Gaddis. Starting Out with Python. 3rd Edition.
3. BalaGuruSwamy, E.2017. Problem Solving and Python Programming. 1st Edition. McGraw Hill Education.
4. Dr.R.NageshwaraRao. 2018. Core Python Programming. 2nd Edition. DreamTechPress.
5. https://www.youtube.com/watch?v=kqtD5dpn9C8

Name of the faculty member & Signature: A.Jyothi

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LOYOLA ACADEMY
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Teaching PlanfortheAcademicYear2023–2024

SEMESTER -III

Department:B.Sc CSC **Class&Section:NCSc** **CourseCode: CSC21301**

Name of the Faculty Member:BINDU BABU **CourseTitle:DISCRETE MATHEMATICS**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**LATTICES** Relations and ordering, partial order relations- partially ordered sets, Hasse diagrams, Lattices- properties of lattices, types of lattices	Chalk and board method ICT tools	Students developed an understanding of Logic sets and functions. Students also came to know Hasse diagrams	Assignment Written Test
II.	**GRAPH THEORY-I** Definition of graph, degree of vertex, First theorem of graph theory, paths and connections, Isomorphism of graphs, some special simple graphs	Chalk and board method Multiple examples on graphs	Students learned to evaluate and apply the fundamental concepts in graph theory	Assignment and Oral Test
III.	**GRAPH THEORY-II** Planar graphs, Euler's formula, Euler graphs, Hamiltonian graphs- Grinberg theorem, Chromatic number	Lecture method Chalk and board method	Students developed an understanding of how graphs and tree concepts are used to solve problems arising in computer science	Assignment Identifying different types of graphs from given graphs
IV.	**NUMBER THEORY-I** Divisibility- Division algorithm, Euclid's algorithm, properties of GCD, Diophantine equation, Primes-Fundamental theorem of arithmetic	Lecture method Chalk and board method	Students were able to express the concepts and results of number theory in real life problems	Solving problems Assignment Real life applications

	NUMBER THEORY -II Congruences- Properties, Applications of congruences, Fermat's theorem and its application, Wilson's theorem and its application	Chalk and board method	Students were able to identify methods and techniques used in number theory	Solving problems Assignment Oral test

Listof References (Book/ICT/ Weblinks):

1. Tremblay, J.P and Manohar,R. 2007, **Discrete mathematical structures with applications to computer science,** New Delhi: Tata McGraw-Hill.
2. Mott,J.L and Kandel ,2007, **Discrete Mathematics for Mathematicians and computer Scientists**, 2nd edition, New Delhi:PHI
3. Burton,David M , 2003, **Elementary Number Theory**, 2nd edition , New Delhi: Universal Book Stall

Name of the faculty member & Signature:

Bindu Babu

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023-2024

SEMESTER-III

Department: Environmental Science **Class:** NCSC **Course Code:ES23301**

Name of FacultyMember:S.BALACHANDAR **Course Title: EVS&GS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable & Non Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of naturalresources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earth quakes, and Cyclones**	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge onsolid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	**Rain-Water Harvesting, Water-shed Management** **Global Warming Ozone depletion, and Acid rains Environmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	Lecture Method using ICT Tools and Board	Apply the environmental science knowledge to improve the resources Evaluate and understand the sustainable environmental conditions and control methods	Oral question and answers To understand the environmental policies and regulations
IV.	**Why should we study gender issues?** **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	Lecture Method using ICT Tools and Board	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	Oral question and answers To develop students' sensibility with regard to issues of gender in contemporary India

V.	**Sexual harassment** **Say no eve teasing** **The caste based violence** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act(2005)**	Lecture Method using ICT Tools and Board	Understand the gender problems and ways of addressing them, including interactionsacross local to global scales in communities and overcome inequalities with legislation	Oral question and answers To expose the students to debate on the politics and economic works and on gender violence

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition.Chennai: Oxford University Press.
Dr D K Asthana and Dr Meera Asthana. 2014.
2.**A Text Book of EnvironmentalStudies** Revised Edition. New Delhi: S. Chand & Company
3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomen in the Telangana People's Struggle**. New Delhi: Kali for Women.
4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.**Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993

Name of the faculty member & Signature: (S. BALACHANDAR)

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

NCSC

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Comp. Sci & Cognitive System **Class&Section:** NCSC **CourseCode:** CSC21302

Nameofthe FacultyMember: A.VaraLakshmi

CourseTitle:Infrastructure Management

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introducing Windows 10 Overview of Deploying Windows 10 Configure Devices and Drivers Perform Post installation Configuration Task . Managing Apps in Window	LectureMethodusing ICT Tools	**Demonstrate** Installation and Managing Windows 10 Systems	Deploying of Windows 10 And usage of Windows features
II.	System Center 2012 R2Configuration Manager Overview, Features and Capabilities, Setup & Installation, Deploying SCCM Client, User and Device Collections in SCCM	Lecture Method using ICT Tools	**Analyze** Manaing Systems using System Center 2012	Knowing about SCCM and its features.Usage of user devices andcollections
III.	Application Management using SCCM, Operating System Deployment Endpoint Protection using SCCM Troubleshooting SCCM Server & Clients, Creation of Reports	Lecture Method using ICT Tools	**Demonstrate** Deployment and Management of System Center 2012	Depolying of OS. Concepts usage in Trouble Shooting
IV.	System Center 2012 R2 Operation Manager Overview, Features and Capabilities, Setup & Installation, Deploying SCCM Client, Magmt Packs in SCOM	Lecture Method using ICT Tools	**Understand** Managing and Monitoring Infrastructure using System Center 2012	Knowing about SCOM and its importance.Creation of Management packs
V.	Managing & Administering SCOM Environment, Managing Alerts using SCOM, Creating Custom Management Packs and Alerts Troubleshooting SCOM Server and Clients. Reports	Lecture Method using ICT Tools	**Demonstrate** Reporting of Infrastructure using System Center 201	Administering SCOM, Creation of reports and its execution

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

- Ed Bott, Craig Stinson, "Windows 10 Inside Out", 2020.
- Kerrie Meyler, Gerry Hampson, "System Center Configuration Manager Current Branch Unleashed System" 1st Edition, 2018.
- Kevin Greene, "Getting Started with Microsoft System Center Operations Manager: Using SCOM 2016 TP 5, 2016.

Windows 10

- Windows 10 Tutorial - 3.5 Hour Windows Guide + Windows 10 Tips
- Windows 10 for Dummies, Newbies, and other Fine Beginners

System Center Configuration Manager (SCCM)

- System Center Configuration Manager Overview
- SCCM Features and Capabilities
- SCCM Setup & Installation
- Configuration Manager Basics

System Center Operations Manager (SCOM)

Operations Manager key concepts
SCOM Features and Capabilities

Nameofthefacultymember&Signature:
A.Varalakshmi

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER III

Department:CSC **Class&Section:** GE Inter-Disciplinary **CourseCode:** G21CSC1T

Nameofthe FacultyMember:Ruchika Murthy **CourseTitle:** Introduction to Worksheet

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Understanding Use of Excel, Workbooks and Worksheets, moving around worksheets, Using the Ribbon Exploring Data types, Entering text and values, date and times in worksheet, modifying ,Cell contents, apply number formatting, Working with excel windows, activating, adding, deleting, changing- name & sheet tab colour, Hiding and unhiding worksheets, working with rows and columns	Ict tools,ppt	Using the Ribbon Exploring Data types, Entering text and values, date and times in worksheet	Quiz on ribbons and data type s in excel
II.	Understanding cells and ranges, working with tables ,Using conditional formatting, working with conditional formats, Printing work sheets	Chalk and board	Understanding cells and ranges, working with tables	Group discussion on cells and ranges
III.	Introducing Formulas and Functions ,Understanding formula basics, Entering and Editing formulas, Using cell references ,Using formulas in tables, Correcting Common formula errors ,Using formula for mathematical operations and manipulating text	Chalk and board	Formulas and Functions Understanding formula basics, Entering and Editing formulas	Interaction section on editing a formula ,manipulating text
IV.	Using Formulas for Conditional Analysis, Matching and Lookups , Using Formulas for statistical analysis, array formulas ,Excel charts-Chart, creating a chart, modifying and	Ict tools,flow charts,ppt	Using Formulas for Conditional Analysis, Matching and Lookups	Assignment on lookups and charts

	customizing chart, chart types			
V.	Creating Spark line graphics, data validations ,Introducing pivot tables, What-if Analysis-data tables, scenario manager, goal Seeking And solver	Chalk and board	Creating Spark line graphics, data validations	Class activity on what if analysis

Listof References (Book/ICT/ Weblinks):

1. Alexander, Michael. Kusleika, Dick, Walkenbach, John. Excel 2019 Bible. 1 stEdition. John Wiley & Sons, Inc.

Nameofthefacultymember&Signature: RUCHIKA MURTHY 08/11/23

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

V SEMESTER

Class & Section: DCSC **Course Code: CSC22505**

Department: Computer Science &Cognitive Systems

Name of the Faculty Member: M Ravi

Course Title:
INTRODUCTION TO DIGITAL TECHNOLOGY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**DIGITAL PRIMER**: Why is Digital Different? Digital Metaphors On Cloud 9 A Small Intro to Big Data Social Media Digital Marketing Artificial Intelligence Unchain the Block chain Internet of Everything(IoE) Immersive Technologies	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Various Digital Technologies used in Realtime and their objectives	Assignments, creating awareness on various online web portals
II.	**Digital For Industries:** Manufacturing Hi-tech Banking and Financial Services Insurance and Healthcare Retail-Travel & Hospitality Communications, Media Information Services-Government	Lecture Method Using ICT Tools (Projector) Black board	**Analyze** Digital Technologies usage in Various Industries	Group discussions, creating awareness on usage of digital technologies with respect to various real time industries
III.	**RPA Tools:** Automatix Art of RPA Introduction-Setting the Context RPA Prelude-RPA Demystified RPA vs BPM RPA Implementations-	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** RPA Tools (UI Path) Configuring and Developing Various Bots	Seminars, Practical implementation of various bots in the lab

	RPA in Industries Tools-Automatix, Art of RPA			
IV.	**AUTOMATION ANYWHERE** Getting Started with AA Enterprise Exploring AA Enterprise AA Enterprise – Architecture	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Various Activities and tools of Automation Anywhere environment	Presentations, awareness on practical environment
V.	**Knowing the Bots** More About Task Bots AA Enterprise - All About Recorders-Designers Meta Bots Cognitive RPA.	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** Developing Various Bots using Automation Anywhere	Group activities, Practical implementation of various bots in the lab using AA

List of References (Book/ICT/ Weblinks):

1. Richard Murdoch. 2020. **Robotic Process Automation: Guide To Building Software Robots, Automate Repetitive Tasks & Become an RPA Consultant**. 1st Edition. **Packt Publishing**Kindle Store
2. Husan Mahey. 2020. **Robotic Process Automation with Automation Anywhere: Techniques to fuel business productivity and intelligent automation using RPA. 1st Edition. Packt Publishing** Kindle Store.
3. Kelly Wibbenmeyer. **The Simple Implementation Guide to Robotic Process Automation (RPA): How to Best Implement RPA in an Organization. 1st Edition. Packt Publishing.** Kindle Store.
4. Alok Mani Tripathi. 2018. Learning Robotic Process Automation: Create Software robots and automate business processes with the leading RPA tool - UiPath: Create Software robots ... with the leading RPA tool – UiPath. 1st Edition. Packt Publishing. Kindle Store.

Web sites

1. https://en.wikipedia.org/wiki/Robotic_process_automation
2. https://en.wikipedia.org/wiki/Automatix_(software)
3. https://www.automationanywhereuniversity.com/
4. https://www.automationanywhere.com/in/products/iq-bot

Name of the faculty member & Signature: M. RAVI M. Ravi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Comp. Sci & Cognitive System **Class&Section:** ~~[illegible]~~ DCSC **CourseCode:** CSC22501B

Nameofthe FacultyMember: A.VaraLakshmi **CourseTitle:** Cloud Computing tools& techniques

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Origins of Cloud computing – Cloud components - Essential characteristics, Comparing cloud providers with traditional IT service providers, Roots of cloud computing	LectureMethodusing ICT Tools	**Explain** the characteristics and components of cloud computing	Group discussion on advantages of Cloud Computing
II.	Architectural influences, Cloud scenarios, Limitations, Security level of third party - security benefits, Regularity issues: Government policies	Lecture Method using ICT Tools	**Illustrate** architectural influences, benefits and limitations of cloud	Students analyzed Legal rights by the Government for security. Assurance about the data for companies
III.	Layers in cloud architecture, Software as a Service (SaaS), features of SaaS and benefits , Platform as a Service (PaaS), features of PaaS and benefits,IaaS Regularity issues: Government policies.	Lecture Method using ICT Tools	**Analyse** various layers and models in cloud	Made the students to know about SaaS, PaaS,IaaS and made them to find out their implementation in which companies.
IV.	Introduction to Simulator, understanding CloudSim simulator, CloudSim Architecture, Understanding Working platform for CloudSim, GreenCloud	Lecture Method using ICT Tools	**Assess** various cloud simulators	Examples of Simulator and their importance by students
V.	Basics of VMWare, advantages of VMware virtualization, Using Vmware workstation, creating virtual machines-understanding virtual machines, create a new virtual	Lecture Method using ICT Tools	**Create** virtual machines using VMWare Simulator	Creation of VM and cloning

	machine on localhost, starting and stopping a virtual machine			

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READINGS

1. Gnanasudaram, Somasundaram, Shrivatsava, Alok. 2012. **Information Storage and Management Storing, Managing, and Protecting Digital Information in Classic, Virtualized, and Cloud Environments**. 2nd Edition. John Wiley and Sons.

Nameofthefacultymember&Signature:
A.Varalakshmi

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - V

Department: computer science & cognitive systems

Class & Section: DCSC – A

Course Code: CSC22504

Name of the Faculty Member: G . Sandeep Reddy

Course Title: Client Relationship management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT 1** **UNIT I - SERVICE NOW INTERMEDIATE LEVEL** Administrator-ServiceNow Introduction-ServiceNow Platform UI ServiceNow . ITSM overview-Managing Users, Groups and Roles, departments, companies and Assignment Rules Tables, Columns, Attributes, Dictionary Entries ,Schema Map-Managing Forms , Layouts and Lists-Dictionary Overrides and Simple Reference Qualifiers **(15 hrs)**	Black board projectors	Define task management using assignment rules, presence, and work notes	Identifying service now structure
II.	**UNIT II : SYSTEM PROPERTIES** Incident management - Problem management- Change management Overview of other ITSM Modules -	Black board projectors	Use various script types throughout the platform	Practical scripting in service now

	Overview of other ITSM Modules SLA Basics-Introducing to Client and Server Side Scripting-Server Side Scripting Server Side Glide API - server-side scripting - Server Side Glide API. Server Side script Debugging- Best Practices-Business Rules Client Side APIs-UI Policies and Data Policies-Client Scripts - Debugging. **(15 hrs)**			
III.	**UNIT III** CLIENT SCRIPTS & CLIENT GLIDE APIS-BEST PRACTICES 15 Hrs Client-side scripting & policies (UI and Data) Modularize programming using UI Actions (both Server and Client Side) Script Include-Glide AJAX-UI Pages and UI Macros-Managing Update Sets Custom Applications Automated Test Framework Events-Inbound/Out Bound Notifications-Mail Templates and Scripts. **(15 hrs)**	Black board projectors	Explain Flows and Workflows for process automation	Practical scripting in service now
IV.	**UNIT IV : MANAGE WORKFLOWS** Managing Stage Sets -Manage Workflows -Manage Workflows Flow Designer (Over view)- Service Catalogs, Categories, Items and variables Flow Designer (Over view)- Service Catalogs, Categories, Items and	Black board Projectors	Choose Access Control rules to protect ServiceNow instance data	Testing activity

	Variables Manage Execution Plans and workflows-Cart Layouts-Client scripts and UI policies-Record Producers-Order Guides & Scriptable Order Guides-Scheduled Jobs. VTB Agent Intelligence (Over View)-Restrict access to applications and application modules. https Automatically create application Access Controls -Manually create, test, and debug Access Controls Managing ServiceNow imports and exports-Managing Import Sets and Transform Map-Configure and run Reports and Dashboards Security Controls, Database Views **(15 hrs)**			
V.	**UNIT V- SERVICENOW SERVICE PORTALS OVERVIEW** ServiceNow Service portals core components ITSM Virtual Agent – Overview. Performance Analytics Overview ServiceNow on Mobile, ServiceNow Integration Overview **(15 hrs)**	Black board projectors	Formulate Capturing and moving configurations between instances, using update sets	application development

List of References (Book / ICT / Weblinks):

1. Tim Woodruff. 2018. **Learning ServiceNow: Administration and development on the Now platform, for powerful IT automation.** 2nd Edition. Packt Publishing Ltd.
2. Ashish Rudra Srivastava. 2017. **ServiceNow Cook Book**. Packt Publishing Ltd
3. Andrew Kindred. 2018. **Mastering ServiceNow Scripting**. Packt Publishing.

Websites

1. https://www.servicenow.com/products/it-service-management.html
2. https://www.servicenow.com/content/dam/servicenow-assets/public/en-us/doc-type/resource-center/data-sheet/ds-itsm.pdf
3. https://www.guru99.com/servicenow-tutorial.html
4. https://www.youtube.com/watch?v=rtoZT94Wjqs&list=PLzTvAeLiW8Ac3Ph2t5z7A60Dw9x3JFZGb

Name of the faculty member & Signature: G sandeep Reddy

Approved by Head of the Department: A. Varalaxmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

IISEMESTER

Department: BSc Computer Science &Cognitive Systems

Class&Section: DCSC

CourseCode: CSC22501A

Name of the Faculty Member: K Nandini

CourseTitle:
INFORMATION AND
STORAGE MANAGEMENT

Unit	Topics to be covered	Teaching Pedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction to Information Storage** 1. Information Storage- Data, types of data, Big data, Storage and information 2. Evolution of Storage Architecture 3. Data Center Infrastructure-Core Elements, characteristics and managing **Data Center Environment** 4.Application, DBMS, Host, Connectivity, Storage 5. Disk Drive Components and Performance 6.Host to Access Data, Direct attached storage- benefits and limitations 7.Storage Design Based on Application Requirements and Disk Performance	LectureMethodusing ICT Tools Blackboard Inquiry based	**Understand** core elements of the data center	Assignments
II.	**Data Protection** 1. RAID implementation methods, Array components, Techniques 2. RAID levels, Impact on Disk Performance 3. RAID comparison, Hot Spare **Intelligent Storage Systems** 4. Components of Intelligent Storage Systems 5. Storage Provisioning, types of intelligent storage systems	Lecture Method using ICT Tools Blackboard Inquiry based	**Explain** Data protection techniques	Seminars

III.	**Storage Networking Technologies** 1. Fibre Channel-Overview, SAN and its Evolution, Components of FCSAN 2. Connectivity. Switched Fabric Ports, FC Architecture 3. NAS: General-Purpose Servers versus NAS Devices, benefits 4. File Systems and Network File Sharing, Components of NAS 5. NAS I/O operations, Implementations and File sharing protocols 6. Object based storage devices, Content Addressed storage	Lecture Method using ICT Tools Blackboard	**Assess** various storage networking technologies	Group discussions
IV.	**BACKUP AND ARCHIVE** 1.Backup purpose, Considerations, Granularity, Considerations 2. Methods, Architecture, Backup and Restore Operations, Topologies 3. Backup in NAS Environments, Targets 4. Data Deduplication for Backup, Backup in virtualized environment 5. Data Archive, Archive Solution Architecture	Lecture Method using ICT Tools Blackboard	**Prepare** backup and archiving of data	Presentations
V.	**Location Replication** 1. Replication Technology, Use of Local replicas, Replica consistency 2. Location Replication Technologies 3. Tracking Changes to Source and Replica, Restore and Restart considerations **Remote Replication** 4. Modes, Remote replication technologies 5. Three Site replication	Lecture Method using ICT Tools Blackboard Inquiry based	**Organize** data using replication techniques	Group activities

List of References (Book/ICT/ Weblinks):

1. Gnanasudaram, Somasundaram. Shrivatsava, Alok. 2012. Information Storage and Management Storing, Managing, and Protecting Digital Information in Classic, Virtualized, and Cloud Environments. 2 Edition. John Wiley and Sons.

Nameofthefacultymember&Signature: K. Nandini & K.

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024 SEMESTER

Department:Cognitive Systems **Class&Section: DCSC** **CourseCode: CSC22503**

Nameofthe FacultyMember: Madhuri Hepseba **CourseTitle: SOFTWARE TESTING**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to Automation, Planning before Automation, Introduction to Selenium, Installing Selenium Components	LectureMethodusing ICT Tools Blackboard Inquiry based	Understand Selenium Architecture and its components	Assignments, Pratical implementation in the lab
II.	Using Selenium IDE, Managing User Interface Controls, Creating First Selenium Web Driver Script, Selenium Methods -Common Selenium Web Driver Method	LectureMethodusing ICT Tools Blackboard	Use Selenium WebDriver	Seminars, Pratical implementation in the lab
III.	Verification Point in Selenium, Shared UI Map, Using Functions- creating and calling a function in web driver script, Using a Configuration File	LectureMethodusing ICT Tools Blackboard	Apply WebDriver advanced features	Group discussions, Pratical implementation in the lab
IV.	Handling Pop-up Dialogs and Multiple Windows, Working with Dynamic UI Objects, Data driven testing Parameterization, Debugging scripts, Exception handling in Web Driver	LectureMethodusing ICT Tools Blackboard	Write Test cases using TestNG	Presentations, Pratical implementation in the lab
V.	Reporting in Selenium, Batch Execution, Automation Frameworks, Selenium Functions, Common Questions and Tips	LectureMethodusing ICT Tools Blackboard Inquiry based	Develop Record and importing tests with Selenium IDE	Group activities

Listof References (Book/ICT/ Weblinks):

1. NavneeshGarg. 2014. **Test Automation Using Selenium WebDriver with Java**AdactIn Group Pvt Ltd.
2. AdithyaGarg, Ashish Mishra. 2012. **A Practitioner's Guide to Test Automation Using Selenium.** McGraw Hill. New Delhi : India.
3. SatyaAvasarala. 2014. **Selenium Web Driver Practical Guide.** Packt Publishing.
4. Rex Allen Jones II. 2016. **Selenium Web Driver for Functional Automation Testing.** Test 4 Success, LLC.
5. David Burns. 2010. **Selenium 1.0 Testing Tools.** Packt Publishing.

Nameofthefacultymember&Signature: Shreeba Madhuri Hepseba

Approvedby HeadoftheDepartment:

LESSON PLAN

Name: Dr. V. Harsha Shastri

Department: B.Sc. Computer Science and Cognitive Systems

Course: Machine learning

Semester: V **Year: III** **Academic Year: 2023-24**

S.No	Name of the Topic	Hrs
	UNIT-I	
1	Data framing: numpy: Ndarray, Array attributes Array creation routines, Indexing and slicing, Array Broadcasting, Array manipulation, Mathematical functions, Statistical functions, Search, sort and counting functions, Matrix Library, Linear algebra	4
2	Pandas: Series, Data frame, Panel, Basic functionality: axes, dtype, empty, ndim, size, values, head, tail. Descriptive Statistics, Re indexing, iterations, sorting, options and Customization, Indexing and Selecting Data, Statistical Functions, Window Functions, Aggregation, Missing data, Group by, Merging, concatenation, Categorical data, I/O tools: read_csv, read_table	4
3	Data Visualization: Matplotlib, Bar plot, Histograms, Box plots, Area plot, Scatter plot, Pie chart, line chart, bar chart, Sea born	4
	UNIT-II	
1	Machine learning: Introduction, applications, ML process, AI vs Machine learning	3
2	Types of machine learning, Supervised vs Un Supervised learning	2
3	Machine learning algorithms and models	2
4	Testing machine learning algorithms	3
5	Basic statistics , bias and variance, Machine learning tools	2
	UNIT-III	
1	Cross validation, Regularization, P-Value	2
	NEURONS, NEURAL NETWORK AND LINEAR DISCRIMINANTS	
2	The brain and the neuron, neural networks, perceptron, linear separability	4
3	Regression analysis in machine learning, types of regression	2
4	Linear regression, Logistic regression, Linear vs Logistic regression	4
	UNIT-IV	
1	Introduction to classification, classification vs regression	2
2	K-NN algorithm, Support vector machine algorithm	3
3	Linear discriminant analysis	2
4	Decision tree algorithm	2
5	Bayes theorem for Machine learning, Naïve Bayes classifier	3
	UNIT-V	
	UNSUPERVISED LEARNING and ASSOCIATION RULE LEARNING	
1	Principal component analysis, Clustering in machine learning	4
2	Hierarchical clustering, K-means clustering	4
3	Association Rule learning, Apriori algorithm in machine learning	4

Harsha

Signature of the concerned faculty

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER II

DepartmentENGLISH

Class&Section:ACSIOT, AAI, ACDS,ACSC

CourseCode:EN23101

Nameofthe FacultyMember:P. Saritha

CourseTitle:GENERAL ENGLISH-2

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Flash Fiction- 'The Mice' by Lydia Davies (1)** Simple, Complex and Compound Sentences (3) Conversion of Sentences (3) Information Transfer (2)	LectureMethodusing ICT Tools	Tolearnaboutthefundamentals Of communication	Solving mixed grammar exercises Narrating mystic experiences Writing paragraphs on various topics
II.	**Short Story- 'The Face on the Wall'by E V Lucas (2)** • Active and Passive Voice (3) • Conjunctions (2) Essay Writing (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Narration of short stories by students. Grammar exercises Essay writing exercises
III.	**From the text*Three Days to See by* Helen Keller** • Explanation of the text (3) • Grammar- Usage of Modal Auxiliary Verbs (2) • Vocabulary – Collective Nouns, Technical Vocabulary (2) Writing Skill – Newspaper Report (2)	Lecture Method using ICT Tools	To recognize the moral element which underlies in the short story. To identify the different types of modal auxiliary verbs in a sentence composition and to learn the correct usage ofCollective Nouns, Technical Vocabulary.	Character sketch of the story characters. Grammar exercises like fill in the blanks, multiple choice and true or false. Newspaper Report writing exercises.

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IV.	**Short Story from the text 'Leela's Friend'by R.K. Narayan** • Explanation of the text (3) • Grammar- Phrasal Verbs, **Wh-**questions (2) • Vocabulary- Noun and Verb Suffixes (2) • Writing Skill- Writing a Narrative (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills.	Description of the different characters of the story. Grammar exercises Exercises exercises like fill in the blanks, multiple choice and true or false. Practice in writing a narrative
V.	**From the text 'The Last Leaf'by O. Henry** • Explanation of the text (3) • Grammar- Prepositions (2) • Vocabulary – Idioms (2) Writing Skill – Precis Writing (2)	Lecture Method using ICT Tools	To write grammatically correct sentences and usage of idioms in sentences.	Textbook exercises and worksheets Precis' writing exercises.

Listof References (Book/ICT/ Weblinks):

Epitome of Wisdom, Maruthi Publications

SUGGESTED READING:

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges.* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing.* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Nameofthefacultymember&Signature: P. Savitha 01/04/2024

Approvedby HeadoftheDepartment:

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- II

Department: B. Sc, Competer Science & Cognitive Systems

Class : ACSC[illegible]

Course Code:IC-23101

Name of the Faculty Member:Dr.K.Musalaiah

Course Title: Indian Heritage and Culture

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation

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IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the constitution.	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr. K. Musalaiah.

Dr.K.Musalaiah

Approved by Head of the Department:

Mrs.A. Vara Lakshmi

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -II

Department: Computer Science & Cognitive System **Class &Section: ACSC** **Course Code: CSC20202**

Name of the Faculty Member: BINDU BABU **Course Title: Mathematics for Cognitive science**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**SET THEORY** The basic of logic- Statements, compound statements (conjunction, disjunction, implication, negation, biconditional) Truth Table Logical equivalence-Tautology, contradiction, contingency Proving methods in Mathematics-constructive proof, direct proof, indirect proof, contradiction	Lecture method Chalk and board method	• Students will be able to demonstrate a working knowledge of set notation and recognize the connection between set operations and logic • Students will be able to learn to construct mathematical proofs and possess the ability to verify them	• Quiz • Solving Problems • Oral test • Presentations
II.	**BASICS OF COUNTING** Basics of counting-sum rule, product rule, Permutation and combination, Permutation with repetition and without repetition, Restricted permutation and combination, Pigeon hole principle and applications, Principle of inclusion and exclusion	Lecture method, Chalk and board method	• Students will be able to apply basic counting techniques to solve combinatorial problems	• Assignment on permutations and combinations • real life application problems • Group discussion
III.	**ADVANCED COUNTING TECHNIQUES** Definition of Recurrence relation, Solving recurrence relation, Solving linear homogenous recurrence relation by substitution method, Solving linear homogenous recurrence relation by generating functions,	Lecture method, Chalk and board method	• Students will be able to solve problems using recurrence relations and recursion to analyze algorithms and programs.	• Solving problems on recurrence relations

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	Solving non homogenous recurrence relation			
IV.	Definition of a matrix, sub matrix and rank of matrix, Problems on finding rank of matrix using echelon form,Problems on finding rank using normal form,solving system of equation by homogenous equation,Solving system of equation by non homogenous equation	Chalk and board method	• Students will be able to find rank of a matrix and solve systems of linear equations applying matrix techniques	• Solving problems • Assignment on finding ranks • Presentations
V.	Definition of eigen value, eigen vector and characteristic roots, Finding characteristic roots and eigen values of a matrix, Statement of Cayley Hamilton theorem, Finding characteristic equation and verifying Cayley Hamilton theorem,Quadratic forms-Reducing quadratic form to canonical form	Chalk and board method	• Students will be able to calculate Eigen values and corresponding Eigen vectors. • Students will also have a knowledge of quadratic forms	• Group discussions • Assignment on finding Eigen values and vectors

List of References (Book/ICT/ Web links):

1. Discrete Mathematics for computer scientists & mathematics, Joe L Mott, Kandel, Baker,PHI
2. Matrices by A.R Vasistha Krishna PrakashanMandir,Meerut

Name of the faculty member & Signature:

Bindu Babu

Approvedby HeadoftheDepartment:

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023–2024

II SEMESTER

Department: Computer Science & Cognitive Systems

Class & Section: ACSC Course Code: BS18202

Name of the Faculty Member: M Ravi

Course Title:
DATA STRUCTURES THROUGH C

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Data Structures :** Stacks Definition and Various Operations performed on Stacks Queues Definition and various Operations performed on Queues Stack Applications Notations – Prefix, Postfix, Infix Conversions – Infix to Postfix, Infix to Prefix	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Linear Data structures like Stacks, Queues and their applications in Real Time	Coding/Programs using Stacks,Queues and its applications
II.	**Linked Lists:** Data Representation, Concept of Linked List Advantages of Linked List,Types of Linked List ,Linear Linked List – various operations performed on Singly Linked List Doubly Linked List – various operations performed on Doubly Linked List Circular Linked List Applications of Linked List	Lecture Method Using ICT Tools (Projector) Black board	**Analyze types of** Linked Lists and its implementation logic and their operations	Coding skills, creating awareness on types of linked lists and their implementation/ Programing logic
III.	**Trees** Trees Definition and Properties Binary Trees a) Definition and Representation of Binary Trees b) Operations – Insertion, Deletion, Search c) Tree Traversal Techniques – In order, Pre order, Post order	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** Non-Linear Data Structures and their operations	Seminars, Practical implementation of Tree Traversals,operations of Trees,Binary Trees,BST,AVL Trees

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	AVL Trees a. Definition and Representation of AVL Trees b. Operations on AVL Trees – Insertion, Deletion			
IV.	**Sorting&Searching Methods** Sorting Methods Bubble Sort Insertion Sort Selection Sort Merge Sort Quick Sort Searching Methods Linear Search Binary Search Comparison and Analysis	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Various Logics/Sorting Techniques to arrange elements in order and Searching a Key element using Linear,Binary Search	*Presentations, Analysing various sorting techniques and comparisons*
V.	**Graphs** Graphs a. Terminology & Representations b. Definition and Representation of Graphs c. Graph Traversals – BFS, DFS B-Trees Definition and Representation of B-Trees Operations on B-Trees– Insertion, Deletion, Search Files Structures – Physical Storage Media, File Organization Sequential Files, Primary Indices, Secondary Indices Indexing and Hashing Indexing and Hashing Comparison	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** Graphs Repersentations, B-Trees and their operations	Group activities, Understanding of various-Trees operations with own example data and File Organization Methods, importance of indexing, hashing to make retrieval operation faster

List of References (Book/ICT/ Weblinks):

Essential Reading :

1. Kanetkar Yashvanth 2008 Data Structures Through C India : BPB Publications

2. Tanen Baum, A.M Lingsam, Y.Augenstein M.J Data Structures using C New Delhi Pearson Education.

Suggested Reading:

1. Balagurusamy.E C Programming & Data Structures through C Tata McGrawhill

2. Data Structures using C Tata McGrawhill Publishing Company Ltd

Name of the faculty member & Signature: M. RAVI M.Ravi

Approved by Head of the Department:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-VI

Department: Comp. Sci & Cognitive System **Class&Section: ACSC** **CourseCode: CSC23203**

FacultyName: Sandeep Reddy G **Title:COMPUTER NETWORKS**

Unit	Topicstobecovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Networks Introduction, Data Communication Components, Network classifications LAN, MAN, WAN, Topologies in Networks ConnectionOriented, Connection lessservices Network models - OSI Reference Model and their functions, TCP/IP protocol. OSI Reference Model vs TCP/IP	Lecture Method using ICT Tools	Understand network infrastructure	Group discussion on use of real time networks
II.	Multiplexing - FDM, TDM, Transmission Media-Guided Media, Unguided Media Switching message, circuit and packet switched networks, Datagram networks and virtual circuit networks.	Lecture Method using ICT Tools	Know the key principles models and concepts of network	Students analyzed Rolesof multiplexing in data communication
III.	IP Addressing Version 4 – IP Addressing Version 6, Subnetting CISCO switch,connecting,startup process,configuring and managing	Lecture Method using ICT Tools	Understand the adress space mechanism	Made a practical real time approach using cisco packet tracer.

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	Data Link Layer Error Detection and Error Correction			
IV.	Routing algorithms – Congestion Control Algorithms, CISCO IOS / Managing / Password recovery, Routing, Dynamic Routing Algorithms-DVR,LSR, OSPF,RIP.	Lecture Method using ICT Tools	Know the practical routing algorithmsimplementation	Students gave presentations on Automation and future of ITIL
V.	Networking and Interconnecting Devices: HUB, Repeaters, Switch, Bridge, Router, Brouters, Gateways Transport Layer Multiplexing & De-Multiplexing	Lecture Method using ICT Tools	Understand the working of different network devices.	Created a small physical network using computers and a hub

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READINGS:

- B A Forouzan, Data Communications and Networking, 4th Ed,, M C Graw Hill Publications
- David J.Wetherall, Andrew S.Tanenbaum, "Computer Networks", 5th Edition, Pearson Education, 2012

Nameofthefacultymember&Signature:
Sandeep Reddy .G

ApprovedbyHeadoftheDepartment:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department BSc Computer science and Cognitive Systems

Class & Section: ACSC

Course Code: CSCS23201

Name of the Faculty Member: N Manisha

Course Title: Server Administration

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Windows Server 2012, Windows Server 2012 Editions and Features, Permissions and Types of Permissions, User Profiles and Home Folders.	Lecture Method using ICT Tools	To learn about the Different editions of the system	Questionnaire Session
II.	Logical Structures of Active Directory, Logical Topologies(Work Group and Domain), ADC and Child Domain, FSMO roles	Lecture Method using ICT Tools	Organize topologies in active directory	Seminars
III.	Trust Relationships , types of Trusts, Physical Structure of active Directory, Active Directory Domain Services, Right Management Services and Federation Services	Lecture Method using ICT Tools	Compare Different Services in Active Directory.	Quiz
IV.	Introduction to DHCP, DNS, IIs, web server, HTTP, FTP server. Working of Network Address Translation. Remote Access Services	Lecture Method using ICT Tools	Compare Networking Services.	Slip Test

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V.	Network Access Protection, ICS and WSUS, Install images and Boot images, Disk Management: FAT, FAT32, NTFS. Backup and Recovery using Windows Server Backup.	Lecture Method using Blackboard	Plan Installation of required services in Organization.	Viva

ESSENTIAL READING:

1. William Panek MCSA Windows Server 2012 R2 2nd Edition
2. Rand Morimoto, Michael Noel, Guy Yardeni, Chris Amaris Windows Server 2012 Unlashed 1st Edition

Name of the faculty member & Signature: N Manisha

Manisha

Approved by Head of the Department:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - IV

Department: B.Sc. COMPUTER SCIENCE AND COGNETIVE SYSTEMS **Class & Section:** NCSC **Course Code:** CSC21401

Name of the Faculty Member: R.Sinivasa rao **Course Title : probability and Statistics**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Mesures of central tendency ,mean median ,mode ,SD. Probability concepts,Correlation and its types , measures of correlation, regression and its properties. Regression equations and its coefficients. Coefficient of correlation.	Discussion and Lecture method using ICT tools	Describe how correlation is used to identify relationships between variables. Describe how regression analysis is used to predict outcomes.	Students analyzed the different series of data.and also analyzing quatitative data and qualitative data
II.	THEORETICAL DISTRIBUTIONS DISCRETE DISTRIBUTIONS : Bernoulli distribution. (1) Binomial distribution, Poisson distribution (as the limiting case of a binomial distribution) - Derivation of only mean, variance and m.g.f of these distributions – Fitting of binomial and Poisson distributions – Simple problems there on. (6) NORMAL DISTRIBUTION : Chief characteristics of normal distribution	Discussion and Lecture method using ICT tools	Identify the characteristics of different discrete and continuous distributions like binomial, Poisson and Normal distributions	Got the know ot the Knowledge about the Concepts of discrete and continuous distributions
III.	SAMPLING AND LARGE SAMPLE TESTS : Types of sampling (Purposive sampling, random sampling, simple sampling and stratified sampling) ..... (2) Null hypothesis- Type I and Type II errors – Critical region – Level of significance& large sample tests	Discussion and Lecture method using ICT tools	Analyze hypothesis tests of means, proportions and variances using both one-and twosample data sets	Group discussion.

III.	SAMPLING AND LARGE SAMPLE TESTS : Types of sampling (Purposive sampling, random sampling, simple sampling and stratified sampling) ….. (2) Null hypothesis- Type I and Type II errors – Critical region – Level of significance& large sample tests	Discussion and Lecture method using ICT tools	Analyze hypothesis tests of means, proportions and variances using both one-and twosample data sets	Group discussion.
IV.	CHI-SQUARE TEST, t-TEST AND F-TEST Chi – square test: Chi – square test for goodness of fit (3) Chi-square for independence of attributes (2) (i) t-test: t-test for single mean (1) t-test for difference of means – paired t- test (only tests without proof)- simple problems thereon. (5) (iii) F-test: F-test (without proof)	Discussion and Lecture method using ICT tools	Differentiate between the test statistics to be used for dependentand independent samples.	Group discussion based on large sample and small sample procedures
V.	STATISTICAL QUALITY CONTROL: Process control – Product control – control limits. (3) CONTROL CHARTS: Mean chart (2) Range chart (1) Sigma chart (2) Fraction defective chart (P-chart) (2) np-chart (1) control chart for number of defects per unit (c-chart)	Discussion and Lecture method using ICT tools	Construct control charts for variables and control charts for attributes	Written Test.

Listof References (Book/ICT/):

1.Fundamentals of Mathematical Statistics – By S. C. Gupta and V. K. Kapoor: Sultan Chand & Sons Publishers)

2. Statistical Quality Control – By R. C. GUPTA (Khanna Publications) REFERENCE BOOKS :

3.. S. C. Gupta and V. K. Kapoor, Fundamentals Mathematical Statistics, Sultan Chand & Sons Publishers.

4.. H. C. Sinha and L. S. Varshoy, Mathematical Statistical, Jaiprakash Nath and Co. Publishers, Meerut.

5.. Statistical Quality Control – By R. C. Gupta (Khanna Publications)

R.S.Rao

Name of the facultymember & Signature:
(R.Srinivasa rao)

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: B.Sc Computer Science & Cognitive Systems	**Class&Section: IICSC**	**CourseCode: CSC21402**
Faculty Member : Ainala Varalakshmi		**CourseTitle: Object Oriented Systems Development**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Object Basics– Objects, classes, state and properties, Behaviour, methods, messages, Encapsulation, class hierarchy, polymorphism, Relationships and associations, Aggregations and containment	Lecture Method using Board. ICT	Understood basics of OOSD concepts	Questionnaire
II.	**Object oriented system life cycle–** Analysis Design, Prototyping UML – Introduction , class diagrams ,Use case diagram ,Interaction diagram	Lecture Method using ICT Tool.	**Categorize** Object oriented methodologies and UML diagrams	Given Scenarios and made them to draw UML diagrams
III.	**Object Oriented Analysis -** Identifying use cases- Introduction Business object analysis, Use- case model, developing effective documentation, case studies **Classification-** classification theory	Lecture Method using ICT Tool.	**Choose** classification theory and performing case studies.	Group discussions
IV.	**Object Oriented Design , Designing classes, Access Layer**	Lecture Method using ICT Tool.	**Design** models based on Object oriented concept.	
V.	**Software Quality Assurance , System Usability and measuring user satisfaction**	Lecture Method using ICT Tool.	**Identify** software quality, system usability, measuring and satisfaction	

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Bahrami, Ali. 1999. **Object Oriented System Development.** New Delhi: McGraw-Hill.

SUGGESTED READING

1. Jacbson Ivor, Booch Grady and Rumbaugh James, 2008. **The Unified Software Development Process**, India: Pearson Education

2.

Name of the faculty member & Signature :Ainala Varalakshmi

Approved by Head of the Department:

LOYOLA ACADEMY
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Teaching PlanfortheAcademicYear2023–2024

SEMESTER-IV

Department:B.Sc. B.Sc. Computer Science and Cognitive Systems

Class&Section:NCSC

CourseCode:CSC21403

Name of the Faculty Member :K Nandini

CourseTitle:ARTIFICIAL INTELLIGENCE

Unit	Topicstobecovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	1. Introduction to AI 2. Applications of AI 3. History of AI 4. Types of AI, Intelligent agents 5. Types of agents 6. Agent environment 7. Turing test in AI	Traditional chalk and board method	Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning.	Assignments
II.	Search Algorithms - Types of Search Algorithms 1. Uninformed Search –Breadth First Search, Uniform Cost Search 2. Depth First Search, and Depth Limited Search 3. Iterative Deepening Depth First Search, Bidirectional Search 4. Informed search -Best first search, A* search	Lecture based using powerpoint presentations	Understand predicate logic and transform the real life information in different representation.	Conducted Quiz
III.	Adversarial search – Types of Games in AI 1. MIN –MAX Algorithm and its Working 2. Alpha Beta Pruning and its Working	Lecture based using ICT Tools	Understand formal methods of knowledge representation	Conducted Computer based Test

IV.	Knowledge Representation: 1. Knowledge Base Agents 2. Knowledge Representation Techniques 3. The Wumpus World 4. Propositional Logic 5. First Order Logic 6. Forward Chaining and Backward Chaining	Inquiry based learning	Demonstrate Knowledge representation techniques.	Conducted Viva
V.	Subset of AI: 1. Expert systems 2. Machine learning and NLP 3. Future of AI	Collaborative learning	Analyze the underlying mathematical relationships and build expert system	Conducted Seminar

Listof References (Book/ICT/ Weblinks):

Kaushik, Saroj. 2011. Artificial Intelligence. First Edition. Cengage Learning India.
Russell, Norvig. 2004. Artificial Intelligence: A Modern Approach. 3r' Edition. Pearson Education

Name of the faculty member &Signature :K Nandini K. Nandini

Approved by Headof the Department: A Varalaxmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

IV SEMESTER

Department: Computer Science & Cognitive Systems

Class & Section: NCSC Course Code: CSC21404

Name of the Faculty Member: M Ravi

Course Title: DBMS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to DBMS**: Introduction, data base applications and purpose, View of data, data base languages-DDL,DML, Data base architecture, users and administrators, Design process overview, Entity relational ship model, Constraints, ER diagrams, design issues, weak entity sets,Extended ER features	Lecture Method Using ICT Tools (Projector) Black board	**Design ,Understand and Represent** Logical Database using ER Model and EER Model	Drawing various Database Design Diagrams using ER Model and EER Model symbols
II.	**Normalization, SQL:** Structure of Relational model, Reduction to schema,Relational algebra- union, project, select and other operations SQL- data definition, structure, set operations, Aggregate functions, Modification of data base, Nested sub queries, views, Joins and Null values, Introduction to Normalization, 1NF, 2NF and 3NF, BCNF	Lecture Method Using ICT Tools (Projector) Black board	**Formulate Database** Using Relational Alzebra and organize relation using Normalization and Queries using SQL	Developing Skills to write various SQL Queries to get required data from database server
III.	**PL/SQL** Introduction, Programming, Functions and Procedures, Triggers, Cursors-implicit, explicit, cursor for loops, Error handling in PL/SQL, Authorization, granting, revoking privileges, Roles, Authorization on views, functions and procedures,Application security	Lecture Method Using ICT Tools (Projector) Black board	**Implement** SQL Queries contd... and implement PL/SQL Programs	Practical implementation of PL/SQL concepts like Cursors, Triggers, Stored Procedures and Functions, Exception Handling

IV.	**Storage Media, File Organization, Indexing&Hashing** Overview of physical storage media Magnetic disks- physical characteristics and performance measures Buffer manager, replacement policies, File organization Organization of records in files Ordered indices, Index sequential-B+ trees Static hash function, Dynamic hash function, comparison	Lecture Method Using ICT Tools (Projector) Black board	**Classify the storage and File Structure** Storage Access,Indexing and Hashing Techniques of Database	Presentations on Indexing and Hashing Methods and File Organization Methods
V.	**Transactions,Concurrency Control** Transactions- concepts, states Implementation of Atomicity and durability, Concurrent executions, Serializability, Testing for Serializability, Concurrency control, lock based protocols, locks and granting locks Two Phase locking and dead lock handling Recovery system, failure, Storage structure-storage types, data access,Recovery and Atomicity, log based recovery, Check points	Lecture Method Using ICT Tools (Projector) Black board	**Explain** the Concept of Transactions, Recovery system and Concurrency Control	Group activities, Understanding of Transactions ACID properties, Recovery system and Concurrency Control with Locking

List of References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. **Korth Henry, F. SilberSchatzAvi. And Sudarshan, S. 2008. Database System Concepts.5th Edition. New Delhi: Tata McGraw-Hill.**
2. **Bayross Ivan. 2010. SQL, PL/SQL- The Programming Language for Oracle.4th Edition. New Delhi: BPB Publications.**

SUGGESTED READING

1. **McFadden Fred, R. Hoffer Jeffery, A and Prescott Mary, B. 2007. Modern Database Management. 8th Edition. New Delhi: Pearson.**
2. **Elmasri Navathe and Shamkant , B. 2008. Fundamentals of Database Systems. 5th Edition. New Delhi: Pearson Education.**

Name of the faculty member & Signature: M. RAVI M.Ravi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-IV

Department: Comp. Sci & Cognitive System **Class&Section: NCSC** **CourseCode: CSC21405**

Nameofthe FacultyMember: Madhuri Hepseba **CourseTitle: PROCESS MANAGEMENT**

Unit	Topiesto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Software and software Engineering:** The Nature of Software, The Unique Nature of WebApps Software Engineering, Software Process Software Engineering Practice, Softwar Myths. **Software Process Model:** A Generic Process Model Process Assessment and Improvement	Lecture Method using ICT Tools	**Explain** basics of software engineering process models	Group discussion on Process models
II.	**Agile:** Agile Methodology, Manifesto, Principles of Agile Agile Methodologies, Challenges with Agile. **Scrum:** Overview of Scrum, Scrum Rol Scrum Ceremonies, Scrum Artifacts, Extreme programming vs Scrum.	Lecture Method using ICT Tools	**Understand** agile methodologies and scrum roles.	Students analyzed various Agile methodologies
III.	**Devops:** Introduction to Devops, Principles, Automation, Performance Measurement through KPIS and Metrics Agile and Devops, Agile Infrastructure, Velocity, Lean Startup UPS.	Lecture Method using ICT Tools	**Demonstrate** Agile and Devops.	Made a study on measurement through KPIS and metrics in Devops
IV.	**Lean UX and Agile Anti-Patterns :** Sprint -Staggered sprints, Sprint zero and design sprints Dual-track Agile Listening to Scrum's rhythms	Lecture Method using ICT Tools	**Explain** Lean UX and Agile anti-patterns	Students gave seminars on Scrum and Agile patterns

	Participation, Design is a team sport Coordinating multiple Lean UX teams, Managing up and out Agile anti-patterns				
V.	**Design Thinking:** Introduction to Design Thinking, Lean thinking, **Actionable Strategy:** The Problem with Complexity, Vision and Strategy, Defining Actionable Strategy. **Act to Learn:** Defining your Beliefs and Assumptions, Decide what to learn and how to learn, Research and Experiments for Learning, Problem Validation. **Leading Teams to Win:** Purpose-Driven Autonomy, Mission Command,	Lecture Method using ICT Tools	**Classify** design thinking and lean thinking	Study done on Strategies, Beliefs and Assumptions in Design Thinking	

Listof References (Book/ICT/ Weblinks):
ESSENTIAL READINGS

Roger S Pressman, "Software Engineering A Practioners Approach", 7th Edition 2010
KalloriVikraman, "Introduction to Devops", 1st Edition, 2016.
Stephen Haunts, "Essential of Scrum" Addison-Wesley Professional; 1st Edition, 2012
Jeff Gothelf, Josh Seiden, "Lean UX", 2nd Edition, 2016.
Jonny Schneider, "Understanding Design Thinking, Lean, and Agile" O'Reilly Media 2017.
Jeff Gothelf , "Lean vs. Agile vs. Design Thinking"Sense and Respond Press,2017.

Nameofthefacultymember&Signature: Hepseba
Madhuri Hepseba

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: B.Sc (Cognitive) **Class & Section: NCSC** **Course Code: 21406**

Name of the Faculty Member: B Venkataratnam **Course Title: B.Sc (Cognitive)**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	INTRODUCTION . Fundamentals of Object-oriented concepts, Java Evolution and overview • Variables, Data types and Arrays, Operators and Control Statements • Class Fundamentals, declaring objects and methods • Constructor, this Keyword • Overloading methods, Objects as parameters • Access control, static, command line arguments **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Understand fundamentals of object oriented concepts in JAVA 1. Fundamentals of Object-oriented concepts, Java Evolution and overview 2. Variables, Data types and Arrays, Operators and Control Statements 3. Class Fundamentals, declaring objects and methods 4. Constructor, this Keyword 5. Overloading methods, Objects as parameters 6. Access control, static, command line arguments.	Quiz
II.	INHERITANCE, PACKAGES, INTERFACES, EXCEPTIONS • Inheritance, multilevel hierarchy, super, method overriding • Dynamic Method Dispatch, Abstract classes, using final • Package-package access, importing packages and classes, user defined 2 package • Interface-define, implement and extending Interface, Multiple inheritance.	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the INHERITANCE, PACKAGES, INTERFACES, EXCEPTIONS 1. Inheritance, multilevel hierarchy, super, method overriding 2. Dynamic Method Dispatch, Abstract classes, using final 3. Dynamic Method Dispatch, Abstract classes, using final 4. Interface-define, implement and extending Interface, Multiple	Seminar

	• Exception handling: try-catch, multiple catch, Nested try, throw, throws, finally, user defined exception **(12Hrs.)**		inheritance 5. Exception handling: try-catch, multiple catch, Nested try, 6. throw, throws, finally, user defined exception	
III.	THREADS, STRINGS, APPLETS • Multithreading- Thread Model, Main Thread, Creating a Thread, isAlive (), join () • Thread priorities, Synchronization.• String class, Wrapper class. • String methods. • Applet class-basics, architecture, life cycle, applet tag, passing parameters, animation Working with frames, fonts, color, Graphics and displaying images in applet. **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the THREADS, STRINGS, APPLETS 1. Multithreading- Thread Model, Main Thread, Creating a Thread, isAlive (), join () 2. Thread priorities, Synchronization. 3. String class, Wrapper class 4. String methods. 5. Applet class-basics, architecture, life cycle, applet tag, passing parameters, animation 6. Working with frames, fonts, color, Graphics and displaying images in applet.	Group Discussion
IV.	EVENTS AND SWINGS • Event Handling: The delegation event model, Event classes-Action event, Mouse Event, Window Event, Item Event, Key Event • Sources of Event, Event listeners-Action listener, Mouse listener, Mouse motion, Window listener, Key Listener • Layout manager-card, grid, flow and border. • Swing- MVC architecture, components and containers • Swing control- JLabel and ImageIcon, JTextField,JButton • JRadioButton, JCheckbox, JToggleButton, JTextArea. • JPasswordField, JCombobox, JTable, JOptionPane **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the EVENTS, SWIGNS 1. Event Handling: The delegation event model, Event classes-Action event, Mouse Event, Window Event, Item Event, Key Event 2. Sources of Event, Event listeners-Action listener, Mouse listener, Mouse motion, Window listener, Key Listener 3. Layout manager-card, grid, flow and border. 4. Swing- MVC architecture, components and containers 5. Swing control- JLabel and ImageIcon, JTextField,JButton 6. JRadioButton, JCheckbox,	Group Discussion

			JToggleButton, JTextArea. 7. JPasswordField, JCombobox, JTable, JOptionPane	
V.	SWINGS, RMI, FILES. • . JTree, JList, JMenu. • JScrollBar, JSplitPane • Input-output- File- directories, File Name Filter, Reading and Writing Files, File Reader and File Writer • RMI: Architecture, registry service, Parameter passing in Remote Methods, Creating RMI Application and steps involved in running RMI application **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the SWINGS AND RMI, FILES 1. . JTree, JList, JMenu.Auto Encoders Applications 2. JScrollBar, JSplitPane 3. Input-output- File- directories, File Name Filter, Reading and Writing, Files, File Reader and File Writer. 4. 4. RMI: Architecture, registry service, Parameter passing in Remote Methods, Creating RMI Application and steps involved in running RMI application	Seminar

List of References (Book / ICT / Weblinks):

1. Schildt, Herbert. 2002. The Complete reference Java2. New Delhi: Tata McGraw Hill.
2. Deitel, P.J.Deitel, H.M. Java for Programmers, Java: How to Program. PHI
3. Gaddis,Tony. Starting Out with Java. Dream Tech Press
4. Balagurusamy, E. Programming with Java, A Primer. 3rd Edition. New Delhi: TMH

Name of the faculty member & Signature: B Venkataratnam

Approved by Head of the Department: Vara Laxmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: B.Sc Computer Science & Cognitive Systems **Class&Section:DCSC** **CourseCode: CSC22602A**

Faculty Member : Ainala Varalakshmi **CourseTitle: Infrastructure Security**

Unit	Topicsto becovered	TeachingPedagogy	Learning Outcome	Skill Development Activity
I.	**Computer Security** Concepts, Threats, Attacks and Assets Security Functional Requirements, Security Design principles , Attack Surfaces and Attack Trees, Computer Security strategies, Access control Principles, Subjects, Objects and Access Rights, Discretionary, role based and Attribute based control	Lecture Method using Board. ICT	Understanding about threats. Importance of Access control	Group Discussion
II.	Need for database security, DBMS and relational databases, SQL injection attacks, Database Access Control, Inference, Encryption Cloud Computing, Risks and Countermeasures, Data protection in cloud Cloud Security as a Service	Lecture Method using ICT Tool.	Necessity of security and techniques to provide it.	JAM
III.	Operating System Security Trusted Computing and Multilevel Security	Lecture Method using ICT Tool.	Understanding the importance of OS hardening. Taking the support of security software's.	Questionnaire
IV.	IT Security Management and Risk Assessment	Lecture Method using ICT Tool.	Knowledge about various risk assessment and IT security	Discussion on Risk Assessment

V.	Web Security Browser attacks Web Attacks Targeting users Obtaining User or Website Data Email attacks	Lecture Method using ICT Tool.	Understood the various attacks and precautions to protect	Real Time Examples

Listof References (Book/ICT/ Weblinks):

1. William Stallings and Lawrie Brown. 2015. **Computer Security Principles and Practice**. 3rd Edition. Pearson Education
2. PFleeger, Charles P, Pfleeger, Shari Lawrence, Margulies Jonathan. Security in Computing. 5th Edition. Prentice Hall

Name of the faculty member & Signature : Ainala Varalakshmi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: B.Sc Computer Science & Cognitive Systems

Class & Section:DCSC

CourseCode: CSC22603

Faculty Member : Ainala Varalakshmi

CourseTitle: BIG DATA ANALYTICS

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	What is Big Data?, History of Data Management-Evolution of Big Data, Structuring Big Data, Elements of Big Data.Big Data Analytics, Careers and Future of Big Data. Use of Big Data in Social Networking, Preventing Fraudulent Activities . Distributed and Parallel Computing for Big Data, Hadoop and Cloud Computing, Exploring the Big Data Stack, Virtualization and Big Data Stack, Virtualization Approaches	Lecture Method using Board. ICT	Understanding Big data elements and opportunities in Big Data and working of Big Data Architecture	Group Discussion
II.	Understanding Analytics and Big Data, Analytical Approaches and Tools to Analyze Data, Storing Data in Databases and Data Warehouses	Lecture Method using ICT Tool.	Analyzing the various tools and storing of data	Assessment
III.	Understanding Hadoop EcoSystem Understanding Map Reduce Fundamentals, Customizing MapReduce Execution and Implementing MapReduce program	Lecture Method using ICT Tool.	Understanding Hadoop Ecosystem and MapReduce working	Questionare

IV.	Understanding Hadoop YARN Architecture, Exploring HIVE, Analyzing Data with Pig	Lecture Method using ICT Tool.	Usage ofYARN commands , Hive Data types and functions	Assignment on yarn commands
V.	Analyzing Data with Pig, NoSQL Data Management	Lecture Method using ICT Tool.	Understanding pig operators and functions	Made to write programs

Listof References (Book/ICT/ Weblinks):

1. DT Editorial Services. 2016. **Big Data Black Book**. Dreamtech Press.
2. White, Tom. 2012. **Hadoop: The Definitive Guide**. 3rd Edition. O'Reilly Media.

Name of the faculty member & Signature :Ainala Varalakshmi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the AcademicYear 2023–2024

SEMESTER-VI

Department:B.Sc.Computer Science and Cognitive Systems

Class&Section:DCSC

Course Code:CSC22601A

Name of the Faculty Member:V.Shirisha

Course Title:Principles of Information Security

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	INTRODUCTION OF INFORMATION SECURITY 1.Introduction to Security, Critical Characteristics of Information 2. 2.Balancing Information Security and Access, Approaches to Information Security Implementation, System Development Life Cycle 4. Security System Development Life Cycle, Information Security Art of Science 4. Need For Security: Business Needs, Threats, Attacks 5. Secure Software Development-software Assurance, Software Design Principles, Software Development Security Problems	Lecture based using power point presentations	• Understanding concepts of security system development life cycle	Conducted Quiz
II.	RISK MANAGEMENT 1. Overview of Risk Management 2. Risk Identification 3. Risk Assessment 4. Risk Control Strategies 5. Selecting a Risk Control Strategy	Traditional chalk and board method	• Identifying risk,access and risk control stratergies.	Assignments

III.	1. Firewalls: Processing modes, categorizations 2. Firewall Architecture, Choosing a Firewall 3. Configuring and Managing a Firewall 4. Firewall Rules 5. Protecting Remote Connections: Securing Authentication with Kerberos 6. VPN: Transport and Tunnel Mode	Lecture based using ICT Tools	• Expertise in configuring host and network level technical security controls	Conducted Viva
IV.	SECURITY TECHNOLOGIES: INTRUSION DETECTION AND OTHER SECURITY TOOLS 1.IDPS terminology, types of IDPS 2.IDPS Detection Methods, IDPS Response Behavior 3.Strengths and Limitations of IDPS 4.Honeypots, Honey nets and Padded Cell Systems 5.Port Scanners, Firewall Analysis Tools 6.Operating System Detection Tools, Vulnerability Scanners 7.Packet Sniffers, Wireless Security Tools	Inquiry based learning	• Analyze systems,methods,tools and techniques for securing digital information	Conducted Computer based Test
V.	SECURITY CONSIDERATIONS IN MOBILE AND WIRELESS COMPUTING 1. Proliferation of Mobile and Wireless Computing Era 2.Trends im Mobility, Credit card Frauds in Mobile and Wireless Computing Era 3.Security Challenges posed by Mobile Devices, Registry Settings for Mobile Devices	Collaborative learning	• Understanding concepts of security considerations in mobiles and wireless computing.	Conducted Seminar

	4.Authentication Service Security 5.Orgamzational Seccunty Policies and Measures in Mobile Computing Era 6.Use of RFID in Mobile Commerce nd laformation Asset Protection			

Listof References (Book/ICT/ Weblinks):

1. Whitman Michael, E. and Mattord Herbert, 1. 2011. Principles of Information Security. 4" Edition. USA: Course Technology
2. Nina Godbole. Information Systems Security: Security Management, Metrics, Frameworks and Best Practices, 2" Edition Wiley Publications

Name of the faculty member&Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching

PlanfortheAcademicYear2023–2024

SEMESTER-VI

Department: B.Sc. Computer Science and Cognitive Systems

Class&Section:DCSC

CourseCode:CSC22601B

Nameofthe FacultyMember: K Nandini

CourseTitle:Cognitive Computing

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Foundations of Cognitive Computing 1. Cognitive computing as new generation 2. Uses of cognitive systems, What makes a system cognitive? 3. Gaining insights from data, AI as foundation of Cognitive computing 4. Understanding cognition, two systems of Judgement and choice 5. Understanding complex relationships between systems 6. Elements of Cognitive system	Traditional chalk and board method	Understand the fundamental concepts of Cognitive Computing	Group discussions
II.	Design Principles of Cognitive Computing 1. Components of Cognitive System 2. Building the Corpus, Bringing data into the Cognitive system	Traditional chalk and board method	Recognize the use of Cognitive Computing in various Industries	Assignments

	3. Machine Learning 4. Hypothesis Generation and Scoring 5. Presentation and visualization services			
III.	Natural Language Processing in Support of Cognitive System 1. Role of NLP in Cognitive system 2 2. Semantic web, application of NLP in business problems 4 BigData and Cognitive computing 3. Dealing with human-generated data, defining big data 2 4. architectural foundation for big data, Hadoop 2 5. Data in motion and streaming data, Integrating with traditional data	Lecture based using ICT Tools	Understand the principles of NLP in Cognitive Computing	Conducted Viva
IV.	The Role of Cloud and Distributed Computing in Cognitive Computing 1. Leveraging Distributed computing for Shared resources 2 2. Cloud services are fundamental to Cognitive system 2 3. Characteristics, cloud models, delivery models in cloud 3 4. Managing workloads, Security and Governance 2 5. Data integration and management in cloud	Inquiry based learning	Understand the principles of Cloud & Cognitive Computing.	Conducted Quiz
V.	Process of Building cognitive application 1. Emerging cognitive platform,	Collaborative learning	Create and Build the Cognitive Application and understand their usages.	Conducted Computer based Test

	defining objective and domain 2.understanding intended users and defining their attributes 2 3.Defining questions and Exploring insights 2 4.Creating and refining corpora, training and testing 2 5.Building cognitive healthcare application			

Listof References (Book/ICT/ Weblinks):

Hurwitz, Kaufman and Bowles. Cognitive computing and Big Data Analytics. by Wiley.

Name of the faculty member & Signature: K Nandini K. Nandini

Approved by Head of the Department: A VaraLaxmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-VI

Department: Comp. Sci & Cognitive System **Class&Section: DCSC** **CourseCode: CSC22602B**

Nameofthe FacultyMember: Madhuri Hepseba

CourseTitle: INFORMATION TECHNOLOGY INFRASTRUCTURE LIBRARY

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction ITIL - Service Life Cycle Model, Define ITIL - Components and Phases of a Service Life Cycle, Main concept of Service life cycle, Service management as a Practice, IT today and IT opportunity	Lecture Method using ICT Tools	Understand service lifecycle model	Group discussion on Service Life Cycle
II.	Introduction to Service and Service management and its value, The 4 Ps of Service Design, Key It service management roles, Key Principles Models and Concepts	Lecture Method using ICT Tools	Know the key principles models and concepts of service management	Students analyzed Roles in Service Design
III.	Process - Functions - Specific Roles, RACI - Risk Management - Business Case, Life Cycle Phases - Service Strategy - Service Design - Service Transition, Service operation – CSI	Lecture Method using ICT Tools	Understand the process management and risk management	Made a business case study using RACI matrix.

IV.	Automation - Evolution of IT Infrastructure Services, Challenges in providing IT Infrastructure Services, The future state of IT Infrastructure Services, Automation and Analytics - the approach of the future	Lecture Method using ICT Tools	Know the challenges in providing IT infrastructure services	Students gave presentations on Automation and future of ITIL
V.	SNOC - Event Management – Objectives and Scope of event management, Value to the organization, Draw IT Infrastructure facilities for Hospital Management System, e - governance and Banking Sector	Lecture Method using ICT Tools	Understand the event management concepts.	Created IT facilities charts for HMS and Banking sector

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READINGS

1. Service Support (CCTA): Part 15 (IT Infrastructure Library)
2. IT Infrastructure Risk & Vulnerability Library: A Consolidated Register of Operational & Technology Infrastructure Vulnerabilities for IT Assuran Professionals
3. IT Infrastructure Risk and Vulnerability Library: A Consolidated Register of Operational and Technology Infrastructure Vulnerabilities for Assurance Professionals (Japanese Edition)

Nameofthefacultymember&Signature:
Madhuri Hepseba

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: B.SC(ComputerScience &Cognitive System) **Class & Section:ACSC** **Course Code: CSC23102**

Name of the Faculty Member:K.HIMABINDU **Course Title: OPERATING SYSTEMS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1.Introduction-Definition of operating system, mainframe system, desktop systems 2.Multiprocessor systems, distributed systems, clustered systems 3.Real time systems , hand held systems 4.Operating system structures-system components 5.Operating system services, system calls 6.system programs, system structures , virtual machines	Lecture Method using ICT Tools,Blackboard	**Explain** functions, types and structures of operating system	Computer based test ,Seminars
II.	1.Process concept-process concept, process scheduling 2.Operation on processes, cooperating processes 3.Inter process communication 4.Process scheduling-basic concepts, scheduling criteria, scheduling algorithms.	Lecture Method using ICT Tools	**Analyze** various process management concepts including scheduling and synchronization	Seminars conducted
III.	1.Process synchronization-critical section problem 2.Semaphores, monitors 3.Deadlocks-deadlock characterization, methods for	Lecture Method using ICT Tools	**Demonstrate** process synchronization and dead locks	Seminars conducted

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	handling deadlocks Deadlock prevention, Deadlock avoidance, Deadlock detection			
IV.	1.File system-file concept, access methods 2.Directory structure, file system mounting, file system sharing. 3.File system implementation-file system structure, file system implementation. 4.Directory implementation, allocation methods, free space management	Lecture Method using ICT Tools	**Solve** issues related to file system interface	Computer based test, Seminars
V.	Memory management-swapping, contiguous memory allocation Fragmentation-internal and external fragmentation Paging, segmentation, segmentation with paging. Virtual memory management-demand paging Page replacement algorithms, Thrashing and working set model.	Lecture Method using ICT Tools,Blackboard	**Choose** an appropriate Page replacement algorithm	Seminars conducted

List of References (Book / ICT / Weblinks):

1. Silberschatz Abraham, Galvin Peter,B. and Gagne• Greg.2006.**Operating System Concepts.** India: Wiley.
2. Tanenbaum Andrew, S. 2001. **Modern Operating Systems**. Asia: Pearson Education.

https://drive.google.com/drive/folders/1PfTvqyVGqvvjqy3XdQ_ZZ0hxbZTSAvxI?usp=drive_link

Name of the faculty member & Signature: K.HIMABINDU

Approved by Head of the Department:

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LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER I

Department:ENGLISH

Class&Section: AAI, ACDS, ACSCS, ACSIOT, ACSC

CourseCode: EN23101

Nameofthe FacultyMember: P. SARITHA

CourseTitle:GENERAL ENGLISH-1

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Short Story – The Mystery Story Present Tense Past Tense Future Tense Paragraph Writing	LectureMethodusing ICT Tools	Tolearnaboutthefundamentals Of communication	Solving mixed tense exercises Narrating mystic experiences Writing paragraphs on various topics
II.	Poem – Goodbye Party for Miss Pushpa T.S. Subject- Verb Agreement Punctuations Review Writing	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Explanation of the poem by students Grammar exercises Film review writing
III.	Lesson – Wit and Humour Nouns and Articles Homophones, Homonyms, Homographs Note making	Lecture Method using ICT Tools	To identify the different types of nouns and articles in a sentence composition and to learn the correct usage and spelling of different words which spell or sound similar.	Character sketch of the story characters Grammar exercises like fill in the blanks, multiple choice and true or false.

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IV.	Lesson – India's Contribution to World Unity Adverbs Adjective and adverb Suffixes Formal letters and Curriculum Vitae	Lecture Method using ICT Tools	To think critically, demonstrate an understanding of diverse cultures and historical movements. To recognize the different parts of speech	Description of the message conveyed by the author and its relevance in the day today world. Practice in Formal letter and Curriculum Vitae writing
V.	Lesson – Sachin Tendulkar Adjectives, Comparison of Adjectives Common Errors, Commonly misspelt words, Commonly Confused words	Lecture Method using ICT Tools	To write grammatically correct sentences and to identify different degrees of comparison.	Text book exercises and worksheets

Listof References (Book/ICT/ Weblinks):

1. Skills Annexe. Functional English for Success. Orient Black Swan

SUGGESTED READING:

- Balasubramaniam, M. 1985 Business Communication. New Delhi: Vani Educational Books.
- Krishna Mohan and Meera Banerjee, 1990. Developing Communication Skills. New Delhi: Macmillan India Ltd.
- Krishnaswamy.N. and Sriraman, T. 1995. Current English for Colleges. Madras: Macmillan India Ltd.
- Narayanaswamy.V.R. 1979 Strengthen Your Writing. New Delhi: Orient Longman.
- Sharma.R.and Krishna Mohan. Business Correspondence. 1978. New Delhi. Tata McGraw-Hill Publishing Co

Nameofthefacultymember&Signature:

P. Savitha Savitha

Approvedby HeadoftheDepartment:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–242024

SEMESTER

Department:Economics **Class&Section:ACSC** **CourseCode:VE18001**

Nameofthe FacultyMember: Larissa Sequeira **CourseTitle:Value Education and Personality Development**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to Ethics	LectureMethod	ToLearnto differentiate between accepted and Counter norms and to be able to identify the various Dimensions of Human Development	Group discussion to understand the value system in the society.
II.	Approach to Life	LectureMethod	To Learn to demonstrate Love and experience of God and to be ableto identify the Basic issues of Life and the Happiness as Life's goal.	Debate on the topics covered
III.	Concern for others	LectureMethod	To Understand the importance of concern for others and critic the various problems that deter the growth of the society	Scenario discussion
IV.	Transformation of Self	LectureMethod	To be able to recognize the traits of a good personality and practice self exploration	Self reflection and discovery of one's true self.
V.	Life Enrichment Skills	LectureMethod	To learn to be able to interpret the purpose of life and goal setting and demonstrate self management.	Exploring of personal skills through peer discussions.

Listof References (Book/ICT/ Weblinks):

1. Human Values – Development Programme – AIACHE
2. In Harmony – Value Education at College level. By a Team of Ethics Teachers (G.M. James , B.J JAYARAJ , K.CANDASSAMY, BERNARD D

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2023-2024

S.J.A PACKIARAJ)

Nameofthefacultymember&Signature:
Mrs. Larissa Sequeira

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Comp. Sci & Cognitive System **Class&Section: ACSC** **CourseCode: CSC23101**

Nameofthe FacultyMember: A.VaraLakshmi **CourseTitle:Introduction to WorkSheets**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introductorty Concepts of MS-Excel Spread Sheet.	LectureMethodusing ICT Tools	**Explain** the concepts of MS-Excel	Analyzing the importance of excel concepts and its applications in real time environment
II.	**Introduction to Visual Basic for application** **Working with VB Editor** **VBA fundamentals**	Lecture Method using ICT Tools	**Understand** basic concepts of VBA	Practiced form designing in VBA
III.	Arrays, Built-in functions, Manipulating objects and collectionsControlling code execution-GoTo, If Then, Select Case Looping block of instructions-For Next, Do While, Do Until Working with VBA Sub procedures-about procedures, Executing Sub Procedures, Error handling techniques	Lecture Method using ICT Tools	**Develop** basic programming using VBA	Exercised programming concepts by implementing control structures and usage of sub procedures
IV.	**Creating functions procedures** String Handling functions, Date time functions,Introducing User forms-handling custom dialog boxes, inserting and addingcontrols user formToolbox controls, control's propertiesDisplaying, closing and creating a user form	Lecture Method using ICT Tools	**Divide** large programs into functions and create user forms	Understanding the concepts of function procedures. Practiced programming concepts with string handling functions and usage of tools in toolbox

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V.	Leveraging Custom Dialog boxes, Working with charts	Lecture Method using ICT Tools	**Create** charts using VBA code Usage of Msgbox() and Dialogue	Practiced inputbox() msgbox() and

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Alexander, Michael and Kulseika, Richard. 2019. **Excel 2019 Power Programming with VBA**. 1st Edition. John Wiley and Sons. Indiana: IndianaPolis.
2. Walkenbach, John. 2013. **Excel VBA Programming for Dummies**. 3rd Edition. John Wiley and Sons. NJ:Hoboken.

SUGGESTED READING

1. Dr. Liew Voon Kiong. 2010. **Excel VBA Made Easy**. CreateSpace Independent Pub.

Nameofthefacultymember&Signature:
A.Varalakshmi

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Teaching Plan for the Academic Year 2023–2024

I SEMESTER

Class & Section: ACSC Course Code: CSC20104

Department: Computer Science & Cognitive Systems

Name of the Faculty Member: M Ravi

Course Title:
PROBLEM SOLVING&PROGRAMMING IN C

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT-1:** Introduction to Programming languages Generation of programming languages Algorithms and Flow charts Introduction to C programming Structure of C program Files used in a C program Compiling and executing C program	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Fundamentals of Programming Languages	Assignments, creating awareness on various programming languages and reasons for development
II.	**UNIT-2** C tokens, Constants, Character set in C Keywords, Identifiers, Data Types in C Enumerated data types, typedef Variables and scope of a variables Data input and output statements in C Operators in C, Type conversion and Type Casting	Lecture Method Using ICT Tools (Projector) Black board	**Analyze** C Language Basic Concepts which helps in developing C programs and and demonstration of various operators and i/o functions to collect various user inputs	Various Coding exercises which helps to improve their programming skills

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III.	**UNIT-3** Conditional Branching Statement – if, if-else, if-else-if, switch case Iterative Statements – while loop, do-while loop, for loop Nested loops, break and continue statements, goto statement Arrays - Single and double dimensional arrays String- string input output functions, string manipulation functions	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** various control statements to develop decision oriented, arrays, strings programs	Seminars, Practical implementation of various control statements related programs in lab to develop advanced programs
IV.	**UNIT-4** Function- Declaring, defining and invoking functions Categories of functions-Built-in functions Passing parameters to functions – call by value & call by reference Storage classes Recursion Pointers - Declaration, passing pointer to functions Pointers and one dimensional arrays Dynamic memory allocations	Lecture Method Using ICT Tools (Projector) Black board	**Understand** concepts to develop our own functions as per our business requirements and concepts to develop programs based on address of arguments using pointers	Presentations,, Practical implementation of various programs to develop our own functions, to use memory effectively using pointers and dynamic memory allocation
V.	**UNIT-5** Structures - Simple structures, nested structure, Array of structures,Unions Differences between Structures and Unions File handling - Various modes, File operations – fopen(), fclose( ) File input output functions – fputc(), fgetc(), fputs(), fgets(),getw(), putw(), getc(), putc(), fprintf(), fscanf(), getchar(), putchar( ) Random accessing file- fseek(), ftell(), rewind( )	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** the structures,unions which are used to develop our own datatypes and storing data permanently using File Concepts and File Functions	Practical implementation of various programs to develop our own data types, and programs to store and retrieve data from a file which stores data permanently

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of Reference books :

1. TharejaReema. 2015. Programming in C. 2 nd Edition. New Delhi:BPB.
2. Kanetkar Yashwant. 1995. Let us C. New Delhi:BPB.
3. Gottfried Byron. 2010. Programming with C (Schaum's Outline Series) 3 rd Edition New Delhi: McGraw Hill Education

Name of the faculty member & Signature: M. RAVI M. Ravi

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Teaching PlanfortheAcademicYear2023–2024

IISEMESTER

Department: BSc Computer Science &Cognitive Systems

Class&Section: ACSC

CourseCode: CSC23103

Name of the Faculty Member: K Nandini

CourseTitle: COMPUTER FUNDAMENTALS

Unit	Topics to be covered	Teaching Pedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**INTRODUCTION TO COMPUTERS** 1. Definition, characteristics, stored program concept, history and classification 2 Applications and basic organization of computer **INPUT AND OUTPUT DEVICES** 3. Input devices- keyboard, pointing, handheld, optical, Audio-visual, card readers Digitizers 4. Output Devices- soft copy devices, Monitor and types, Hardcopy devices Voice response systems, biometric devices	LectureMethod using ICT Tools Blackboard Inquiry based	**Understand** various I/O devices and functionality of computer	Assignments
II.	**COMPUTER MEMORY** 1. Introduction, memory organization, hierarchy, sequential and random access 2. Process Registers, Primary memory and cache memory 3. Secondary storage devices, Magnetic tapes, Hard disks- external, optical disks USB flash drives, Memory Cards, Mass storage devices COMPUTER SOFTWARE 4. Introduction, classification, System	Lecture Method using ICT Tools Blackboard Inquiry based	**Understand** types of memory and software	Seminars

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	oftware, application software 5. Firmware, middle ware, procuring computer software			
III.	**NUMBER SYSTEMS AND COMPUTER CODES** 1. Introduction, binary number system-working with binary numbers 2. Octal number system-conversion 3. Hexadecimal number system-conversions, addition and subtraction 4. Signed number representation in binary form 5. BCD and other codes	Lecture Method using ICT Tools Blackboard	**Solve** arithmetic operations using different types of number systems	Group discussions,
IV.	**COMPUTER NETWORKS** 1. Introduction, types of networks 2. Physical components of a network 3. Wired media and wireless media 4. Networking devices 5. Networking topologies 6. Data transmission modes	Lecture Method using ICT Tools Blackboard	**Distinguish** different types of networks, networking devices and topologies	Presentations
V.	**THE INTERNET** 1. Internet-history, intranet and extranet, differences 2. IP address-types 3. Domain Name System, Uniform resource locator, Internet browsers 4. Internet services 5. Types of Internet connections 6. Internet Security	Lecture Method using ICT Tools Blackboard Inquiry based	**Explain** various IP addressing mechanisms	Group activities

List of References (Book/ICT/ Weblinks):

1. Thareja, Reema. 2020. Fundamentals of Computers, 2nd Edition. Oxford Higher Education.
2. Sinha Pradeep, K. and Sinha Preeti. 2007. Computer Fundamentals, Concepts, Systems an Applications, 4 edition. BPB Publications
3. Rajaraman. 2006. Fundamentals of Computers, 4o edition. PHI Publications.
4. Bharihoke Deepak. 2000. Fundamentals of Information Technology. 2 edition. Excel Books

Name of the faculty member & Signature: K. Nandini & K

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Teaching PlanfortheAcademicYear2023–2024 IISEMESTER

Department: Cognitive Systems **Class&Section: NCSC** **CourseCode: CSC21303**

Nameofthe FacultyMember: Madhuri Hepseba **CourseTitle: VIRTUALIZATION AND CLOUD**

Unit	Topics to be covered	Teaching Pedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Distributed Systems**: Distribute a system –Distributed algorithm, Distributed Data Stores – Distributed Computing, File Systems – Distributed Messaging, Distributed Applications – Distributed Transaction	LectureMethodusing ICT Tools Blackboard Inquiry based	**Understand** Distributed Systems and its Application	Assignments, Pratical implementation in the lab
II.	**Cloud Concepts:** Introduction Cloud Computing - Advantages of Cloud, Three service models - Four deployment models, Cloud Vendors, Traditional Infrastructure setup and Challenges, AWS	LectureMethodusing ICT Tools Blackboard Inquiry based	**Analyze** Cloud Service Models and Deployment Models	Seminars, Pratical implementation in the lab
III.	**Virtualization :**Introduction to vSphere and the Software. Defined Data Center Creating Virtual Machines, VCenter Server - Configuring and Managing, . Virtual Machine Management	LectureMethodusing ICT Tools Blackboard	**Demonstrate** Virtual Networks Configuring and Managing Virtual Storage	Group discussions, Pratical implementation in the lab
IV.	**Virtual Machines**: vSphere HA. DRS,Fault tolerance, Update Manager, Network Scalability, Securing Virtual Machines	LectureMethodusing ICT Tools Blackboard	**Understand** vSphere Update Manager and Host Maintenance	Presentations, Pratical implementation in the lab

V.	**Datacenter:** Data center overview - Components – Provisions, Need of Data Center, Data Center Architecture, Data center architecture for cloud computing, Different Racks	LectureMethodusing ICT Tools Blackboard Inquiry based	**Demonstrate** Role of data center in cloud computing	Group activities

Listof References (Book/ICT/ Weblinks):

1. Jean Dollimore formerly of Queen Mary, Tim Kindberg, "Distributed Systems Concepts and Design", 5th Edition Cambridge University, University of London
2. VenkataJosyula , Malcolm Orr , Greg Page, "Cloud Computing: Automating the Virtualized Data Center", 1st Edition.
3. Brian J.S. Chee, Curtis Franklin Jr., "Cloud Computing: Technologies and Strategies of the Ubiquitous Data Center", 1st Edition.

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Hepseba

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER - III

Department:Computer Science and Cognitivesystem

Class & Section: NCSC

CourseCode:CSC21304

Nameofthe FacultyMember: A.Jyothi

CourseTitle:Python Programming

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Basic of Python Programming: Features of Python, History of Python, Future of writing and Executing first python program, Literal constants-Numbers, strings, Variables and Identifiers, Data types, Input Operation, Comments, Reserved words, Operators and Expressions in python, Other Data type- Tuples, dictionary,list. Type conversion, Decision control statements- if statement, if-else statements, Nested if, if-elif-else, Basic Loop structure- while loop, for loop, selecting an appropriate loop, Nested loops, Break statement, continue statement, pass statement, else statement used with loops.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn about the basics of python programming constructs.	Online Quiz.
II.	Functions and modules-Need for functions function definition function call, variable scope and life time, Return statement, function definition using required argument, keyword argument, and Default argument. Lambda functions, Recursive	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn about the sub divides larger problems into smaller ones using functions.	Computer Based test.

	functions-Greatest common Divisor, finding exponents Fibonacci series, Modules-The from… import statement, Name of module, making your own module, The dir ( ), the python module, module and Namespaces. Packages in python, standard Library modules, Functions redefinition.			
III.	Python String: Introduction-concatenating, Appending, multiplying strings, strings are Immutable, String formatting operator. Built-in sting methods and functions slice operation. Ord ( ) and chr( ) functions, in and not in operators, comparing and iterating strings. The string module, Regular Expressions-match ( ), Search ( ), sub ( ), find all ( ), Finditer ( ), functions, flag options, Meta characters in Regular expressions. Data Structures: Sequence, Lists, Functional programming: filter ( ), map( ) and reduce ( ) function, Tuple, sets, Dictionaries-creating dictionary, adding, modifying, sorting and deleting item in dictionary, looping and nested dictionary, built-in dictionary functions, difference between list and dictionaries.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to apply various data structures for problem solving.	Offline Quiz.
IV.	Class and objects-Introduction, defining classes, creating objects, data abstraction, Class method and self-argument, the __init__( ) method, class variables and object variables, The del ( ) method, other special methods, public and private data members, private methods. Calling a class method from another	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to apply object-oriented programming features for solving a given problem.	Written Test.

	class method, built-in functions to check, Get, Set and Delete Class Attribute, Built-in class attribute. Inheritance: Introduction, inheriting classes in python, Types of Inheritance Composition or containership or complex objects, abstract classes and interfaces Meta class. Operator overloading-Introduction, Implementing operator overloading, reverse adding.			
V.	Error and Exception Handling-Introduction to errors and exceptions, handling exceptions, Multiple except blocks, multiple exceptions in a single block, except block without exception. Raising Exceptions, Instantiating exceptions, handling exceptions in invoked functions, Built-in and user defined exceptions, the finally block. File Handling-Introduction, File path, Types of Files-ASCII text file, Binary file, operating and closing files. Reading and writing files-write( ), write lines ( ), Append ( ), read line ( ). File positions, renaming and deleting files, Directory methods. GUI Programming: Graphical User Interfaces, Using the thinker Module, Display text with Label widgets, Organizing widgets with Frames. Button Widgets and Info Dialog Boxes, Getting Input with Entry widget, Using labels as output fields, Radio Buttons, Check Buttons.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to select an appropriate exception handling depending on application and design file operations using python standard library.	Practical Test.

Listof References (Book/ICT/ Weblinks):

1. Thareja, Reema. 2017 Python Programming 3rd Edition. New Delhi Oxford HED.
2. Tony Gaddis. Starting Out with Python. 3rd Edition.
3. BalaGuruSwamy, E.2017. Problem Solving and Python Programming. 1st Edition. McGraw Hill Education.
4. Dr.R.NageshwaraRao. 2018. Core Python Programming. 2nd Edition. DreamTechPress.
5. https://www.youtube.com/watch?v=kqtD5dpn9C8

Name of the faculty member & Signature: A.Jyothi

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LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER -III

Department:B.Sc CSC **Class&Section:NCSc** **CourseCode: CSC21301**

Name of the Faculty Member:BINDU BABU **CourseTitle:DISCRETE MATHEMATICS**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**LATTICES** Relations and ordering, partial order relations- partially ordered sets, Hasse diagrams, Lattices- properties of lattices, types of lattices	Chalk and board method ICT tools	Students developed an understanding of Logic sets and functions. Students also came to know Hasse diagrams	Assignment Written Test
II.	**GRAPH THEORY-I** Definition of graph, degree of vertex, First theorem of graph theory, paths and connections, Isomorphism of graphs, some special simple graphs	Chalk and board method Multiple examples on graphs	Students learned to evaluate and apply the fundamental concepts in graph theory	Assignment and Oral Test
III.	**GRAPH THEORY-II** Planar graphs, Euler's formula, Euler graphs, Hamiltonian graphs- Grinberg theorem, Chromatic number	Lecture method Chalk and board method	Students developed an understanding of how graphs and tree concepts are used to solve problems arising in computer science	Assignment Identifying different types of graphs from given graphs
IV.	**NUMBER THEORY-I** Divisibility- Division algorithm, Euclid's algorithm, properties of GCD, Diophantine equation, Primes-Fundamental theorem of arithmetic	Lecture method Chalk and board method	Students were able to express the concepts and results of number theory in real life problems	Solving problems Assignment Real life applications

	NUMBER THEORY -II Congruences- Properties, Applications of congruences, Fermat's theorem and its application, Wilson's theorem and its application	Chalk and board method	Students were able to identify methods and techniques used in number theory	Solving problems Assignment Oral test

Listof References (Book/ICT/ Weblinks):

1. Tremblay, J.P and Manohar,R. 2007, **Discrete mathematical structures with applications to computer science,** New Delhi: Tata McGraw-Hill.
2. Mott,J.L and Kandel ,2007, **Discrete Mathematics for Mathematicians and computer Scientists**, 2nd edition, New Delhi:PHI
3. Burton,David M , 2003, **Elementary Number Theory**, 2nd edition , New Delhi: Universal Book Stall

Name of the faculty member & Signature:

Bindu Babu

Bindu

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-III

Department: Environmental Science **Class:** NCSC **Course Code:ES23301**

Name of FacultyMember:S.BALACHANDAR **Course Title: EVS&GS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable & Non Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of naturalresources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earth quakes, and Cyclones**	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge onsolid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	**Rain-Water Harvesting, Water-shed Management** **Global Warming Ozone depletion, and Acid rains Environmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	Lecture Method using ICT Tools and Board	Apply the environmental science knowledge to improve the resources Evaluate and understand the sustainable environmental conditions and control methods	Oral question and answers To understand the environmental policies and regulations
IV.	**Why should we study gender issues?** **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	Lecture Method using ICT Tools and Board	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	Oral question and answers To develop students' sensibility with regard to issues of gender in contemporary India

V.	**Sexual harassment** **Say no eve teasing** **The caste based violence** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act(2005)**	Lecture Method using ICT Tools and Board	Understand the gender problems and ways of addressing them, including interactionsacross local to global scales in communities and overcome inequalities with legislation	Oral question and answers To expose the students to debate on the politics and economic works and on gender violence

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition.Chennai: Oxford University Press.
Dr D K Asthana and Dr Meera Asthana. 2014.
2.**A Text Book of EnvironmentalStudies** Revised Edition. New Delhi: S. Chand & Company
3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomen in the Telangana People's Struggle**. New Delhi: Kali for Women.
4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.**Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993

Name of the faculty member & Signature: (S.BALACHANDAR)

Approved by Head of the Department:

LOYOLA ACADEMY

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NCSC

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Comp. Sci & Cognitive System **Class&Section:** CSC **CourseCode:** CSC21302

Nameofthe FacultyMember: A.VaraLakshmi **CourseTitle:Infrastructure Management**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introducing Windows 10 Overview of Deploying Windows 10 Configure Devices and Drivers Perform Post installation Configuration Task . Managing Apps in Window	LectureMethodusing ICT Tools	**Demonstrate** Installation and Managing Windows 10 Systems	Deploying of Windows 10 And usage of Windows features
II.	System Center 2012 R2Configuration Manager Overview, Features and Capabilities, Setup & Installation, Deploying SCCM Client, User and Device Collections in SCCM	Lecture Method using ICT Tools	**Analyze** Manaing Systems using System Center 2012	Knowing about SCCM and its features.Usage of user devices andcollections
III.	Application Management using SCCM, Operating System Deployment Endpoint Protection using SCCM Troubleshooting SCCM Server & Clients, Creation of Reports	Lecture Method using ICT Tools	**Demonstrate** Deployment and Management of System Center 2012	Depolying of OS. Concepts usage in Trouble Shooting
IV.	System Center 2012 R2 Operation Manager Overview, Features and Capabilities, Setup & Installation, Deploying SCCM Client, Magmt Packs in SCOM	Lecture Method using ICT Tools	**Understand** Managing and Monitoring Infrastructure using System Center 2012	Knowing about SCOM and its importance.Creation of Management packs
V.	Managing & Administering SCOM Environment, Managing Alerts using SCOM, Creating Custom Management Packs and Alerts Troubleshooting SCOM Server and Clients. Reports	Lecture Method using ICT Tools	**Demonstrate** Reporting of Infrastructure using System Center 201	Administering SCOM, Creation of reports and its execution

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

- Ed Bott, Craig Stinson, "Windows 10 Inside Out", 2020.
- Kerrie Meyler, Gerry Hampson, "System Center Configuration Manager Current Branch Unleashed System" 1st Edition, 2018.
- Kevin Greene, "Getting Started with Microsoft System Center Operations Manager: Using SCOM 2016 TP 5, 2016.

Windows 10

- Windows 10 Tutorial - 3.5 Hour Windows Guide + Windows 10 Tips
- Windows 10 for Dummies, Newbies, and other Fine Beginners

System Center Configuration Manager (SCCM)

- System Center Configuration Manager Overview
- SCCM Features and Capabilities
- SCCM Setup & Installation
- Configuration Manager Basics

System Center Operations Manager (SCOM)

Operations Manager key concepts
SCOM Features and Capabilities

Nameofthefacultymember&Signature:
A.Varalakshmi

Approvedby HeadoftheDepartment:

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER III

Department:CSC **Class&Section:** GE Inter-Disciplinary **CourseCode:** G21CSC1T

Nameofthe FacultyMember:Ruchika Murthy **CourseTitle:** Introduction to Worksheet

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Understanding Use of Excel, Workbooks and Worksheets, moving around worksheets, Using the Ribbon Exploring Data types, Entering text and values, date and times in worksheet, modifying ,Cell contents, apply number formatting, Working with excel windows, activating, adding, deleting, changing- name & sheet tab colour, Hiding and unhiding worksheets, working with rows and columns	Ict tools,ppt	Using the Ribbon Exploring Data types, Entering text and values, date and times in worksheet	Quiz on ribbons and data type s in excel
II.	Understanding cells and ranges, working with tables ,Using conditional formatting, working with conditional formats, Printing work sheets	Chalk and board	Understanding cells and ranges, working with tables	Group discussion on cells and ranges
III.	Introducing Formulas and Functions ,Understanding formula basics, Entering and Editing formulas, Using cell references ,Using formulas in tables, Correcting Common formula errors ,Using formula for mathematical operations and manipulating text	Chalk and board	Formulas and Functions Understanding formula basics, Entering and Editing formulas	Interaction section on editing a formula ,manipulating text
IV.	Using Formulas for Conditional Analysis, Matching and Lookups , Using Formulas for statistical analysis, array formulas ,Excel charts-Chart, creating a chart, modifying and	Ict tools,flow charts,ppt	Using Formulas for Conditional Analysis, Matching and Lookups	Assignment on lookups and charts

	customizing chart, chart types			
V.	Creating Spark line graphics, data validations ,Introducing pivot tables, What-if Analysis-data tables, scenario manager, goal Seeking And solver	Chalk and board	Creating Spark line graphics, data validations	Class activity on what if analysis

Listof References (Book/ICT/ Weblinks):

1. Alexander, Michael. Kusleika, Dick, Walkenbach, John. Excel 2019 Bible. 1 stEdition. John Wiley & Sons, Inc.

Nameofthefacultymember&Signature: RUCHIKA MURTHY 08/11/23

Approvedby HeadoftheDepartment:

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Teaching Plan for the Academic Year 2023–2024

V SEMESTER

Class & Section: DCSC **Course Code: CSC22505**

Department: Computer Science &Cognitive Systems

Name of the Faculty Member: M Ravi

Course Title:
INTRODUCTION TO DIGITAL TECHNOLOGY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**DIGITAL PRIMER**: Why is Digital Different? Digital Metaphors On Cloud 9 A Small Intro to Big Data Social Media Digital Marketing Artificial Intelligence Unchain the Block chain Internet of Everything(IoE) Immersive Technologies	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Various Digital Technologies used in Realtime and their objectives	Assignments, creating awareness on various online web portals
II.	**Digital For Industries:** Manufacturing Hi-tech Banking and Financial Services Insurance and Healthcare Retail-Travel & Hospitality Communications, Media Information Services-Government	Lecture Method Using ICT Tools (Projector) Black board	**Analyze** Digital Technologies usage in Various Industries	Group discussions, creating awareness on usage of digital technologies with respect to various real time industries
III.	**RPA Tools:** Automatix Art of RPA Introduction-Setting the Context RPA Prelude-RPA Demystified RPA vs BPM RPA Implementations-	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** RPA Tools (UI Path) Configuring and Developing Various Bots	Seminars, Practical implementation of various bots in the lab

	RPA in Industries Tools-Automatix, Art of RPA			
IV.	**AUTOMATION ANYWHERE** Getting Started with AA Enterprise Exploring AA Enterprise AA Enterprise – Architecture	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Various Activities and tools of Automation Anywhere environment	Presentations, awareness on practical environment
V.	**Knowing the Bots** More About Task Bots AA Enterprise - All About Recorders-Designers Meta Bots Cognitive RPA.	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** Developing Various Bots using Automation Anywhere	Group activities, Practical implementation of various bots in the lab using AA

List of References (Book/ICT/ Weblinks):

1. Richard Murdoch. 2020. **Robotic Process Automation: Guide To Building Software Robots, Automate Repetitive Tasks & Become an RPA Consultant**. 1st Edition. **Packt Publishing**Kindle Store
2. Husan Mahey. 2020. **Robotic Process Automation with Automation Anywhere: Techniques to fuel business productivity and intelligent automation using RPA. 1st Edition. Packt Publishing** Kindle Store.
3. Kelly Wibbenmeyer. **The Simple Implementation Guide to Robotic Process Automation (RPA): How to Best Implement RPA in an Organization. 1st Edition. Packt Publishing.** Kindle Store.
4. Alok Mani Tripathi. 2018. Learning Robotic Process Automation: Create Software robots and automate business processes with the leading RPA tool - UiPath: Create Software robots ... with the leading RPA tool – UiPath. 1st Edition. Packt Publishing. Kindle Store.

Web sites

1. https://en.wikipedia.org/wiki/Robotic_process_automation
2. https://en.wikipedia.org/wiki/Automatix_(software)
3. https://www.automationanywhereuniversity.com/
4. https://www.automationanywhere.com/in/products/iq-bot

Name of the faculty member & Signature: M. RAVI M. Ravi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Comp. Sci & Cognitive System **Class&Section:** ~~[illegible]~~ DCSC **CourseCode:** CSC22501B

Nameofthe FacultyMember: A.VaraLakshmi **CourseTitle:** Cloud Computing tools& techniques

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Origins of Cloud computing – Cloud components - Essential characteristics, Comparing cloud providers with traditional IT service providers, Roots of cloud computing	LectureMethodusing ICT Tools	**Explain** the characteristics and components of cloud computing	Group discussion on advantages of Cloud Computing
II.	Architectural influences, Cloud scenarios, Limitations, Security level of third party - security benefits, Regularity issues: Government policies	Lecture Method using ICT Tools	**Illustrate** architectural influences, benefits and limitations of cloud	Students analyzed Legal rights by the Government for security. Assurance about the data for companies
III.	Layers in cloud architecture, Software as a Service (SaaS), features of SaaS and benefits , Platform as a Service (PaaS), features of PaaS and benefits,IaaS Regularity issues: Government policies.	Lecture Method using ICT Tools	**Analyse** various layers and models in cloud	Made the students to know about SaaS, PaaS,IaaS and made them to find out their implementation in which companies.
IV.	Introduction to Simulator, understanding CloudSim simulator, CloudSim Architecture, Understanding Working platform for CloudSim, GreenCloud	Lecture Method using ICT Tools	**Assess** various cloud simulators	Examples of Simulator and their importance by students
V.	Basics of VMWare, advantages of VMware virtualization, Using Vmware workstation, creating virtual machines-understanding virtual machines, create a new virtual	Lecture Method using ICT Tools	**Create** virtual machines using VMWare Simulator	Creation of VM and cloning

	machine on localhost, starting and stopping a virtual machine			

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READINGS

1. Gnanasudaram, Somasundaram, Shrivatsava, Alok. 2012. **Information Storage and Management Storing, Managing, and Protecting Digital Information in Classic, Virtualized, and Cloud Environments**. 2nd Edition. John Wiley and Sons.

Nameofthefacultymember&Signature:
A.Varalakshmi

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - V

Department: computer science & cognitive systems

Class & Section: DCSC – A

Course Code: CSC22504

Name of the Faculty Member: G . Sandeep Reddy

Course Title: Client Relationship management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT 1** **UNIT I - SERVICE NOW INTERMEDIATE LEVEL** Administrator-ServiceNow Introduction-ServiceNow Platform UI ServiceNow . ITSM overview-Managing Users, Groups and Roles, departments, companies and Assignment Rules Tables, Columns, Attributes, Dictionary Entries ,Schema Map-Managing Forms , Layouts and Lists-Dictionary Overrides and Simple Reference Qualifiers **(15 hrs)**	Black board projectors	Define task management using assignment rules, presence, and work notes	Identifying service now structure
II.	**UNIT II : SYSTEM PROPERTIES** Incident management - Problem management- Change management Overview of other ITSM Modules -	Black board projectors	Use various script types throughout the platform	Practical scripting in service now

	Overview of other ITSM Modules SLA Basics-Introducing to Client and Server Side Scripting-Server Side Scripting Server Side Glide API - server-side scripting - Server Side Glide API. Server Side script Debugging- Best Practices-Business Rules Client Side APIs-UI Policies and Data Policies-Client Scripts - Debugging. **(15 hrs)**			
III.	**UNIT III** CLIENT SCRIPTS & CLIENT GLIDE APIS-BEST PRACTICES 15 Hrs Client-side scripting & policies (UI and Data) Modularize programming using UI Actions (both Server and Client Side) Script Include-Glide AJAX-UI Pages and UI Macros-Managing Update Sets Custom Applications Automated Test Framework Events-Inbound/Out Bound Notifications-Mail Templates and Scripts. **(15 hrs)**	Black board projectors	Explain Flows and Workflows for process automation	Practical scripting in service now
IV.	**UNIT IV : MANAGE WORKFLOWS** Managing Stage Sets -Manage Workflows -Manage Workflows Flow Designer (Over view)- Service Catalogs, Categories, Items and variables Flow Designer (Over view)- Service Catalogs, Categories, Items and	Black board Projectors	Choose Access Control rules to protect ServiceNow instance data	Testing activity

	Variables Manage Execution Plans and workflows-Cart Layouts-Client scripts and UI policies-Record Producers-Order Guides & Scriptable Order Guides-Scheduled Jobs. VTB Agent Intelligence (Over View)-Restrict access to applications and application modules. https Automatically create application Access Controls -Manually create, test, and debug Access Controls Managing ServiceNow imports and exports-Managing Import Sets and Transform Map-Configure and run Reports and Dashboards Security Controls, Database Views **(15 hrs)**			
V.	**UNIT V- SERVICENOW SERVICE PORTALS OVERVIEW** ServiceNow Service portals core components ITSM Virtual Agent – Overview. Performance Analytics Overview ServiceNow on Mobile, ServiceNow Integration Overview **(15 hrs)**	Black board projectors	Formulate Capturing and moving configurations between instances, using update sets	application development

List of References (Book / ICT / Weblinks):

1. Tim Woodruff. 2018. **Learning ServiceNow: Administration and development on the Now platform, for powerful IT automation.** 2nd Edition. Packt Publishing Ltd.
2. Ashish Rudra Srivastava. 2017. **ServiceNow Cook Book**. Packt Publishing Ltd
3. Andrew Kindred. 2018. **Mastering ServiceNow Scripting**. Packt Publishing.

Websites

1. https://www.servicenow.com/products/it-service-management.html
2. https://www.servicenow.com/content/dam/servicenow-assets/public/en-us/doc-type/resource-center/data-sheet/ds-itsm.pdf
3. https://www.guru99.com/servicenow-tutorial.html
4. https://www.youtube.com/watch?v=rtoZT94Wjqs&list=PLzTvAeLiW8Ac3Ph2t5z7A60Dw9x3JFZGb

Name of the faculty member & Signature: G sandeep Reddy

Approved by Head of the Department: A. Varalaxmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

IISEMESTER

Department: BSc Computer Science &Cognitive Systems

Class&Section: DCSC

CourseCode: CSC22501A

Name of the Faculty Member: K Nandini

CourseTitle:
INFORMATION AND
STORAGE MANAGEMENT

Unit	Topics to be covered	Teaching Pedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction to Information Storage** 1. Information Storage- Data, types of data, Big data, Storage and information 2. Evolution of Storage Architecture 3. Data Center Infrastructure-Core Elements, characteristics and managing **Data Center Environment** 4.Application, DBMS, Host, Connectivity, Storage 5. Disk Drive Components and Performance 6.Host to Access Data, Direct attached storage- benefits and limitations 7.Storage Design Based on Application Requirements and Disk Performance	LectureMethodusing ICT Tools Blackboard Inquiry based	**Understand** core elements of the data center	Assignments
II.	**Data Protection** 1. RAID implementation methods, Array components, Techniques 2. RAID levels, Impact on Disk Performance 3. RAID comparison, Hot Spare **Intelligent Storage Systems** 4. Components of Intelligent Storage Systems 5. Storage Provisioning, types of intelligent storage systems	Lecture Method using ICT Tools Blackboard Inquiry based	**Explain** Data protection techniques	Seminars

III.	**Storage Networking Technologies** 1. Fibre Channel-Overview, SAN and its Evolution, Components of FCSAN 2. Connectivity. Switched Fabric Ports, FC Architecture 3. NAS: General-Purpose Servers versus NAS Devices, benefits 4. File Systems and Network File Sharing, Components of NAS 5. NAS I/O operations, Implementations and File sharing protocols 6. Object based storage devices, Content Addressed storage	Lecture Method using ICT Tools Blackboard	**Assess** various storage networking technologies	Group discussions
IV.	**BACKUP AND ARCHIVE** 1.Backup purpose, Considerations, Granularity, Considerations 2. Methods, Architecture, Backup and Restore Operations, Topologies 3. Backup in NAS Environments, Targets 4. Data Deduplication for Backup, Backup in virtualized environment 5. Data Archive, Archive Solution Architecture	Lecture Method using ICT Tools Blackboard	**Prepare** backup and archiving of data	Presentations
V.	**Location Replication** 1. Replication Technology, Use of Local replicas, Replica consistency 2. Location Replication Technologies 3. Tracking Changes to Source and Replica, Restore and Restart considerations **Remote Replication** 4. Modes, Remote replication technologies 5. Three Site replication	Lecture Method using ICT Tools Blackboard Inquiry based	**Organize** data using replication techniques	Group activities

List of References (Book/ICT/ Weblinks):

1. Gnanasudaram, Somasundaram. Shrivatsava, Alok. 2012. Information Storage and Management Storing, Managing, and Protecting Digital Information in Classic, Virtualized, and Cloud Environments. 2 Edition. John Wiley and Sons.

Nameofthefacultymember&Signature: K. Nandini & K.

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024 SEMESTER

Department:Cognitive Systems **Class&Section: DCSC** **CourseCode: CSC22503**

Nameofthe FacultyMember: Madhuri Hepseba **CourseTitle: SOFTWARE TESTING**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to Automation, Planning before Automation, Introduction to Selenium, Installing Selenium Components	LectureMethodusing ICT Tools Blackboard Inquiry based	Understand Selenium Architecture and its components	Assignments, Pratical implementation in the lab
II.	Using Selenium IDE, Managing User Interface Controls, Creating First Selenium Web Driver Script, Selenium Methods -Common Selenium Web Driver Method	LectureMethodusing ICT Tools Blackboard	Use Selenium WebDriver	Seminars, Pratical implementation in the lab
III.	Verification Point in Selenium, Shared UI Map, Using Functions- creating and calling a function in web driver script, Using a Configuration File	LectureMethodusing ICT Tools Blackboard	Apply WebDriver advanced features	Group discussions, Pratical implementation in the lab
IV.	Handling Pop-up Dialogs and Multiple Windows, Working with Dynamic UI Objects, Data driven testing Parameterization, Debugging scripts, Exception handling in Web Driver	LectureMethodusing ICT Tools Blackboard	Write Test cases using TestNG	Presentations, Pratical implementation in the lab
V.	Reporting in Selenium, Batch Execution, Automation Frameworks, Selenium Functions, Common Questions and Tips	LectureMethodusing ICT Tools Blackboard Inquiry based	Develop Record and importing tests with Selenium IDE	Group activities

Listof References (Book/ICT/ Weblinks):

1. NavneeshGarg. 2014. **Test Automation Using Selenium WebDriver with Java**AdactIn Group Pvt Ltd.
2. AdithyaGarg, Ashish Mishra. 2012. **A Practitioner's Guide to Test Automation Using Selenium.** McGraw Hill. New Delhi : India.
3. SatyaAvasarala. 2014. **Selenium Web Driver Practical Guide.** Packt Publishing.
4. Rex Allen Jones II. 2016. **Selenium Web Driver for Functional Automation Testing.** Test 4 Success, LLC.
5. David Burns. 2010. **Selenium 1.0 Testing Tools.** Packt Publishing.

Nameofthefacultymember&Signature: Shreeba Madhuri Hepseba

Approvedby HeadoftheDepartment:

LESSON PLAN

Name: Dr. V. Harsha Shastri

Department: B.Sc. Computer Science and Cognitive Systems

Course: Machine learning

Semester: V **Year: III** **Academic Year: 2023-24**

S.No	Name of the Topic	Hrs
	UNIT-I	
1	Data framing: numpy: Ndarray, Array attributes Array creation routines, Indexing and slicing, Array Broadcasting, Array manipulation, Mathematical functions, Statistical functions, Search, sort and counting functions, Matrix Library, Linear algebra	4
2	Pandas: Series, Data frame, Panel, Basic functionality: axes, dtype, empty, ndim, size, values, head, tail. Descriptive Statistics, Re indexing, iterations, sorting, options and Customization, Indexing and Selecting Data, Statistical Functions, Window Functions, Aggregation, Missing data, Group by, Merging, concatenation, Categorical data, I/O tools: read_csv, read_table	4
3	Data Visualization: Matplotlib, Bar plot, Histograms, Box plots, Area plot, Scatter plot, Pie chart, line chart, bar chart, Sea born	4
	UNIT-II	
1	Machine learning: Introduction, applications, ML process, AI vs Machine learning	3
2	Types of machine learning, Supervised vs Un Supervised learning	2
3	Machine learning algorithms and models	2
4	Testing machine learning algorithms	3
5	Basic statistics , bias and variance, Machine learning tools	2
	UNIT-III	
1	Cross validation, Regularization, P-Value	2
	NEURONS, NEURAL NETWORK AND LINEAR DISCRIMINANTS	
2	The brain and the neuron, neural networks, perceptron, linear separability	4
3	Regression analysis in machine learning, types of regression	2
4	Linear regression, Logistic regression, Linear vs Logistic regression	4
	UNIT-IV	
1	Introduction to classification, classification vs regression	2
2	K-NN algorithm, Support vector machine algorithm	3
3	Linear discriminant analysis	2
4	Decision tree algorithm	2
5	Bayes theorem for Machine learning, Naïve Bayes classifier	3
	UNIT-V	
	UNSUPERVISED LEARNING and ASSOCIATION RULE LEARNING	
1	Principal component analysis, Clustering in machine learning	4
2	Hierarchical clustering, K-means clustering	4
3	Association Rule learning, Apriori algorithm in machine learning	4

Harsha

Signature of the concerned faculty

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER II

DepartmentENGLISH

Class&Section:ACSIOT, AAI, ACDS,ACSC

CourseCode:EN23101

Nameofthe FacultyMember:P. Saritha

CourseTitle:GENERAL ENGLISH-2

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Flash Fiction- 'The Mice' by Lydia Davies (1)** Simple, Complex and Compound Sentences (3) Conversion of Sentences (3) Information Transfer (2)	LectureMethodusing ICT Tools	Tolearnaboutthefundamentals Of communication	Solving mixed grammar exercises Narrating mystic experiences Writing paragraphs on various topics
II.	**Short Story- 'The Face on the Wall'by E V Lucas (2)** • Active and Passive Voice (3) • Conjunctions (2) Essay Writing (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Narration of short stories by students. Grammar exercises Essay writing exercises
III.	**From the text*Three Days to See by* Helen Keller** • Explanation of the text (3) • Grammar- Usage of Modal Auxiliary Verbs (2) • Vocabulary – Collective Nouns, Technical Vocabulary (2) Writing Skill – Newspaper Report (2)	Lecture Method using ICT Tools	To recognize the moral element which underlies in the short story. To identify the different types of modal auxiliary verbs in a sentence composition and to learn the correct usage ofCollective Nouns, Technical Vocabulary.	Character sketch of the story characters. Grammar exercises like fill in the blanks, multiple choice and true or false. Newspaper Report writing exercises.

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IV.	**Short Story from the text 'Leela's Friend'by R.K. Narayan** • Explanation of the text (3) • Grammar- Phrasal Verbs, **Wh-**questions (2) • Vocabulary- Noun and Verb Suffixes (2) • Writing Skill- Writing a Narrative (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills.	Description of the different characters of the story. Grammar exercises Exercises exercises like fill in the blanks, multiple choice and true or false. Practice in writing a narrative
V.	**From the text 'The Last Leaf'by O. Henry** • Explanation of the text (3) • Grammar- Prepositions (2) • Vocabulary – Idioms (2) Writing Skill – Precis Writing (2)	Lecture Method using ICT Tools	To write grammatically correct sentences and usage of idioms in sentences.	Textbook exercises and worksheets Precis' writing exercises.

Listof References (Book/ICT/ Weblinks):

Epitome of Wisdom, Maruthi Publications

SUGGESTED READING:

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges.* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing.* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Nameofthefacultymember&Signature: P. Savitha 01/04/2024

Approvedby HeadoftheDepartment:

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- II

Department: B. Sc, Competer Science & Cognitive Systems

Class : ACSC[illegible]

Course Code:IC-23101

Name of the Faculty Member:Dr.K.Musalaiah

Course Title: Indian Heritage and Culture

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation

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IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the constitution.	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr. K. Musalaiah.

Dr.K.Musalaiah

Approved by Head of the Department:

Mrs.A. Vara Lakshmi

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -II

Department: Computer Science & Cognitive System **Class &Section: ACSC** **Course Code: CSC20202**

Name of the Faculty Member: BINDU BABU **Course Title: Mathematics for Cognitive science**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**SET THEORY** The basic of logic- Statements, compound statements (conjunction, disjunction, implication, negation, biconditional) Truth Table Logical equivalence-Tautology, contradiction, contingency Proving methods in Mathematics-constructive proof, direct proof, indirect proof, contradiction	Lecture method Chalk and board method	• Students will be able to demonstrate a working knowledge of set notation and recognize the connection between set operations and logic • Students will be able to learn to construct mathematical proofs and possess the ability to verify them	• Quiz • Solving Problems • Oral test • Presentations
II.	**BASICS OF COUNTING** Basics of counting-sum rule, product rule, Permutation and combination, Permutation with repetition and without repetition, Restricted permutation and combination, Pigeon hole principle and applications, Principle of inclusion and exclusion	Lecture method, Chalk and board method	• Students will be able to apply basic counting techniques to solve combinatorial problems	• Assignment on permutations and combinations • real life application problems • Group discussion
III.	**ADVANCED COUNTING TECHNIQUES** Definition of Recurrence relation, Solving recurrence relation, Solving linear homogenous recurrence relation by substitution method, Solving linear homogenous recurrence relation by generating functions,	Lecture method, Chalk and board method	• Students will be able to solve problems using recurrence relations and recursion to analyze algorithms and programs.	• Solving problems on recurrence relations

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	Solving non homogenous recurrence relation			
IV.	Definition of a matrix, sub matrix and rank of matrix, Problems on finding rank of matrix using echelon form,Problems on finding rank using normal form,solving system of equation by homogenous equation,Solving system of equation by non homogenous equation	Chalk and board method	• Students will be able to find rank of a matrix and solve systems of linear equations applying matrix techniques	• Solving problems • Assignment on finding ranks • Presentations
V.	Definition of eigen value, eigen vector and characteristic roots, Finding characteristic roots and eigen values of a matrix, Statement of Cayley Hamilton theorem, Finding characteristic equation and verifying Cayley Hamilton theorem,Quadratic forms-Reducing quadratic form to canonical form	Chalk and board method	• Students will be able to calculate Eigen values and corresponding Eigen vectors. • Students will also have a knowledge of quadratic forms	• Group discussions • Assignment on finding Eigen values and vectors

List of References (Book/ICT/ Web links):

1. Discrete Mathematics for computer scientists & mathematics, Joe L Mott, Kandel, Baker,PHI
2. Matrices by A.R Vasistha Krishna PrakashanMandir,Meerut

Name of the faculty member & Signature:

Bindu Babu

Approvedby HeadoftheDepartment:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

II SEMESTER

Department: Computer Science & Cognitive Systems

Class & Section: ACSC Course Code: BS18202

Name of the Faculty Member: M Ravi

Course Title:
DATA STRUCTURES THROUGH C

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Data Structures :** Stacks Definition and Various Operations performed on Stacks Queues Definition and various Operations performed on Queues Stack Applications Notations – Prefix, Postfix, Infix Conversions – Infix to Postfix, Infix to Prefix	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Linear Data structures like Stacks, Queues and their applications in Real Time	Coding/Programs using Stacks,Queues and its applications
II.	**Linked Lists:** Data Representation, Concept of Linked List Advantages of Linked List,Types of Linked List ,Linear Linked List – various operations performed on Singly Linked List Doubly Linked List – various operations performed on Doubly Linked List Circular Linked List Applications of Linked List	Lecture Method Using ICT Tools (Projector) Black board	**Analyze types of** Linked Lists and its implementation logic and their operations	Coding skills, creating awareness on types of linked lists and their implementation/ Programing logic
III.	**Trees** Trees Definition and Properties Binary Trees a) Definition and Representation of Binary Trees b) Operations – Insertion, Deletion, Search c) Tree Traversal Techniques – In order, Pre order, Post order	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** Non-Linear Data Structures and their operations	Seminars, Practical implementation of Tree Traversals,operations of Trees,Binary Trees,BST,AVL Trees

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	AVL Trees a. Definition and Representation of AVL Trees b. Operations on AVL Trees – Insertion, Deletion			
IV.	**Sorting&Searching Methods** Sorting Methods Bubble Sort Insertion Sort Selection Sort Merge Sort Quick Sort Searching Methods Linear Search Binary Search Comparison and Analysis	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Various Logics/Sorting Techniques to arrange elements in order and Searching a Key element using Linear,Binary Search	*Presentations, Analysing various sorting techniques and comparisons*
V.	**Graphs** Graphs a. Terminology & Representations b. Definition and Representation of Graphs c. Graph Traversals – BFS, DFS B-Trees Definition and Representation of B-Trees Operations on B-Trees– Insertion, Deletion, Search Files Structures – Physical Storage Media, File Organization Sequential Files, Primary Indices, Secondary Indices Indexing and Hashing Indexing and Hashing Comparison	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** Graphs Repersentations, B-Trees and their operations	Group activities, Understanding of various-Trees operations with own example data and File Organization Methods, importance of indexing, hashing to make retrieval operation faster

List of References (Book/ICT/ Weblinks):

Essential Reading :

1. Kanetkar Yashvanth 2008 Data Structures Through C India : BPB Publications

2. Tanen Baum, A.M Lingsam, Y.Augenstein M.J Data Structures using C New Delhi Pearson Education.

Suggested Reading:

1. Balagurusamy.E C Programming & Data Structures through C Tata McGrawhill

2. Data Structures using C Tata McGrawhill Publishing Company Ltd

Name of the faculty member & Signature: M. RAVI M.Ravi

Approved by Head of the Department:

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LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER-VI

Department: Comp. Sci & Cognitive System **Class&Section: ACSC** **CourseCode: CSC23203**

FacultyName: Sandeep Reddy G **Title:COMPUTER NETWORKS**

Unit	Topicstobecovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Networks Introduction, Data Communication Components, Network classifications LAN, MAN, WAN, Topologies in Networks ConnectionOriented, Connection lessservices Network models - OSI Reference Model and their functions, TCP/IP protocol. OSI Reference Model vs TCP/IP	Lecture Method using ICT Tools	Understand network infrastructure	Group discussion on use of real time networks
II.	Multiplexing - FDM, TDM, Transmission Media-Guided Media, Unguided Media Switching message, circuit and packet switched networks, Datagram networks and virtual circuit networks.	Lecture Method using ICT Tools	Know the key principles models and concepts of network	Students analyzed Rolesof multiplexing in data communication
III.	IP Addressing Version 4 – IP Addressing Version 6, Subnetting CISCO switch,connecting,startup process,configuring and managing	Lecture Method using ICT Tools	Understand the adress space mechanism	Made a practical real time approach using cisco packet tracer.

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	Data Link Layer Error Detection and Error Correction			
IV.	Routing algorithms – Congestion Control Algorithms, CISCO IOS / Managing / Password recovery, Routing, Dynamic Routing Algorithms-DVR,LSR, OSPF,RIP.	Lecture Method using ICT Tools	Know the practical routing algorithmsimplementation	Students gave presentations on Automation and future of ITIL
V.	Networking and Interconnecting Devices: HUB, Repeaters, Switch, Bridge, Router, Brouters, Gateways Transport Layer Multiplexing & De-Multiplexing	Lecture Method using ICT Tools	Understand the working of different network devices.	Created a small physical network using computers and a hub

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READINGS:

- B A Forouzan, Data Communications and Networking, 4th Ed,, M C Graw Hill Publications
- David J.Wetherall, Andrew S.Tanenbaum, "Computer Networks", 5th Edition, Pearson Education, 2012

Nameofthefacultymember&Signature:
Sandeep Reddy .G

ApprovedbyHeadoftheDepartment:

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department BSc Computer science and Cognitive Systems

Class & Section: ACSC

Course Code: CSCS23201

Name of the Faculty Member: N Manisha

Course Title: Server Administration

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Windows Server 2012, Windows Server 2012 Editions and Features, Permissions and Types of Permissions, User Profiles and Home Folders.	Lecture Method using ICT Tools	To learn about the Different editions of the system	Questionnaire Session
II.	Logical Structures of Active Directory, Logical Topologies(Work Group and Domain), ADC and Child Domain, FSMO roles	Lecture Method using ICT Tools	Organize topologies in active directory	Seminars
III.	Trust Relationships , types of Trusts, Physical Structure of active Directory, Active Directory Domain Services, Right Management Services and Federation Services	Lecture Method using ICT Tools	Compare Different Services in Active Directory.	Quiz
IV.	Introduction to DHCP, DNS, IIs, web server, HTTP, FTP server. Working of Network Address Translation. Remote Access Services	Lecture Method using ICT Tools	Compare Networking Services.	Slip Test

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V.	Network Access Protection, ICS and WSUS, Install images and Boot images, Disk Management: FAT, FAT32, NTFS. Backup and Recovery using Windows Server Backup.	Lecture Method using Blackboard	Plan Installation of required services in Organization.	Viva

ESSENTIAL READING:

1. William Panek MCSA Windows Server 2012 R2 2nd Edition
2. Rand Morimoto, Michael Noel, Guy Yardeni, Chris Amaris Windows Server 2012 Unlashed 1st Edition

Name of the faculty member & Signature: N Manisha

Manisha

Approved by Head of the Department:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - IV

Department: B.Sc. COMPUTER SCIENCE AND COGNETIVE SYSTEMS **Class & Section:** NCSC **Course Code:** CSC21401

Name of the Faculty Member: R.Sinivasa rao **Course Title : probability and Statistics**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Mesures of central tendency ,mean median ,mode ,SD. Probability concepts,Correlation and its types , measures of correlation, regression and its properties. Regression equations and its coefficients. Coefficient of correlation.	Discussion and Lecture method using ICT tools	Describe how correlation is used to identify relationships between variables. Describe how regression analysis is used to predict outcomes.	Students analyzed the different series of data.and also analyzing quatitative data and qualitative data
II.	THEORETICAL DISTRIBUTIONS DISCRETE DISTRIBUTIONS : Bernoulli distribution. (1) Binomial distribution, Poisson distribution (as the limiting case of a binomial distribution) - Derivation of only mean, variance and m.g.f of these distributions – Fitting of binomial and Poisson distributions – Simple problems there on. (6) NORMAL DISTRIBUTION : Chief characteristics of normal distribution	Discussion and Lecture method using ICT tools	Identify the characteristics of different discrete and continuous distributions like binomial, Poisson and Normal distributions	Got the know ot the Knowledge about the Concepts of discrete and continuous distributions
III.	SAMPLING AND LARGE SAMPLE TESTS : Types of sampling (Purposive sampling, random sampling, simple sampling and stratified sampling) ..... (2) Null hypothesis- Type I and Type II errors – Critical region – Level of significance& large sample tests	Discussion and Lecture method using ICT tools	Analyze hypothesis tests of means, proportions and variances using both one-and twosample data sets	Group discussion.

III.	SAMPLING AND LARGE SAMPLE TESTS : Types of sampling (Purposive sampling, random sampling, simple sampling and stratified sampling) ….. (2) Null hypothesis- Type I and Type II errors – Critical region – Level of significance& large sample tests	Discussion and Lecture method using ICT tools	Analyze hypothesis tests of means, proportions and variances using both one-and twosample data sets	Group discussion.
IV.	CHI-SQUARE TEST, t-TEST AND F-TEST Chi – square test: Chi – square test for goodness of fit (3) Chi-square for independence of attributes (2) (i) t-test: t-test for single mean (1) t-test for difference of means – paired t- test (only tests without proof)- simple problems thereon. (5) (iii) F-test: F-test (without proof)	Discussion and Lecture method using ICT tools	Differentiate between the test statistics to be used for dependentand independent samples.	Group discussion based on large sample and small sample procedures
V.	STATISTICAL QUALITY CONTROL: Process control – Product control – control limits. (3) CONTROL CHARTS: Mean chart (2) Range chart (1) Sigma chart (2) Fraction defective chart (P-chart) (2) np-chart (1) control chart for number of defects per unit (c-chart)	Discussion and Lecture method using ICT tools	Construct control charts for variables and control charts for attributes	Written Test.

Listof References (Book/ICT/):

1.Fundamentals of Mathematical Statistics – By S. C. Gupta and V. K. Kapoor: Sultan Chand & Sons Publishers)

2. Statistical Quality Control – By R. C. GUPTA (Khanna Publications) REFERENCE BOOKS :

3.. S. C. Gupta and V. K. Kapoor, Fundamentals Mathematical Statistics, Sultan Chand & Sons Publishers.

4.. H. C. Sinha and L. S. Varshoy, Mathematical Statistical, Jaiprakash Nath and Co. Publishers, Meerut.

5.. Statistical Quality Control – By R. C. Gupta (Khanna Publications)

R.S.Rao

Name of the facultymember & Signature:
(R.Srinivasa rao)

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: B.Sc Computer Science & Cognitive Systems	**Class&Section: IICSC**	**CourseCode: CSC21402**
Faculty Member : Ainala Varalakshmi		**CourseTitle: Object Oriented Systems Development**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Object Basics– Objects, classes, state and properties, Behaviour, methods, messages, Encapsulation, class hierarchy, polymorphism, Relationships and associations, Aggregations and containment	Lecture Method using Board. ICT	Understood basics of OOSD concepts	Questionnaire
II.	**Object oriented system life cycle–** Analysis Design, Prototyping UML – Introduction , class diagrams ,Use case diagram ,Interaction diagram	Lecture Method using ICT Tool.	**Categorize** Object oriented methodologies and UML diagrams	Given Scenarios and made them to draw UML diagrams
III.	**Object Oriented Analysis -** Identifying use cases- Introduction Business object analysis, Use- case model, developing effective documentation, case studies **Classification-** classification theory	Lecture Method using ICT Tool.	**Choose** classification theory and performing case studies.	Group discussions
IV.	**Object Oriented Design , Designing classes, Access Layer**	Lecture Method using ICT Tool.	**Design** models based on Object oriented concept.	
V.	**Software Quality Assurance , System Usability and measuring user satisfaction**	Lecture Method using ICT Tool.	**Identify** software quality, system usability, measuring and satisfaction	

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Bahrami, Ali. 1999. **Object Oriented System Development.** New Delhi: McGraw-Hill.

SUGGESTED READING

1. Jacbson Ivor, Booch Grady and Rumbaugh James, 2008. **The Unified Software Development Process**, India: Pearson Education

2.

Name of the faculty member & Signature :Ainala Varalakshmi

Approved by Head of the Department:

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-IV

Department:B.Sc. B.Sc. Computer Science and Cognitive Systems

Class&Section:NCSC

CourseCode:CSC21403

Name of the Faculty Member :K Nandini

CourseTitle:ARTIFICIAL INTELLIGENCE

Unit	Topicstobecovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	1. Introduction to AI 2. Applications of AI 3. History of AI 4. Types of AI, Intelligent agents 5. Types of agents 6. Agent environment 7. Turing test in AI	Traditional chalk and board method	Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning.	Assignments
II.	Search Algorithms - Types of Search Algorithms 1. Uninformed Search –Breadth First Search, Uniform Cost Search 2. Depth First Search, and Depth Limited Search 3. Iterative Deepening Depth First Search, Bidirectional Search 4. Informed search -Best first search, A* search	Lecture based using powerpoint presentations	Understand predicate logic and transform the real life information in different representation.	Conducted Quiz
III.	Adversarial search – Types of Games in AI 1. MIN –MAX Algorithm and its Working 2. Alpha Beta Pruning and its Working	Lecture based using ICT Tools	Understand formal methods of knowledge representation	Conducted Computer based Test

IV.	Knowledge Representation: 1. Knowledge Base Agents 2. Knowledge Representation Techniques 3. The Wumpus World 4. Propositional Logic 5. First Order Logic 6. Forward Chaining and Backward Chaining	Inquiry based learning	Demonstrate Knowledge representation techniques.	Conducted Viva	
V.	Subset of AI: 1. Expert systems 2. Machine learning and NLP 3. Future of AI	Collaborative learning	Analyze the underlying mathematical relationships and build expert system	Conducted Seminar	

Listof References (Book/ICT/ Weblinks):

Kaushik, Saroj. 2011. Artificial Intelligence. First Edition. Cengage Learning India.
Russell, Norvig. 2004. Artificial Intelligence: A Modern Approach. 3r' Edition. Pearson Education

Name of the faculty member &Signature :K Nandini K. Nandini

Approved by Headof the Department: A Varalaxmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

IV SEMESTER

Department: Computer Science & Cognitive Systems

Class & Section: NCSC Course Code: CSC21404

Name of the Faculty Member: M Ravi

Course Title: DBMS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to DBMS**: Introduction, data base applications and purpose, View of data, data base languages-DDL,DML, Data base architecture, users and administrators, Design process overview, Entity relational ship model, Constraints, ER diagrams, design issues, weak entity sets,Extended ER features	Lecture Method Using ICT Tools (Projector) Black board	**Design ,Understand and Represent** Logical Database using ER Model and EER Model	Drawing various Database Design Diagrams using ER Model and EER Model symbols
II.	**Normalization, SQL:** Structure of Relational model, Reduction to schema,Relational algebra- union, project, select and other operations SQL- data definition, structure, set operations, Aggregate functions, Modification of data base, Nested sub queries, views, Joins and Null values, Introduction to Normalization, 1NF, 2NF and 3NF, BCNF	Lecture Method Using ICT Tools (Projector) Black board	**Formulate Database** Using Relational Alzebra and organize relation using Normalization and Queries using SQL	Developing Skills to write various SQL Queries to get required data from database server
III.	**PL/SQL** Introduction, Programming, Functions and Procedures, Triggers, Cursors-implicit, explicit, cursor for loops, Error handling in PL/SQL, Authorization, granting, revoking privileges, Roles, Authorization on views, functions and procedures,Application security	Lecture Method Using ICT Tools (Projector) Black board	**Implement** SQL Queries contd... and implement PL/SQL Programs	Practical implementation of PL/SQL concepts like Cursors, Triggers, Stored Procedures and Functions, Exception Handling

IV.	**Storage Media, File Organization, Indexing&Hashing** Overview of physical storage media Magnetic disks- physical characteristics and performance measures Buffer manager, replacement policies, File organization Organization of records in files Ordered indices, Index sequential-B+ trees Static hash function, Dynamic hash function, comparison	Lecture Method Using ICT Tools (Projector) Black board	**Classify the storage and File Structure** Storage Access,Indexing and Hashing Techniques of Database	Presentations on Indexing and Hashing Methods and File Organization Methods
V.	**Transactions,Concurrency Control** Transactions- concepts, states Implementation of Atomicity and durability, Concurrent executions, Serializability, Testing for Serializability, Concurrency control, lock based protocols, locks and granting locks Two Phase locking and dead lock handling Recovery system, failure, Storage structure-storage types, data access,Recovery and Atomicity, log based recovery, Check points	Lecture Method Using ICT Tools (Projector) Black board	**Explain** the Concept of Transactions, Recovery system and Concurrency Control	Group activities, Understanding of Transactions ACID properties, Recovery system and Concurrency Control with Locking

List of References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. **Korth Henry, F. SilberSchatzAvi. And Sudarshan, S. 2008. Database System Concepts.5th Edition. New Delhi: Tata McGraw-Hill.**
2. **Bayross Ivan. 2010. SQL, PL/SQL- The Programming Language for Oracle.4th Edition. New Delhi: BPB Publications.**

SUGGESTED READING

1. **McFadden Fred, R. Hoffer Jeffery, A and Prescott Mary, B. 2007. Modern Database Management. 8th Edition. New Delhi: Pearson.**
2. **Elmasri Navathe and Shamkant , B. 2008. Fundamentals of Database Systems. 5th Edition. New Delhi: Pearson Education.**

Name of the faculty member & Signature: M. RAVI M.Ravi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-IV

Department: Comp. Sci & Cognitive System **Class&Section: NCSC** **CourseCode: CSC21405**

Nameofthe FacultyMember: Madhuri Hepseba **CourseTitle: PROCESS MANAGEMENT**

Unit	Topiesto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Software and software Engineering:** The Nature of Software, The Unique Nature of WebApps Software Engineering, Software Process Software Engineering Practice, Softwar Myths. **Software Process Model:** A Generic Process Model Process Assessment and Improvement	Lecture Method using ICT Tools	**Explain** basics of software engineering process models	Group discussion on Process models
II.	**Agile:** Agile Methodology, Manifesto, Principles of Agile Agile Methodologies, Challenges with Agile. **Scrum:** Overview of Scrum, Scrum Rol Scrum Ceremonies, Scrum Artifacts, Extreme programming vs Scrum.	Lecture Method using ICT Tools	**Understand** agile methodologies and scrum roles.	Students analyzed various Agile methodologies
III.	**Devops:** Introduction to Devops, Principles, Automation, Performance Measurement through KPIS and Metrics Agile and Devops, Agile Infrastructure, Velocity, Lean Startup UPS.	Lecture Method using ICT Tools	**Demonstrate** Agile and Devops.	Made a study on measurement through KPIS and metrics in Devops
IV.	**Lean UX and Agile Anti-Patterns :** Sprint -Staggered sprints, Sprint zero and design sprints Dual-track Agile Listening to Scrum's rhythms	Lecture Method using ICT Tools	**Explain** Lean UX and Agile anti-patterns	Students gave seminars on Scrum and Agile patterns

	Participation, Design is a team sport Coordinating multiple Lean UX teams, Managing up and out Agile anti-patterns				
V.	**Design Thinking:** Introduction to Design Thinking, Lean thinking, **Actionable Strategy:** The Problem with Complexity, Vision and Strategy, Defining Actionable Strategy. **Act to Learn:** Defining your Beliefs and Assumptions, Decide what to learn and how to learn, Research and Experiments for Learning, Problem Validation. **Leading Teams to Win:** Purpose-Driven Autonomy, Mission Command,	Lecture Method using ICT Tools	**Classify** design thinking and lean thinking	Study done on Strategies, Beliefs and Assumptions in Design Thinking	

Listof References (Book/ICT/ Weblinks):
ESSENTIAL READINGS

Roger S Pressman, "Software Engineering A Practioners Approach", 7th Edition 2010
KalloriVikraman, "Introduction to Devops", 1st Edition, 2016.
Stephen Haunts, "Essential of Scrum" Addison-Wesley Professional; 1st Edition, 2012
Jeff Gothelf, Josh Seiden, "Lean UX", 2nd Edition, 2016.
Jonny Schneider, "Understanding Design Thinking, Lean, and Agile" O'Reilly Media 2017.
Jeff Gothelf , "Lean vs. Agile vs. Design Thinking"Sense and Respond Press,2017.

Nameofthefacultymember&Signature: Hepseba
Madhuri Hepseba

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: B.Sc (Cognitive) **Class & Section: NCSC** **Course Code: 21406**

Name of the Faculty Member: B Venkataratnam **Course Title: B.Sc (Cognitive)**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	INTRODUCTION . Fundamentals of Object-oriented concepts, Java Evolution and overview • Variables, Data types and Arrays, Operators and Control Statements • Class Fundamentals, declaring objects and methods • Constructor, this Keyword • Overloading methods, Objects as parameters • Access control, static, command line arguments **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Understand fundamentals of object oriented concepts in JAVA 1. Fundamentals of Object-oriented concepts, Java Evolution and overview 2. Variables, Data types and Arrays, Operators and Control Statements 3. Class Fundamentals, declaring objects and methods 4. Constructor, this Keyword 5. Overloading methods, Objects as parameters 6. Access control, static, command line arguments.	Quiz
II.	INHERITANCE, PACKAGES, INTERFACES, EXCEPTIONS • Inheritance, multilevel hierarchy, super, method overriding • Dynamic Method Dispatch, Abstract classes, using final • Package-package access, importing packages and classes, user defined 2 package • Interface-define, implement and extending Interface, Multiple inheritance.	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the INHERITANCE, PACKAGES, INTERFACES, EXCEPTIONS 1. Inheritance, multilevel hierarchy, super, method overriding 2. Dynamic Method Dispatch, Abstract classes, using final 3. Dynamic Method Dispatch, Abstract classes, using final 4. Interface-define, implement and extending Interface, Multiple	Seminar

	• Exception handling: try-catch, multiple catch, Nested try, throw, throws, finally, user defined exception **(12Hrs.)**		inheritance 5. Exception handling: try-catch, multiple catch, Nested try, 6. throw, throws, finally, user defined exception	
III.	THREADS, STRINGS, APPLETS • Multithreading- Thread Model, Main Thread, Creating a Thread, isAlive (), join () • Thread priorities, Synchronization.• String class, Wrapper class. • String methods. • Applet class-basics, architecture, life cycle, applet tag, passing parameters, animation Working with frames, fonts, color, Graphics and displaying images in applet. **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the THREADS, STRINGS, APPLETS 1. Multithreading- Thread Model, Main Thread, Creating a Thread, isAlive (), join () 2. Thread priorities, Synchronization. 3. String class, Wrapper class 4. String methods. 5. Applet class-basics, architecture, life cycle, applet tag, passing parameters, animation 6. Working with frames, fonts, color, Graphics and displaying images in applet.	Group Discussion
IV.	EVENTS AND SWINGS • Event Handling: The delegation event model, Event classes-Action event, Mouse Event, Window Event, Item Event, Key Event • Sources of Event, Event listeners-Action listener, Mouse listener, Mouse motion, Window listener, Key Listener • Layout manager-card, grid, flow and border. • Swing- MVC architecture, components and containers • Swing control- JLabel and ImageIcon, JTextField,JButton • JRadioButton, JCheckbox, JToggleButton, JTextArea. • JPasswordField, JCombobox, JTable, JOptionPane **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the EVENTS, SWIGNS 1. Event Handling: The delegation event model, Event classes-Action event, Mouse Event, Window Event, Item Event, Key Event 2. Sources of Event, Event listeners-Action listener, Mouse listener, Mouse motion, Window listener, Key Listener 3. Layout manager-card, grid, flow and border. 4. Swing- MVC architecture, components and containers 5. Swing control- JLabel and ImageIcon, JTextField,JButton 6. JRadioButton, JCheckbox,	Group Discussion

			JToggleButton, JTextArea. 7. JPasswordField, JCombobox, JTable, JOptionPane	
V.	SWINGS, RMI, FILES. • . JTree, JList, JMenu. • JScrollBar, JSplitPane • Input-output- File- directories, File Name Filter, Reading and Writing Files, File Reader and File Writer • RMI: Architecture, registry service, Parameter passing in Remote Methods, Creating RMI Application and steps involved in running RMI application **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the SWINGS AND RMI, FILES 1. . JTree, JList, JMenu.Auto Encoders Applications 2. JScrollBar, JSplitPane 3. Input-output- File- directories, File Name Filter, Reading and Writing, Files, File Reader and File Writer. 4. 4. RMI: Architecture, registry service, Parameter passing in Remote Methods, Creating RMI Application and steps involved in running RMI application	Seminar

List of References (Book / ICT / Weblinks):

1. Schildt, Herbert. 2002. The Complete reference Java2. New Delhi: Tata McGraw Hill.
2. Deitel, P.J.Deitel, H.M. Java for Programmers, Java: How to Program. PHI
3. Gaddis,Tony. Starting Out with Java. Dream Tech Press
4. Balagurusamy, E. Programming with Java, A Primer. 3rd Edition. New Delhi: TMH

Name of the faculty member & Signature: B Venkataratnam

Approved by Head of the Department: Vara Laxmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: B.Sc Computer Science & Cognitive Systems **Class&Section:DCSC** **CourseCode: CSC22602A**

Faculty Member : Ainala Varalakshmi **CourseTitle: Infrastructure Security**

Unit	Topicsto becovered	TeachingPedagogy	Learning Outcome	Skill Development Activity
I.	**Computer Security** Concepts, Threats, Attacks and Assets Security Functional Requirements, Security Design principles , Attack Surfaces and Attack Trees, Computer Security strategies, Access control Principles, Subjects, Objects and Access Rights, Discretionary, role based and Attribute based control	Lecture Method using Board. ICT	Understanding about threats. Importance of Access control	Group Discussion
II.	Need for database security, DBMS and relational databases, SQL injection attacks, Database Access Control, Inference, Encryption Cloud Computing, Risks and Countermeasures, Data protection in cloud Cloud Security as a Service	Lecture Method using ICT Tool.	Necessity of security and techniques to provide it.	JAM
III.	Operating System Security Trusted Computing and Multilevel Security	Lecture Method using ICT Tool.	Understanding the importance of OS hardening. Taking the support of security software's.	Questionnaire
IV.	IT Security Management and Risk Assessment	Lecture Method using ICT Tool.	Knowledge about various risk assessment and IT security	Discussion on Risk Assessment

V.	Web Security Browser attacks Web Attacks Targeting users Obtaining User or Website Data Email attacks	Lecture Method using ICT Tool.	Understood the various attacks and precautions to protect	Real Time Examples

Listof References (Book/ICT/ Weblinks):

1. William Stallings and Lawrie Brown. 2015. **Computer Security Principles and Practice**. 3rd Edition. Pearson Education
2. PFleeger, Charles P, Pfleeger, Shari Lawrence, Margulies Jonathan. Security in Computing. 5th Edition. Prentice Hall

Name of the faculty member & Signature : Ainala Varalakshmi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: B.Sc Computer Science & Cognitive Systems

Class & Section:DCSC

CourseCode: CSC22603

Faculty Member : Ainala Varalakshmi

CourseTitle: BIG DATA ANALYTICS

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	What is Big Data?, History of Data Management-Evolution of Big Data, Structuring Big Data, Elements of Big Data.Big Data Analytics, Careers and Future of Big Data. Use of Big Data in Social Networking, Preventing Fraudulent Activities . Distributed and Parallel Computing for Big Data, Hadoop and Cloud Computing, Exploring the Big Data Stack, Virtualization and Big Data Stack, Virtualization Approaches	Lecture Method using Board. ICT	Understanding Big data elements and opportunities in Big Data and working of Big Data Architecture	Group Discussion
II.	Understanding Analytics and Big Data, Analytical Approaches and Tools to Analyze Data, Storing Data in Databases and Data Warehouses	Lecture Method using ICT Tool.	Analyzing the various tools and storing of data	Assessment
III.	Understanding Hadoop EcoSystem Understanding Map Reduce Fundamentals, Customizing MapReduce Execution and Implementing MapReduce program	Lecture Method using ICT Tool.	Understanding Hadoop Ecosystem and MapReduce working	Questionare

IV.	Understanding Hadoop YARN Architecture, Exploring HIVE, Analyzing Data with Pig	Lecture Method using ICT Tool.	Usage ofYARN commands , Hive Data types and functions	Assignment on yarn commands
V.	Analyzing Data with Pig, NoSQL Data Management	Lecture Method using ICT Tool.	Understanding pig operators and functions	Made to write programs

Listof References (Book/ICT/ Weblinks):

1. DT Editorial Services. 2016. **Big Data Black Book**. Dreamtech Press.
2. White, Tom. 2012. **Hadoop: The Definitive Guide**. 3rd Edition. O'Reilly Media.

Name of the faculty member & Signature :Ainala Varalakshmi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the AcademicYear 2023–2024

SEMESTER-VI

Department:B.Sc.Computer Science and Cognitive Systems

Class&Section:DCSC

Course Code:CSC22601A

Name of the Faculty Member:V.Shirisha

Course Title:Principles of Information Security

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	INTRODUCTION OF INFORMATION SECURITY 1.Introduction to Security, Critical Characteristics of Information 2. 2.Balancing Information Security and Access, Approaches to Information Security Implementation, System Development Life Cycle 4. Security System Development Life Cycle, Information Security Art of Science 4. Need For Security: Business Needs, Threats, Attacks 5. Secure Software Development-software Assurance, Software Design Principles, Software Development Security Problems	Lecture based using power point presentations	• Understanding concepts of security system development life cycle	Conducted Quiz
II.	RISK MANAGEMENT 1. Overview of Risk Management 2. Risk Identification 3. Risk Assessment 4. Risk Control Strategies 5. Selecting a Risk Control Strategy	Traditional chalk and board method	• Identifying risk,access and risk control stratergies.	Assignments

III.	1. Firewalls: Processing modes, categorizations 2. Firewall Architecture, Choosing a Firewall 3. Configuring and Managing a Firewall 4. Firewall Rules 5. Protecting Remote Connections: Securing Authentication with Kerberos 6. VPN: Transport and Tunnel Mode	Lecture based using ICT Tools	• Expertise in configuring host and network level technical security controls	Conducted Viva
IV.	SECURITY TECHNOLOGIES: INTRUSION DETECTION AND OTHER SECURITY TOOLS 1.IDPS terminology, types of IDPS 2.IDPS Detection Methods, IDPS Response Behavior 3.Strengths and Limitations of IDPS 4.Honeypots, Honey nets and Padded Cell Systems 5.Port Scanners, Firewall Analysis Tools 6.Operating System Detection Tools, Vulnerability Scanners 7.Packet Sniffers, Wireless Security Tools	Inquiry based learning	• Analyze systems,methods,tools and techniques for securing digital information	Conducted Computer based Test
V.	SECURITY CONSIDERATIONS IN MOBILE AND WIRELESS COMPUTING 1. Proliferation of Mobile and Wireless Computing Era 2.Trends im Mobility, Credit card Frauds in Mobile and Wireless Computing Era 3.Security Challenges posed by Mobile Devices, Registry Settings for Mobile Devices	Collaborative learning	• Understanding concepts of security considerations in mobiles and wireless computing.	Conducted Seminar

	4.Authentication Service Security 5.Orgamzational Seccunty Policies and Measures in Mobile Computing Era 6.Use of RFID in Mobile Commerce nd laformation Asset Protection			

Listof References (Book/ICT/ Weblinks):

1. Whitman Michael, E. and Mattord Herbert, 1. 2011. Principles of Information Security. 4" Edition. USA: Course Technology
2. Nina Godbole. Information Systems Security: Security Management, Metrics, Frameworks and Best Practices, 2" Edition Wiley Publications

Name of the faculty member&Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching

PlanfortheAcademicYear2023–2024

SEMESTER-VI

Department: B.Sc. Computer Science and Cognitive Systems

Class&Section:DCSC

CourseCode:CSC22601B

Nameofthe FacultyMember: K Nandini

CourseTitle:Cognitive Computing

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Foundations of Cognitive Computing 1. Cognitive computing as new generation 2. Uses of cognitive systems, What makes a system cognitive? 3. Gaining insights from data, AI as foundation of Cognitive computing 4. Understanding cognition, two systems of Judgement and choice 5. Understanding complex relationships between systems 6. Elements of Cognitive system	Traditional chalk and board method	Understand the fundamental concepts of Cognitive Computing	Group discussions
II.	Design Principles of Cognitive Computing 1. Components of Cognitive System 2. Building the Corpus, Bringing data into the Cognitive system	Traditional chalk and board method	Recognize the use of Cognitive Computing in various Industries	Assignments

	3. Machine Learning 4. Hypothesis Generation and Scoring 5. Presentation and visualization services			
III.	Natural Language Processing in Support of Cognitive System 1. Role of NLP in Cognitive system 2 2. Semantic web, application of NLP in business problems 4 BigData and Cognitive computing 3. Dealing with human-generated data, defining big data 2 4. architectural foundation for big data, Hadoop 2 5. Data in motion and streaming data, Integrating with traditional data	Lecture based using ICT Tools	Understand the principles of NLP in Cognitive Computing	Conducted Viva
IV.	The Role of Cloud and Distributed Computing in Cognitive Computing 1. Leveraging Distributed computing for Shared resources 2 2. Cloud services are fundamental to Cognitive system 2 3. Characteristics, cloud models, delivery models in cloud 3 4. Managing workloads, Security and Governance 2 5. Data integration and management in cloud	Inquiry based learning	Understand the principles of Cloud & Cognitive Computing.	Conducted Quiz
V.	Process of Building cognitive application 1. Emerging cognitive platform,	Collaborative learning	Create and Build the Cognitive Application and understand their usages.	Conducted Computer based Test

	defining objective and domain 2.understanding intended users and defining their attributes 2 3.Defining questions and Exploring insights 2 4.Creating and refining corpora, training and testing 2 5.Building cognitive healthcare application			

Listof References (Book/ICT/ Weblinks):

Hurwitz, Kaufman and Bowles. Cognitive computing and Big Data Analytics. by Wiley.

Name of the faculty member & Signature: K Nandini K. Nandini

Approved by Head of the Department: A VaraLaxmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-VI

Department: Comp. Sci & Cognitive System **Class&Section: DCSC** **CourseCode: CSC22602B**

Nameofthe FacultyMember: Madhuri Hepseba

CourseTitle: INFORMATION TECHNOLOGY INFRASTRUCTURE LIBRARY

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction ITIL - Service Life Cycle Model, Define ITIL - Components and Phases of a Service Life Cycle, Main concept of Service life cycle, Service management as a Practice, IT today and IT opportunity	Lecture Method using ICT Tools	Understand service lifecycle model	Group discussion on Service Life Cycle
II.	Introduction to Service and Service management and its value, The 4 Ps of Service Design, Key It service management roles, Key Principles Models and Concepts	Lecture Method using ICT Tools	Know the key principles models and concepts of service management	Students analyzed Roles in Service Design
III.	Process - Functions - Specific Roles, RACI - Risk Management - Business Case, Life Cycle Phases - Service Strategy - Service Design - Service Transition, Service operation – CSI	Lecture Method using ICT Tools	Understand the process management and risk management	Made a business case study using RACI matrix.

IV.	Automation - Evolution of IT Infrastructure Services, Challenges in providing IT Infrastructure Services, The future state of IT Infrastructure Services, Automation and Analytics - the approach of the future	Lecture Method using ICT Tools	Know the challenges in providing IT infrastructure services	Students gave presentations on Automation and future of ITIL
V.	SNOC - Event Management – Objectives and Scope of event management, Value to the organization, Draw IT Infrastructure facilities for Hospital Management System, e - governance and Banking Sector	Lecture Method using ICT Tools	Understand the event management concepts.	Created IT facilities charts for HMS and Banking sector

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READINGS

1. Service Support (CCTA): Part 15 (IT Infrastructure Library)
2. IT Infrastructure Risk & Vulnerability Library: A Consolidated Register of Operational & Technology Infrastructure Vulnerabilities for IT Assuran Professionals
3. IT Infrastructure Risk and Vulnerability Library: A Consolidated Register of Operational and Technology Infrastructure Vulnerabilities for Assurance Professionals (Japanese Edition)

Nameofthefacultymember&Signature:
Madhuri Hepseba

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class&Section: AMCA – I SEM** **CourseCode: MCA22101**

Nameofthe FacultyMember: MEHRUNNISSA **CourseTitle: PROBABILITY AND STATISTICS**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction ● Data Collection, presenting the data in tables, graphing ● Measures of central tendency ● Measures of dispersion	Lecture Method usingICT Tools: Discussion-basedLearning: Flipped Classroom.	Understanding of basic statistics will boost the ability to understand and apply data organization and presentation through graphs	Q&A, Assignments, Group Discussion
II.	**Probability** ● Basic terminology, Three types of probability, Probability rules ● Statistical independence, Statistical dependency ● Bayes' theorem. Probability Distributions ● Binomial distribution ● Poisson distribution ● Normal distribution ● Choosing correct distribution	Lecture-Based Teaching Flipping Classroom, Think Pair Share, Chalk & Talk,	Calculate probabilities by applying probability laws and theoretical results, knowledge of important discrete and continuous distributions, and their interrelations with real-time applications.	Online quiz, Examples
III.	Sampling and sampling distributions ● Random sampling ● Sampling distributions ● Operational considerations in sampling Estimation	Lecture-Based Teaching Flipping Classroom,	Understanding the use of sample statistics to estimate unknown parameters.	Weekly test, Assignments

	● Point estimates, interval estimates, confidence intervals ● calculating interval estimates of the mean and proportion ● t-distribution, determination of sample size in estimation.			
IV.	● Hypotheses testing of mean when the population standard deviation is known powers of hypotheses test ● Hypotheses testing of proportions ● Hypotheses testing of means when the standard deviation is not known. Testing Hypotheses - Two sample tests ● Tests for difference between means - large sample, small sample, with dependent samples ● Testing for difference between proportions – Large sample.	Lecture-Based Teaching Flipping Classroom, Chalk & Talk	Evaluating the proficiency in learning to interpret outcomes	Example Problems Discusssion Group discussion
V.	Chi-square and analysis of variance ● chi-square as test of independence, chi-square as a test of goodness of fit, analysis of variance, ● Inferences about a population variance, inferences about two population variances. Regression and correlation ● Simple Regression - Estimation using regression line, correlation analysis, making inferences about population parameters, limitations ● Errors and caveats in regression and correlation analysis ● Multiple Regression and correlation analysis. Finding multiple regression equations and making inferences about population parameters.	Lecture-Based Teaching Flipping Classroom, Think Pair Share	Application of Correlation Analysis, regression lines and multiple regression analysis	Example Problems Discusssion

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Richard I Levin, David S Rubin - **Statistics for Management**, Seventh Edition, PHI – 1997

SUGGESTED READING

1. Douglas C. Montgomery, Douglas Montgomery, and George C. Runger, " **Applied Statistics and Probability for Engineers & quote, Fifth Edition Wiley Publishers**



Nameofthefacultymember&Signature: MEHRUNNISSA



Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class&Section: AMCA – I SEM** **CourseCode: MCA20102**

Nameofthe FacultyMember: Mrs. G. SIRISHA **CourseTitle: MATHEMATICAL FOUNDATION OF COMPUTER SCIENCE**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Mathematical Logic** • Statements and notations • Connectives • Well-formed formulas, Truth Tables • Tautology, equivalence implication • Normal forms **Set Theory** • Sets and subsets, Set Operation • Laws of Set Theory and Venn diagrams **Properties of the Integers** • The well – ordering principle • Recursive Definitions • Division Algorithms • Fundamental theorem of	Lecture Method usingICT Tools: Chalk & Talk, Discussion basedLearning: Presentation, Think Pair Share	Define Statements, connectives, how to apply connectives, working with sets, subsets and represent them in Venn diagrams.	Quiz, Q&A

	Arithmetic			
II.	**Functions** • Cartesian Product • Functions onto Functions • Special Functions • Pigeonhole Principle • Composition and Inverse Functions **Relations** • Partial Orders • Equivalence Relations and Partitions **Principle of Inclusion and Exclusion** • Principles of Inclusion and Exclusion • Generalization of Principle	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk, Jigsaw	Explains about relations, ordering, functions, illustrating with examples.	Small Assignments, online quiz
III.	**Algebraic structures** • Algebraic System – General Properties • Semi Groups • Monoids, Homomorphism	Lecture-Based Teaching, Students centric learning: Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Explains about algebraic structures and groups by applying various theorems and solving for an	Interactive methods like group discussion

	• Groups • Residue Arithmetic		appropriate result.	
IV.	**Generating Functions** • Introductory Examples • Definition and Examples • Partitions of Integers **Recurrence Relations** • First-order linear recurrence relation • Second-order linear Homogeneous • Recurrence relations with constant coefficients • Non-homogeneous recurrence relations	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Compare the Homogeneous Recurrence Relations and Non-Homogeneous Recurrence Relations along with examples.	Case Studies, Simulations
V.	**Graph theory** • Definitions and examples, Sub graphs, Complements • Graph Isomorphism, Vertex Degree • Planar Graphs: Euler's formula Euler graphs Hamiltonian graphs	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Construct graphs, trees and planar graphs.	Real-world Case Studies

	• Graph Coloring **Trees** • Definitions and their properties and Examples • Rooted trees, Spanning Trees and Minimum Spanning Trees (Kruskal's Algorithm and Prim's Algorithm)			

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Mott Joe L Mott, Abraham Kandel, and Theodore P Baker, **Discrete Mathematics for Computer Scientists & Mathematicians**, Prentice Hall NJ, 2nd Edition, 2015.
2. Jr. P. Tremblay and R Manohar **Discrete Mathematical Structures with Applications to Computer Science**, McGraw Hill, 1987.

SUGGESTED READING

1. R.K.Bisht and H.S.Dhami, **Discrete Mathematics** Oxford Higher Education, 2015
2. Bhavanari Satyanarayana, Tumurukota Venkata Pradeep Kumar and Shaik Mohiddin Shaw,Mathematical Foundation of Computer Science, BSP, 2016
3. Ralph P. Grimaldi **Discrete and Combinatorial Mathematics**, 5th Edition, Pearson, 2004.

Nameofthefacultymember&Signature: Mrs. G. SIRISHA

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class&Section: AMCA – I SEM** **CourseCode: MCA20103**

Nameofthe FacultyMember: P VANDANA **CourseTitle: COMPUTER ARCHITECTURE**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Digital Logic Circuits** ● Digital computers & Logic gates ● Boolean Algebra & Map Simplification ● Combinational Circuits ● Flip Flops ● Sequential Circuits **Digital Components** ● Integrated Circuits & Decoders ● Multiplexers ● Registers ● Shift Registers ● Binary counter & Memory unit **Data Representation** ● Data types & Complements ● Fixed and floating point Representation ● Other binary codes & Error detection codes	Lecture Method usingICT Tools: Discussion-basedLearning: Presentation, Flipped Classroom.	Demonstrateknowledge of digital logic circuits and organization of a basic computer system.	Q&A, Assignments

II.	**Register Transfer and Micro operations** ● Register Transfer language & Register transfer ● Bus and Memory Transfer ● Arithmetic Micro operations ● Logic Micro operations ● Shift Micro operations & Arithmetic logic shift unit **Basic Computer Organization and Design** • Instruction codes & Computer Registers • Computer Instructions & Timing and Control • Instruction Cycle • Memory Reference Instructions • Input &output & Interrupt • Design of Accumulator logic	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk,	Explain machine language of a basic computer system.	Online quiz
III.	**Programming the Basic Computer** • Introduction, Machine Language & • Assembly Language • The Assembler • Programming Arithmetic and Logic Operations Subroutines • Input-output Programming **Micro programmed Control** • Control Memory & Address Sequencing • Micro program Example • Design of Control Unit	Lecture-Based Teaching Flipping Classroom, Presentations	Analysein-depth understanding of control unit organization and micro programmed control	Weekly test, Assignments
IV.	Central Processing Unit ●Introduction, General Register Organization & Stack Organization ●Instruction Formats & Addressing Modes ●Data Transfer and Manipulation & Program Control	Lecture-Based Teaching Flipping Classroom, Presentations	Apply various algorithms to perform arithmetic operations and propose suitable hardware for them	Group discussion

	●RISC Computer Arithmetic ●Addition and Subtraction ●Multiplication algorithms ●Division Algorithms ●Floating point arithmetic operations ●Decimal arithmetic unit,Decimal arithmetic operation			
V.	Input-Output Organization ● Peripheral Devices & I/O output interface ● Asynchronous data transfer ● Modes of transfer ● Priority Interrupt ● DMA, Input-output Processor & Serial Communication Memory Organization ● Memory Hierarchy ● Main Memory,Cache Memory	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Analyzeand emphasize various communication media in the basic computer system using the design of various memory structures.	Case Studies

Listof References (Book/ICT/ Weblinks):

1. M.Morris Mano**, "Computer System Architecture**", Pearson Education Asia, third Edition, 1993.

SUGGESTED READING

1. Miles Murdocca, Vincent Heuring, **Computer Architecture and Organization** , John Wileyand son's 2007
2. ShivaRama P dandanudi **Fundamentals of Computer Organization and Design** , Wiley Dream Tech publisher's, 2003
3. William Stalling's , **Computer Organization and Architecture** ,Pearson Education, Sixth Edition, 2003.
4. Miles Murdocca, Vincent Heuring, **Computer Architecture and Organization** , John Wileyand son's 2007.
5. ShivaRama P dandanudi **Fundamentals of Computer Organization and Design** , Wiley Dream Tech publisher's, 2003.

William Stalling's ,**Computer Organization and Architecture** ,Pearson Education, Sixth Edition, 2000.

Nameofthefacultymember&Signature: P VANDANA

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class&Section: AMCA – I SEM** **CourseCode: MCA20104**

Nameofthe FacultyMember: K S L PRASAD **CourseTitle: DATA STRUCTURES USING C**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopment Activity
I.	**C PROGRAMMING BASICS** • Structure of a C program, compilation, and linking processes • Constants, Variables, Data Types • Expressions using operators in C • Managing Input and Output operations • Decision Making and Branching, Looping statements • Arrays –Initialization, Declaration, One dimensional and Two - dimensional arrays • Strings- String operations, String Arrays. Simple programs-sorting • Searching – matrix operations.	Lecture Method using ICT Tools: Chalk & Talk, Paper Presentation, Discussion basedLearning	Implement linear and non-linear data structure operations using C	Quiz, Assignments
II.	• Functions, pointers, structures and unions • Functions – Pass by value, Pass by reference • Recursion – Pointers – Definition – Initialization • Pointer's arithmetic. Structures and unions, definition, Structure within a structure • Union – Programs using structures and Unions – Storage classes, Pre-processor	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk	Suggest appropriate linear/non-linear data structures for any given data set.	Weekly Test

	directives			
III.	**LINEAR DATA STRUCTURES** • Arrays and its representations Stacks and Queues Applications • Linked lists – Single, circular, and doubly Linked lists – Applications	Lecture-Based Teaching Flipping Classroom, Presentations, Chalk & Talk,	Apply hashing concepts for a given problem	Weekly Test and Online Test
IV.	**NON-LINEAR DATA STRUCTURES** • Trees – Binary Trees – Binary tree representation • Traversals, – Applications of trees. Binary Search Trees, AVL trees. • Graph and its representations - Graph Traversals.	Lecture Method using ICT Tools: Chalk & Talk, Paper Presentation, Discussion basedLearning	Modify or suggest new data structure for an application	Assignments, Quiz, Viva
V.	**SEARCHING AND SORTING ALGORITHMS** • Linear Search – Binary Search. Sorting: Selection Sort, Bubble Sort. • Insertion sort, Merge sort, Quick Sort Hashing, Types of Hashing. • Collision resolution techniques	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Implementing a sorting algorithm for an application	Regular assessments, Quiz

Listof References (Book/ICT/ Weblinks):

1. Brian W. Kernighan / Dennis Ritchie, The C Programming Language, Second Edition Pearson 2015
2. Ellis Horowitz, Sartaj Sahni, Susan Anderson – Freed, ―Fundamentals of Data Structures in C, Second Edition, University Press, 2008

Suggested Readings

1. Pradip Dey and Manas Ghosh, ― Programming in C, Second Edition, Oxford University Press, 2011
2. Mark Allen Weiss, - Data Structures and Algorithm Analysis in C Edition, Pearson Education, 1996
3. Alfred V. Aho, John E. Hopcroft, and Jeffrey D. Ullman, - Data Structures and Algorithms, Pearson Education, 1983

Nameofthefacultymember&Signature: K S L PRASAD



Approvedby the HeadoftheDepartment:

InternalQualityAssuranceCell



LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year2023–2024

SEMESTER

Department : Master of Computer Applications **Class & Section: AMCA – I SEM** **Course Code: MCA20105**

Name of the Faculty Member :P V NAGA LAKSHMI **Course Title : DATABASE MANAGEMENT SYSTEMS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Database System Applications, Purpose of Database Systems • View of Data – Data Abstraction, Instances and Schemas • Data Models – the ER Model, Relational Model, Database Languages • Database Access from Applications Programs • Transaction Management, Data Storage and Querying • Database Architecture, Database Users and • Administrators, ER diagrams Introduction to the Relational Model • Integrity Constraints over Relations, Enforcing Integrity constraints Introduction to the Relational Model • Integrity Constraints over Relations,Enforcing Integrity constraints • Querying relational data, Logical data base Design	Lecture Method usingICT Tools: Chalk & Talk, Paper Presentation, Discussion based Learning	**Explain logical database using Entity Relationship.**	Quiz, Assignments

	• Introduction to Views – Altering Tables and Views, Relational Algebra • Basic SQL Queries, Nested Queries, Complex Integrity Constraints in SQL, Triggers			
II.	• **Introduction to Schema Refinement – Problems Caused by redundancy** • Decompositions – Problem related to decomposition • Functional Dependencies - Reasoning about FDS • Normal Forms- BCNF • Properties of Decompositions,-Loss less- join Decomposition • Dependency preserving Decomposition, Schema Refinement in Data base Design • Other kinds of Dependencies-Multi valued Dependencies, Join Dependencies, • FIFTH Normal form.	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk	**Construct database using relational algebra and relational calculus &SQL**	Weekly Test
III.	• Basic Concepts, Ordered Indices, B+-tree Index Files • B-tree Index Files, Multiple-Key Access • Static Hashing, Dynamic Hashing, Comparison of	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	**Classify the storage and file structure, storage access, indexing and hashing techniques of the database.**	Interactive methods like group discussion
IV.	**Transaction Management** • The ACID Properties, Transactions and Schedules • Concurrent Execution of Transactions – Lock Based Concurrency Control • Deadlocks – Performance of Locking – Transaction Support in SQL. • Concurrency Control: Serializability,	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	**Defines client server architecture, Parallel databases, and distributed databases.**	Real-world Case Studies, Quiz

	and recoverability **Introduction to Lock Management** Lock Conversions, Dealing with Deadlocks			
V.	**Crash Recovery** • Introduction to ARIES, The Log • Other Recovery Related Structures, The WAL • Check pointing, Recovering from a System Crash, media Recovery **Security and Authorization** • Introduction to Database Security,Access Control, Discretionary Access Control • Mandatory Access Control **NOSQL:** • Need for NoSQL,Aggregate data models, more details on data models • Distribution models, consistency,version stamps, map-reduce • Key-value databases, document databases, column-family stores • Graph databases, Schema Migrations	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	**Create NOSQL Databases.**.	Regular assessments & Quiz

List of References (Book/ICT/ Web links):

1.Database Management Systems, Raghu Ramakrishnan, Johannes Gehrke, TMH, 3rd Edition
2. Data base System Concepts, A.Silberschatz, H.F. Korth, S.Sudarshan, McGraw hill, VI edition
3. NoSQL Distilled by Pramod J Sadalage, Martin Fowler, Addison-Wesley Professional; 1 st edition, 2012.

Nameofthefacultymember&Signature: P.V.Naga Lakshmi



Approved by Head of the Department:



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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department : Master of Computer Applications **Class& Section: AMCA – II SEM** **CourseCode: MCA20202**

Name of the Faculty Member: P DAYAKER **Course Title: COMPUTER NETWORKS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**DATA COMMUNICATIONS** • Components of Networks – Direction of data flow – Networks – Components and categories – Types of connections • Topologies • Protocols and Standards – ISO/OSI model, TCP/IP • Transmission media – Coaxial cable – Fibre Optics • Transmission impairments • Line coding schemes.	Lecture Method usingICT Tools: Chalk & Talk, Discussion based Learning: Presentation, Think Pair Share	Defines Data Communication, components of networks, explains the type of transmission media and describes the functions of each layer in OSI and TCP/IP model.	Quiz,Q&A
II.	**DATA LINK LAYER** • Error detection and correction, CRC, Hamming code • Flow Control and Error control – stop and wait – go back – N ARQ – • selective repeat ARQ sliding window • HDLC • MAC LAYER • LANs Ethernet-Wired • ALOHA, CSMA • CSMA/CD	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk, Jigsaw	Describes the functions of each layer and explains the various protocols	Small Assignments, online quiz

	• CSMA/CA			
III.	**NETWORK LAYER** • Internet works – virtual Circuit and Datagram approach • Connecting Devices • IP addressing, Address Space, Notations, Classful Addressing • Classless Addressing, NAT. • Routing – Distance Vector Routing, Link State Routing • OSPF and BGP	Lecture-Based Teaching, Students centric learning: Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Classify the routing protocols and analyze how to assign the IP addresses for the given network.	Interactive methods like group discussion
IV.	**TRANSPORT LAYER** • Services of transport layer, Multiplexing • Transmission Control Protocol (TCP) - Congestion Control, Timer management • Quality of services (QOS) • User Datagram Protocol (UDP)	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Describe the Transport layer header format and services.	Case Studies, Simulations
V.	**APPLICATION LAYER** • Domain Name Space (DNS) • SMTP, FTP, HTTP • WWW, SNMP	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Explain the functions of the Presentation layer and Application Layer	Real-world Case Studies

Listof References (Book/ICT/ Weblinks):

1. Andrew S, Tanenbaum. 2008. **Computer Networks. (4th Ed.)** Pearson Education.
2. Behrouz A, Forouzan. 2009. **Data communication and Networking.** Tata McGraw-Hill.

Name of the faculty member & Signature: P Dayaker 

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class & Section: AMCA – II SEM** **CourseCode: MCA20203**

Name of the Faculty Member: Mrs. G. SIRISHA **Course Title: Artificial Intelligence**

Unit	Topicsto becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction, History • Intelligent Systems, Foundations of AI, Sub areas of AI, Applications • Problem Solving – State-Space Search and Control Strategies • Introduction, General Problem Solving • Characteristics of Problem, Exhaustive Searches • Heuristic Search Techniques • Iterative-Deepening A* • Constraint Satisfaction • Game Playing • Bounded Look-ahead Strategy and use of Evaluation Functions • Alpha-Beta Pruning	Lecture Method usingICT Tools: Chalk & Talk, Discussion basedLearning: Presentation, Think Pair Share	Defines Artificial Intelligence, Problem Solving, Heuristic Search Techniques.	Quiz, Q&A

	• Case Study: Playing Chess and Manufacturing Scheduling.			
II.	**Logic Concepts and Logic Programming**: • Introduction, Propositional Calculus • Propositional Logic, Natural Deduction System • Axiomatic System, Semantic Tableau System in Propositional Logic • Resolution Refutation in Propositional Logic • Predicate Logic, Logic Programming. **Knowledge Representation**: • Introduction Approaches to Knowledge Representation • Knowledge Representation using Semantic Network • Extended Semantic Networks for KR • Knowledge Representation	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk, Jigsaw	Explains about Knowledge Representation using Predicate Logic.	Small Assignments, online quiz

	using Frames • Case Study: Medical Diagnosis			
III.	**Expert System and Applications**: • Introduction, Phases in Building Expert Systems • Expert System Architecture • Expert Systems Vs Traditional Systems • Truth Maintenance Systems, Application of Expert Systems • List of Shells and Tools. **Uncertainty Measure – Probability Theory:** • Introduction, Probability Theory • Bayesian Belief Networks, Certainty Factor Theory • Dempster-Shafer Theory • Case Study: A Course Advisory Expert System.	Lecture-Based Teaching, Students centric learning: Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Explains about Expert Systems and Probability Theory.	Interactive methods like group discussion
IV.	**Artificial Neural Networks**: • Introduction, Artificial Neural	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Compares the various Artificial Neural Networks.	Case Studies, Simulations

	Networks • Single- Layer Feed-Forward Networks • Multi-Layer Feed-Forward Networks • Radial- Basis Function Networks • Design Issues of Artificial Neural Networks, Recurrent Networks • Case Study: Bank Failure Prediction, Public Health Outcome Cluster.			
V.	**Advanced Knowledge Representation Techniques**: • Case Grammars **Semantic Web Natural Language Processing:** • Introduction, Sentence Analysis Phases • Grammars and Parsers, Types of Parsers, Semantic Analysis • Universal Networking	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Constructs the various Advance Knowledge Representation Techniques.	Real-world Case Studies

	Knowledge • Case Study: Machine Translation			

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Artificial Intelligence by Saroj Kaushik, Cengage Learning,2011.
2. Artificial intelligence, A Modern Approach by Russell, Norvig, Pearson Education,2nd Edition.2004.

SUGGESTED READING

1. Artificial intelligence by Rich, Knight, Nair, Tata McGraw

Nameofthefacultymember&Signature: Mrs. G. SIRISHA

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class&Section: AMCA – II SEM** **CourseCode: MCA20204**

Nameofthe FacultyMember: P VANDANA **CourseTitle: DESIGN AND ANALYSIS OF ALGORITHMS**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Definition of an algorithm** ● Algorithm Specification ● Performance Analysis ● Randomized Algorithms **Elementary Data Structures** ● Stacks and Queues,Trees ● Dictionaries ● Priority Queues ● Sets and Disjoint Set Union Graphs	Lecture Method usingICT Tools: Discussion-basedLearning: Presentation, Flipped Classroom.	DefineElementary data structures	Q&A
II.	**Divide and Conquer** ● Binary Search,Finding the Maximum and Minimum ● Merge Sort,Quick Sort ● Selection,Stassen's Matrix Multiplication ● Convex Hull **The Greedy Method** ● Knapsack problem,Tree Vertex Splitting ● Job Sequencing with Deadlines ● Minimum-Cost Spanning Trees ● Optimal Storage on Tapes ● Optimal Merge Patterns,Single Source Shortest Paths	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk,	Explaining divide and conquer, greedy methods with examples	Seminars

III.	**Dynamic Programming** ●General Method,Multistage Graphs ●All-Pairs Shortest Paths,Single-Source Shortest Paths ●Optimal Binary Search Trees,0/1 Knapsack, Reliability Design ●The Travelling Salesperson Problem **Basic Traversal and Search Techniques** ●Techniques for Binary Trees ●Techniques for Graphs ●Connected Components and Spanning Trees ●Biconnected Components and DFS	Lecture-Based Teaching Flipping Classroom, Presentations	Explaining divide and conquer, greedy methods with examples	Weekly test, Assignments
IV.	**Back Tracking** ●General Method,8-Queens Problem ●Sum of Subsets,Graph Coloring ●Hamiltonian Cycles ●Knapsack Problem **Branch-Bound** ●The Method, 0/1 Knapsack Problem ●Travelling Sales Person	Lecture-Based Teaching Flipping Classroom, Presentations	Explaining backtracking and branch and bound	Group discussion, Small Assignments
V.	●NP Hard and NP-Complete Problems ●Basic Concepts ●Cook's Theorem ●NP-Hard Graph Problems ●NP-Hard Scheduling Problems, NP-Hard Code Generation, ●Some Simplified NP-Hard Problems	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Analysis of NP-Hard and NP-Complete problems	Examples

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. E,Horowitz. S, sahni. S, Rajasekaran. 2007.**Fundamentals of Computer Algorithms**. 2nd Edition.Hyderabad: University Press.

SUGGESTED READING

1. Pannerselvam. R2007. **Design Analysis of Algorithms.** New Delhi**:** PHI.
2. Hari, Mohan Pandey. 2009. **Design Analysis and Algorithms.** India:University Science Press.
3. TH, Cormen. CE, Leiserson. RL, Rlvert. C, Stein. 2010.**Introduction to Algorithm** .3rd Edition. New Delhi:PHI.
4. PH Dave, HB Dave. 2008. **Design and Analysis of Algorithm.** New Delhi:Pearson Education.

Nameofthefacultymember&Signature: P VANDANA Vandana

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications Class&Section: AMCA – II SEM CourseCode: MCA20205

Nameofthe FacultyMember: MEHRUNNISSA CourseTitle: OPERATING SYSTEMS

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction:** ● Operating System structure and Operating System operations ● Operating system services, System calls and System Programs **Process Management:** ● Process concept, Process Scheduling, Operations on Processes. ● Interprocess communication, Threads, Multithreading Models. **CPU Scheduling:** ● Scheduling Criteria Scheduling Algorithms, Multi-Processor scheduling	Lecture Method usingICT Tools: Discussion-basedLearning: Flipped Classroom.	Understand fundamental operating system abstractions, Analyzing the algorithms	Q&A, Assignments
II.	**Process synchronization:** ● Critical Section problem, Semaphores, monitors **Deadlocks:** ● Necessary conditions, resource allocation graph ● Methods for Handling deadlocks, preventions ● Avoidance, detection and recovery Protection Goal ● Domain of protection, access matrix.	Lecture-Based Teaching Flipping Classroom, Think Pair Share, Chalk & Talk,	Describe list of resources involved in process creation and management	Online quiz, Examples

III.	Memory Management ●Swapping, contiguous allocation, paging ●Static and Dynamic partition, demand paging ●Page replacement Algorithms, thrashing ●Segmentation, segmentation with Paging File System Interface: ●File Concept, Access Methods ●Directory Structure, File System Mounting,File Sharing,Protection. File System Implementation: ●File-System Structure ,Implementation ●Directory Implementation, Allocation Methods ●Free Space management, Efficiency and Performance, Recovery	Lecture-Based Teaching Flipping Classroom,	Explainthe use of paging and segmentation	Weekly test, Assignments
IV.	**Mass Storage Stucture** ● Disk Structure, Disk Attachment, Disk Scheduling ● Disk Management, Swap Space Management ● RAID structure, Stable storage Implementation ● I/O hardware, Application I/O Interface ● Kernel I/O Subsystem ● Transforming I/O request to hardware operation ● STREAMS.	Lecture-Based Teaching Flipping Classroom, Chalk & Talk	Explainthe function and structure of the I/O system.	Group discussion, Seminars
V.	**Case Studies.** **Linux System:** ● Design Principles, Kernel Modules ● Process Management, Scheduling Memory Management ● File Systems, Input and Output, Inter-Process Communication Network Structure, Security	Lecture-Based Teaching Flipping Classroom, Think Pair Share	Describe path names and directory structure visible to end users	Case Studies

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Abraham, Silberschatz. Peter, B Galvin. Greg, Gagne. 2012. **Operating System Concepts. Ninth Edition.** Wiley India.

SUGGESTED READING

1. Andrew S, Tanenbaum. 2009. **Modern Operating Systems. (3rd Ed)**. PHI.

2. Robert, Love. 2004. **Linux Kernel Development.** Pearson Education.

3. William, Stallings. **Operating Systems. (6thEd)**. PHP

Nameofthefacultymember&Signature: MEHRUNNISSA

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class&Section: AMCA – II SEM** **CourseCode: MCA20206**

Nameofthe FacultyMember: K S L PRASAD **CourseTitle: JAVA PROGRAMMING**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopment Activity
I.	• Understanding object-oriented development and concepts • Benefits of object-oriented development • Java Programming Fundamentals • Introduction • Overview of Java • Data types, variables • Arrays, Operators, Control statements, Overloading and Overriding • Classes, Methods, Inheritance • Packages and Interfaces, Inner Classes	Lecture Method using ICT Tools: Chalk & Talk, Paper Presentation, Discussion basedLearning	Explain the benefit of JAVA compared to other Programming languages. The student will be able to identify classes, objects, and Interfaces and will be able to demonstrate the concepts of polymorphism and inheritance	Quiz, Assignments
II.	• Collections overview • Collection classes ArrayList, Linkedlist, Hashset, HashMap • Collection Interfaces – Collection, Set, List, Map • Iterators, Random access interface	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk	Create Java programs to implement error-handling techniques using exception-handling and multi-threading concepts	Weekly Test
III.	**Java Collections** • Arrays and its representations Stacks and Queues Applications • Linked lists – Single, circular, and doubly Linked lists – Applications	Lecture-Based Teaching Flipping Classroom, Presentations, Chalk & Talk,	Identify usage of collection framework.	Weekly Test and Online Test

IV.	**Java Files** • Java I/O classes and interfaces • Files, streams and byte classes • Character streams ,Serialization **Applet** • Applet Basics, Applet Architecture • Applet tag, passing Parameters to Applet	Lecture Method using ICT Tools: Chalk & Talk, Paper Presentation, Discussion basedLearning	Distinguish different Byte Streams and Character Streams and construct applets.	Assignments, Quiz, Viva
V.	**Event Handling** • The delegation event model, Events, and Event classes • Event Listener Interfaces. • Using the Delegation event model, Adapter classes, Layout Manager **Swings** • JComboBox, JLabel, JMenuBar, JOptionPane, JPanel, JPopupMenu • JScrollPane, TabbedPane, JTable, JTree, JTextArea, JTextField, JPasswordField • JButton, JMenuItem, JCheckBox-MenuItem, JRadioButton-MenuItem, JCheckBox, JRadioButton, JMenu, JToggleButton	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Describe different AWT and Swings Classes. Students can design GUI-based applications.	Regular assessments, Quiz

Listof References (Book/ICT/ Weblinks):

1. HerberttSchildt. Java Complete Reference. 9th Edition. New Delhi: TGH.
2. Jim Keogh. The Complete Reference J2EE. 7th Edition. New Delhi: Tata McGraw Hill.

Suggested Readings

1. Richard A. Johnson. 2009. Java Programming and Object–Oriented Application Development. India: Cengage Learning.
2. John Dean and Raymond Dean.2008. Introducing to Programming with JAVA A Problem-Solving Approach. New Delhi: Tata McGraw Hill.

Nameofthefacultymember&Signature: K S L PRASAD



Approvedby the HeadoftheDepartment:



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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER

Department : Master of Computer Applications **Class & Section: AMCA – II SEM** **Course Code: MCA22207**

Name of the Faculty Member :P V NAGA LAKSHMI **Course Title : DATA SCIENCE**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to RBasics** • Introduction, Downloading and Installing R Primitives • IDE and Text Editors, Handling Packages in R. **Getting Started With R** • Introduction, Working with Directory • Data Types in R, Few Commands for Data Exploration. **Loading and Handling Data In R** • Introduction, Challenges of Analytical Data Processing • Expression, Variables, Functions, Missing Values Treatment In R • Using ‗As' Operator To Change The Structure Of The Data, Victors • Matrices, Factors, List, Few Common Analytical Tasks • Aggregation And Group Processing Of A Variable,	Lecture Method usingICT Tools: Chalk & Talk, Paper Presentation, Discussion based Learning	**Use various data structures and packages in R for data visualization and summarization**	Weekly Test

	Simple Analysis Using R • Methods For Reading Data, Comparison Of R GUI's For Data Input • Using R with Databases And Business Intelligence Systems.			
II.	**Exploring Data In R** • Introduction, Data Frames • R Functions for Understanding Data in Data Frames • Load Data Frames, Exploring Data, Data Summary • Finding the Missing Values, Invalid Values And Outliers • Descriptive Statistics, Spotting Problems In Data with Visualization.	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk	**Use linear , non-linear regression models, and classification techniques for data analysis**	Quiz, Assignments
III.	**Linear Regression** • Introduction, Model Fitting • Linear Regression, Assumptions of Linear Regression **Logistic Regression.** • Introduction, What Is Regression?, Introduction To Generalized Linear Model • Binary Logistic Regression • Diagnosing Logistic Regression • Multinomial Logistic Regression Model.	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	**Use linear , non-linear regression models, and classification techniques for data analysis**	Real-world Case Studies, Quiz
IV.	**Decision Tree** • Introduction, What Is A Decision Tree? • Decision Tree Representation In R • Appropriate Problems For Decision Tree Learning • Basic Decision Tree Learning Algorithm • Measuring Features, Hypothesis Space Search In Decision Tree Learning • Inductive Bias In Decision	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Decision Tree and Time Series in R	Interactive methods like group discussion

	Tree Learning • Why Prefer Short Hypotheses, Issues In Decision Tree Learning. **Time Series In R** • Introduction, What Is Time Series Data • Reading Time Series Data, Decomposing Time Series Data • Forecasts Using Exponential Smoothing, ARIMA Models.			
V.	**Clustering:** • **Introduction**, What Is Clustering, Basic Concepts in Clustering, • Hierarchical Clustering, K-Means Algorithm • CURE Algorithm • Clustering in Non-Euclidean Space • Clustering for Streams and Parallelism. **Association Rules** • Introduction, Frequent Itemset • Data Structure Overview, Mining Algorithm Interfaces • Auxiliary Functions, Sampling from Transaction • Generating Synthetic Transaction Data • Additional Measures of Interestingness • Distance Based Clustering Transaction and Association.	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Clustering and Association Rules	Regular assessments

List of References (Book/ICT/ Weblinks):

1.Data Analytics using R by Seema Acharya. McGraw Hill education.
2. Practical Data Science with R, Nina Zumel and John Mount, Manning Shelter Island.
3. The R book, Crawley, Michael J. John Wiley & Sons, Ltd

Nameofthefacultymember&Signature: P.V.Naga Lakshmi



Approved by Head of the Department:



LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department:Master of Computer Applications **Class & Section : NMCA – III SEM** **Course Code : MCA21302A**

Name of the Faculty Member: MEHRUNNISSA **Course Title: INTERNET OF THINGS**

Unit	Topicsto becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction to Internet of Things • Definition and Characteristics of IoT • Physical Design of IoT – IoT Protocols, IoT communication models • IoT Communication APIs • IoT enabled Technologies – Wireless Sensor Networks, Cloud Computing • Big data analytics, Communication protocols,Embedded Systems. • IoT Levels and Templates, Domain Specific IoTs – Home, City, Environment, Agriculture, Industry, health and Lifestyle	Lecture Method usingICT Tools: Discussion-basedLearning: Flipped Classroom.	Understand the concepts of IoT and IoT enabling technologies	Q&A, Assignments
II.	• IoT and M2M- Introduction to M2M, Difference between IoT and M2M • SDN and NFV for IoT, IoT System Management with NETCONF-YANG • Need for IoT Systems Management, SNMP	Lecture-Based Teaching Flipping Classroom, Think Pair Share, Chalk & Talk,	Explain IOT and system management.	Online quiz, Examples

	• Network Operator requirements, NETCONF, YANG • IoT Platforms Design Methodology: Introduction, IoT Design Methodology			
III.	• Python packages - JSON, XML, HTTPLib, URLLib, SMTPLib • IoT Physical Devices and Endpoints – IoT deviceRaspberry Pi, About the Board, Linux on Raspberry Pi, Raspberry Pi Interfaces • Programming Raspberry Pi with Python • Program with Raspberry PI with focus of interfacing external gadgets, • Controlling output, reading input from pins.	Lecture-Based Teaching Flipping Classroom,	To develop an understanding Programming Raspberry Pi with Python	Weekly test, Assignments
IV.	• IoT Physical Servers and Cloud Offerings • Cloud Storage models and communication • Wamp, Xively • Django, Restful, Amazon • FOG computing • Protocol based applications	Lecture-Based Teaching Flipping Classroom, Chalk & Talk	To understand IoT Physical Servers and Cloud Offerings	Group discussion, Seminars

V.	• **Case studies Illustrating IOT Design** • Introduction • Home Automation • Cities • Environment • Agriculture • Productivity Applications	Lecture-Based Teaching Flipping Classroom, Think Pair Share	Gain knowledge on IoT programming and able to develop IoT applications	Case Studies

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Bahga, Arshdeep and Madisetti, Vijay. 2015.**Internet of Things - A Hands-on Approach** Universities Press ISBN: 9788173719547

SUGGESTED READING

1. Richardson, Matt and Wallace, Shawn. 2014. **Getting Started with Raspberry Pi.** O'Reilly (SPD). ISBN: 9789350239759

Name of the faculty member &Signature: MEHRUNNISSA

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class&Section: NMCA – III SEM** **CourseCode: MCA21302B**

Nameofthe FacultyMember: Mrs. G. SIRISHA **CourseTitle: DISTRIBUTED SYSTEMS**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction to Distributed Systems** ● Definition, Goals ● Types of Distributed Systems **Architectures** ● Architectural Styles ● System Architecture ● Architectures Versus Middleware ● Self-Management **Processes** ● Threads ● Virtualization ● Clients, Servers ● Code Migration	Lecture Method usingICT Tools: Chalk & Talk, Discussion basedLearning: Presentation, Think Pair Share	Defines Distributed systems, goals, processes and identifies the advantages and challenges in designing distributed algorithms for different primitives like mutual exclusion, deadlock detection, agreement, etc.	Quiz, Q&A
II.	**Naming** ● Names, Identifiers and Addresses ● Flat Naming ● Structured Naming	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk, Jigsaw	Explains about Name entities and illustrates the various synchronization algorithms	Small Assignments, online quiz

	• Attribute-Based Naming **Synchronization** • Clock Synchronization • Logical Clocks,Mutual exclusion • Global Positioning of Nodes • Election Algorithms			
III.	**Consistency and Replication** • Introduction • Data-Centric, Client-Centric Consistency Models • Replica Management • Consistency Protocols **Fault Tolerance** • Introduction, Process resilience • Reliable client-server and Group Communication • Distributed Commit and Recovery	Lecture-Based Teaching, Students centric learning: Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Differentiate between different types of faults and fault handling techniques in order to implement fault tolerant systems.	Interactive methods like group discussion
IV.	**Distributed Object based Systems** • Architecture • Processes • Communication • Naming • Synchronization • Consistency and Replication • Fault Tolerance	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Compares the various Distributed Object Systems along with their related Case studies..	Examples, Discussion

	• Security			
V.	**Distributed shared memory** • Implementation algorithms • Memory coherence • Design issues **Distributed Scheduling** • Issues in Load Distributing • Components of Load Distributing Algorithms • Load Distributing Algorithms	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Constructs the algorithms related to Distributed Shared memory and Distributed Scheduling.	Assignments

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Andrew S, Tanenbaum, Van, Steen.2002. **Distributed Systems, Second Edition.** New Delhi:Pearson- Education.
2. M, Singhal. N.G, Shivaratri. 2001.**Advanced concepts in operating systems.**NewDelhi:Tata McGraw Hill.

Nameofthefacultymember&Signature: Mrs. G. SIRISHA

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class&Section: NMCA – III SEM** **CourseCode: MCA21303A**

Nameofthe FacultyMember: K S L PRASAD **CourseTitle: NETWORK SECURITY**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopment Activity
I.	**Introduction** • Attributes of Security • Integrity, Authenticity • Non-repudiation, Confidentiality Authorization • Anonymity, Types of Attacks, DoS • IP Spoofing, Replay, Man-in-the-Middle attacks General Threats to Computer Network • Worms, Viruses, -Troja	Lecture Method using ICT Tools: Chalk & Talk, Paper Presentation, Discussion basedLearning	Explain the fundamentals of network security	Quiz, Assignments
II.	**Secret Key Cryptography** • DES, Triple DES • AES, Key distribution, Attacks **Public Key Cryptography** • RSA, ECC, Key Exchange (Diffie-Hellman) • Java Cryptography Extensions, Attacks	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk	Elaborate on the concepts of secret and public key cryptography.	Weekly Test
III.	**Integrity, Authentication, and Non-Repudiation** • Hash Function (MD5, SHA5) • Message Authentication Code (MAC) • Digital Signature (RSA, DSA Signatures) • Biometric Authentication	Lecture-Based Teaching Flipping Classroom, Presentations, Chalk & Talk,	Elucidate the hash functions	Weekly Test and Online Test, Seminar

IV.	**PKI Interface** • Digital Certificates, Certifying Authorities • POP Key Interface • System Security using Firewalls and VPNs. **Smart Cards** • Application Security using Smart Cards • Zero-knowledge protocols and their use in Smart Cards • Attacks on Smart Cards	Lecture Method using ICT Tools: Chalk & Talk, Paper Presentation, Discussion basedLearning	Describe the digital signatures and smart cards	Assignments, Quiz, Viva
V.	**Applications** • Kerberos, Web Security Protocols (SSL), IPSec • Electronic Payments, E-cash, Secure Electronic Transaction (SET) • Micro Payments, Case Studies of Enterprise Security (.NET and J2EE)	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Explain the applications of network security.	Regular assessments, Quiz, Seminar

Listof References (Book/ICT/ Weblinks):

1. William Stallings, Cryptography and Network Security, 4th Edition. Pearson, 2009
2. Behrouz A Forouzan, Cryptography and Network Security, TMH, 2009

Suggested Readings

1. Joseph Migga Kizza, A Guide to Computer Network Security, Springer,2010
2. Dario Cataiano, Contemporary Cryptology, Springer, 2010.

Nameofthefacultymember&Signature: K S L PRASAD 

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department:Master of Computer Applications **Class & Section : NMCA – III SEM** **Course Code : MCA23303C**

Nameofthe FacultyMember:MEHRUNNISSA **Course Title: ANDROID APPLICATION DEVELOPMENT**

Unit	Topicsto becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction to Android • History of Android Platform Android APIs • Android Architecture, Application Framework • Features of Android, Android Components, Manifest File. • Downloading and Installing Android – • Android SDK, Android Virtual Device • Android Physical Device, Development Environment. • Developing and executing the First Android Application • Using Eclipse IDE to create an application, Running the Application • Exploring the Application, Using command-line tools.	Lecture Method usingICT Tools: Discussion-basedLearning: Flipped Classroom.	Compare different mobile application models/architectures and patterns	Q&A, Assignments
II.	• Working with Activities • Creating an Activity, Starting an Activity, Lifecycle of an activity • Applying themes and styles to the activity	Lecture-Based Teaching Flipping Classroom, Think Pair	Apply a mobile development framework to the development of a mobile application.	Online quiz, Examples

	• Displaying dialogs in the activity, Hiding the title of the activity • Intents • Exploring Intent objects, Intent resolution, Intent Filters • Linking the Activities using Intent, Obtaining results from an Intent • Passing data Using an Intent Object. • Fragments • Life cycle of a fragment, Implementation • Using the Intent Object to Invoke Built-in-Application.	Share, Chalk & Talk,		
III.	• Working with view groups • Linear layout, Relative layout, Scroll layout • Table layout, Frame layout, Tab layout • Working with views • Text , Edit text, Button, Radio button, Checkbox • Image Button, Toggle button, Rating bar. • Binding Data with the Adapter View Class • List view, Spinner, Gallery view. • Implementing Screen Orientation, Handling UI Events • With Activities, With Views.	Lecture-Based Teaching Flipping Classroom,	Explain components and structure of a mobile development framework.	Weekly test, Assignments
IV.	• Working with Image views • Displaying image in gallery view and grid view	Lecture-Based Teaching Flipping	Develop advanced Java programming competency	Group discussion, Seminars

	• Designing context menu, Analog and Digital clock view • Embedding web browser in the Activity. • Notifications – Creating and Displaying notifications, Displaying Toasts.	Classroom, Chalk & Talk		
V.	• Persistent Storage • Using application specific folders and files, creating files, reading data from files • Listing contents of a directory shared preferences – creating shared preferences • Saving and retrieving data using shared preference • Database – • Introduction to SQLite database, creating and opening a database • creating and opening a database, creating tables • Inserting retrieving and deleting data, • Registering Content Providers, using content providers – insert, retrieve and update.	Lecture-Based Teaching Flipping Classroom, Think Pair Share	Explain list of content of directory and SQLite Database	Group discussion, examples

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Pradeep Kothari. Android Application Development- Black Book**.** DreamTech press

Name of the faculty member &Signature: MEHRUNNISSA

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class&Section: NMCA – III SEM** **CourseCode:MCA21304**

Nameofthe FacultyMember: P VANDANA **CourseTitle: OPERATIONS RESEARCH**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Linear Programming: • Introduction and Concept of Linear Programming Model • Development of LP models • Graphical Method • Linear Programming Methods • Special cases of Linear Programming • Duality • Sensitivity Analysis	Lecture Method usingICT Tools: Discussion-basedLearning: Presentation, Flipped Classroom, Think Pair Share	Identifying the methods to solve LPP.	Q&A, Small Groups Assignments
II.	Transportation Problem: • Introduction • Mathematical Model for Transportation Problem • Types of Transportation Problem • Methods to solve Transportation Problem • Transshipment Model.	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk	Applying OR to transportation problems.	Small Assignments
III.	• Assignment Problem: Introduction and Zero-One Programming Model • Types of Assignment Problem and Hungarian Method • Branch-and-Bound Technique	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Applying OR to Assignment problems and IPP	Weekly test, Assignments

	for Assignment Problem • Integer Programming: Introduction, Integer Programming Formulations • The Cutting-Plane Algorithm • Branch-and-Bound Technique • Zero-One Implicit Enumeration Algorithm			
IV.	Dynamic Programming: Introduction • Applications of Dynamic Programming- Cargo Loading & Capital budgeting • Solution of Linear Programming Problem through Dynamic Programming • Project Management: PERT and CPM-Introduction, the difference between PERT and CPM • Significance of using PERT/CPM and Phases of Project management • PERT/CPM network components and Precedence relationships • Critical Path Analysis	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Creating the network diagrams for Project management problems.	Interactive methods like group discussion
V.	Game Theory: Introduction • Game with Pure Strategies, game with Mixed Strategies • Dominance Property • Graphical Method for 2 x n or m x2 Games • Linear Programming Approach for Game Theory	Lecture-Based Teaching Flipping Classroom, Chalk & Talk,Presentations, Think Pair Share	Analysing the game theory problems	Real-world Case Studies

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Pannarselvam 2006. Operations Research. (2nd Ed).India:PHI.
2. Prem Kumar, Gupta. DS, Hira. 2010. Operations Research. S. Chand.

SUGGESTED READING

1. Rathindra P, Sen. 2010. Operations Research-Algorithm and Application. India: PHI.
2. JK, Sharma. 2009. Operations Research. (4th Ed). India: Macmillan.

Nameofthefacultymember&Signature: P VANDANA Vandana

Approvedby HeadoftheDepartment:



LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Master of Computer Applications **Class&Section: NMCA – III SEM** **CourseCode: MCA21305**

Nameofthe FacultyMember: Mrs. G. SIRISHA **CourseTitle: Software Engineering**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Software and Software Engineering:** ● The Nature of software, The Unique nature of Web Apps ● Software Engineering, The Software Process ● Software Engineering Practice **The Software Process:Process Models:** ● A Generic Process Model ● Process Assessment and Improvement ● Prescriptive Process Models ● Specialized Process Models ● The Unified Process ● Process Technology, Product and Process. **Agile Development:** ● Agile Process, Agile	Lecture Method usingICT Tools: Chalk & Talk, Discussion basedLearning: Presentation, Think Pair Share	Define Software Engineering and to know which model is suited according to the user specifications.	Quiz, Q&A

	Development ● Extreme Programming			
II.	**Understanding Requirements:** ● Requirements Engineering ● Eliciting Requirements ● Developing Use Cases ● Building the Requirements Model, Negotiating ● Validating Requirements. **Requirements Modeling:** ● Requirement Analysis ● Scenario Based Modeling ● UML Models, Data Modeling Concepts, Class Based Modeling ● Requirement Modeling Strategies, Flow-Oriented ● Modeling, Behavioral Model, Patterns Requirements **Design Concepts:** ● Design Process, Concepts, Model. **Architectural Design**: ● Architectural Styles, Architectural Design	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk, Jigsaw	Explains about Software Requirement and Specifications (SRS) and to know the concepts of designing a project and what are the models used for designing.	Small Assignments, online quiz

III.	**Component Level Design:** ● Definition, Designing Class Based Components ● Conducting Component Level Design ● Designing Traditional Components, Component Based Development **Pattern Based Design:** ● Design Patterns, Pattern Based Software Design **Project Management Concepts:** ● The Management Spectrum, People, Product, Process, The Project ● The W^5HH Principle **Estimation for Software Projects:** ● Software Project Estimation ● Empirical Estimation Models, The Make/Buy Decision ● Project scheduling, Scheduling **Risk Management:** ● Reactive versus Proactive Risks, Software Risks, Risk Identification ● Projection, Refinement, Risk Mitigation, Monitoring and	Lecture-Based Teaching, Students centric learning: Flipping Classroom, Presentations, Think Pair Share, Jigsaw	To understand the places or parts of the project where design is to be conducted and the types of designs and how to identify and overcome the risks in a software project.	Interactive methods like group discussion

	Management ● The RMMM Plan			
IV.	**Testing Strategies:** ● A strategic approach to software testing ● Test strategies for conventional software, Validation testing, System testing ● The Art of Debugging ● Software Testing Fundamentals ● White-Box testing, Basis Path Testing, Control Structure Testing ● Black-Box Testing **Product metrics:** ● Framework for Product metrics, Metrics for Requirements Model ● Metrics for Design Model ● Metrics for source code, Metrics for testing, Metrics for maintenance **Process and Project Metrics**: ● Software Measurement,	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	To know the importance of testing and to understand the importance of testing and understand various testing procedures and measurements used for testing the productivity of a software project.	Case Studies, Simulations

	Metrics for software quality			
V.	**Maintenance and Reengineering**: ● Software Maintenance ● Reengineering, Business Process Reengineering ● Software Reengineering, Reverse Engineering ● Restructuring, Forward Engineering ● The Economics of Reengineering **Software Process Improvement**: ● SPI, SPI Process ● The CMMI, The People CMM ● Other SPI Frameworks, SPI Return on Investment, SPI Trends.	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	To understand the importance of maintenance, reengineering and software process improvement in a software project.	Real-world Case Studies

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. **Software Engineering A Practitioner's Approach,** Roger S Pressman, seventh edition. McGraw Hill International Edition.
2. **Software Engineering, Ian Sommerville**, eigth edition, Pearson education.

SUGGESTED READING

1. **Software Engineering, A Precise Approach**, Pankaj Jalote, Wiley India, 2010.
2. **Software Engineering**: A Primer, Waman S Jawadekar, Tata McGraw-Hill, 2008
3. **Fundamentals of Software Engineering**, Rajib Mall, PHI, 2005
4. **Software Engineering, Principles and Practices,** Deepak Jain, Oxford University Press.

Nameofthefacultymember&Signature: Mrs. G. SIRISHA



Approvedby HeadoftheDepartment:



LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER

Department : Master of Computer Applications **Class & Section: NMCA – III SEM** **Course Code: MCA21306**

Name of the Faculty Member :P V NAGA LAKSHMI **Course Title : INTERNET TECHNOLOGIES**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Basics of JavaScript • Objects, OOPs • Primitives • Operations and Expressions • Control Statements • Arrays, Functions • Constructors • Pattern Matching using Regular Expression. • typescript, css, scss, sass	Lecture Method usingICT Tools: Chalk & Talk, Paper Presentation, Discussion based Learning	**Explain basics** of Java Script and OOPS concept.	Quiz, Assignments
II.	• Getting Started with Node Saving Time with Express • Tidying Up • The Request and Response • Form Handling • Routing • Database Integration • Implementing MVC in Express	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk	**Creation** of Express with node JS	Weekly Test
III.	• Overview, Environment Setup • Project Setup • Components, Modules • Data Binding, Event Binding • Templates • Directives, Pipes • Routing, Forms	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	**Create** Dynamic Web Applications using Angular	Interactive methods like group discussion

IV.	• Introduction to Django • Getting started with Django • Views and URLconfs	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	**Explain** Basics of Django Frame work.	Real-world Case Studies, Quiz
V.	• Templates • Models • The Django Admin Site • Forms	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	**Create** trending web applications using Django.	Real-world Case Studies, Installation of tools, Regular assessments

List of References (Book/ICT/ Weblinks):

1. The DjangoBook Release 2.0. Adrian Holvaty,Jacob Kaplan-Moss,et al.(Unit-4,5), 2013.
2. Web Technologies, Uttam K Roy, Oxford University Press,2010.
3. ng-book The Complete Book on Angular,Nate Murray,Felipe Coury,Ari Lerner,Carlos Taborda,2021 Edition.
4. Web Development with Node & Express, Ethan Brown, O'reilly Publication,July 2014.

Nameofthefacultymember&Signature: P.V.Naga Lakshmi



Approved by Head of the Department:



LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department:Master of Computer Applications **Class&Section:NMCA – III SEM** **CourseCode: MCA23307**

Nameofthe FacultyMember:P DAYAKER **CourseTitle:DEEP LEARNING**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	• Introduction:A motivating example, the key components, Data, models, and algorithms, • Kinds of machine learning, the road to deep learning, success stories • Linear regression, multilayer perceptron's, model selection, • Underfitting and overfitting, weight decay, dropout, forward propagation • Backward propagation and computational graphs, • Numerical stability and initialization, • Considering the environment, predicting house prices on Kaggle • Optimization algorithms Optimization and deep learning, convexity, gradient descent, • Momentum, adagrad, rmsprop, adadelta, adam, learning rate scheduling	Lecture Method usingICT Tools: Chalk & Talk, Paper Presentation, Discussion basedLearning	Learn deep learning basics and optimization algorithm	Quiz, Assignments

II.	• **Deep learning computation** • Layers and blocks, parameter management • Deferred initialization, custom layers, file i/o, gpus • **Convolutional neural networks** • From dense layers to convolutions, convolutions for images • Padding and stride, multiple input and output channels • Pooling, convolutional neural networks(leNet) • **Modern Convolutional neural networks** • Deep Convolutional neural networks(alexnet), Networks using blocks (VGG) • Networks with parallel concatenations(googlenet) • Batch normalization, residual networks(resnet), • Densely connected networks(densenet)	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk	Understand deep learning computation, CNNs and moderns CNN	Weekly Test, Q&A
III.	**Recurrent neural networks** Sequence models, text processing • Language models and the dataset, recurrent neural networks • Backpropagation through time **Modern Recurrent neural networks** • Gated recurrent units (GRU), long short-term memory (LSTM) • Deep recurrent neural networks, bidirectional recurrent neural networks • Machine translation and the dataset Encoder-decoder architecture, sequence to-	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Study recurrent neural networks and its modern versions	Interactive methods like group discussion

	sequence **Attention mechanisms** • Attention mechanism • Sequence to sequence with attention mechanism, transformer			
IV.	**Computer vision** • Image augmentation fine tuning • Object detection and bounding boxes, anchor boxes • Multiscale object detection, the object detection dataset • Single shot multibox detection(SSD), region based cnns(R-cnns) • Semantic segmentation and the dataset, transposed convolution • Fully convolutional networks(FCN), neural style transfer • Image classification(CIFAR-10) on kaggle • Dog breed identification (Imagenet dogs) on kaggl	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Learn computer vision	Real-world Case Studies, Quiz
V.	**Generative adversarial networks** • Generative adversarial networks • Deep convolutional generative adversarial networks **Tools for deep learning** • Using jupyter, using amazon sagemaker • Using aws ec2 instances • Using google colab, selecting servers and gpus • ESSENTIAL READING	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Comprehend GANs	Real-world Case Studies, Installation of tools, Regular assessments

Listof References (Book/ICT/ Weblinks):

1. Deep Learning: An MIT Press Book By Ian Goodfellow and Yoshua Bengio and Aaron Courville
2. Neural Networks and Learning Machines, Simon Haykin, 3rd Edition, Pearson Prentice Hall.

Web resources:

1. Goodfellow, I., Bengio, Y., and Courville, A., Deep Learning, MIT Press, 2016. Link: https://www.deeplearningbook.org
2. Aston Zhang, Zachary C. Lipton, Mu Li, and Alexander J. Smola, Dive into Deep Learning, 2020

Link: Dive into Deep Learning- Dive into Deep Learning 0.16.6 documentation (https://d2l.ai/



Nameofthefacultymember&Signature: P DAYAKER

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: Master of Computer Applications **Class & Section: NMCA – IV SEM** **Course Code: MCA21401A**

Name of the Faculty Member: P DAYAKER **Course Title: SOFTWARE TESTING**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	▪ A Mathematical Context ▪ A Perspective on Testing, Examples Functional Testing ▪ Boundary Value Testing, ▪ Equivalence Class Testing ▪ Decision Table-Based ▪ Testing Retrospective on Functional Testing.	Lecture Method usingICT Tools: Discussion-based Learning: Presentation, Flipped Classroom, Think Pair Share	Express the importance of testing in the software development process, glass-box testing, black-box testing, and how to report and analyse bugs	Q&A, Small Groups Assignments
II.	▪ Structural Testing: Path Testing, ▪ Dataflow Testing, ▪ Retrospective on Structural Testing	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk, Jigsaw	Design different types of test cases.	Small Assignments, online quiz
III.	▪ Integration and System Testing: Levels of Testing, ▪ Integration Testing System Testing, ▪ Interaction Testing.	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Organize how to build testing strategy, establishing software testing methodology and software testing techniques	Weekly test, Assignments
IV.	▪ Object-Oriented Testing: Issues in Object-Oriented Testing, Class Testing ▪ Object-Oriented Integration Testing ▪ GUI Testing, ▪ Object-Oriented System Testing	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Identify the definition of quality, metrics for software quality, and inspection techniques	Interactive methods like group discussion
V.	▪ Millennium Testing: Exploratory Testing, ▪ Model-Based Testing	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share,	Identify the definition of quality, metrics for software quality and inspection: Identify	Real-world Case Studies

	▪ Test-Driven Development, ▪ All Pairs Testing ▪ Software Testing Excellence ▪ Test adequacy assessment using: control flow, data flow, and program mutations	Jigsaw	the definition of quality, metrics for software quality and inspection	

List of References (Book / ICT / Weblinks):

1. Paul C. Jorgensen, Software Testing: A Craftsman's Approach, 3rd Edition, CRC Press, 2007.
2. William E. Perry. Effective Methods for Software Testing: Includes Complete Guidelines, Checklists, and Templates 3rd Edition. Wiley Publishers, 3rd Edition

Suggested Reading

1. Boris Beizer, Software Testing Techniques, Dreamtech, 2009.



Name of the faculty member & Signature: P DAYAKER

Approved by Head of the Department:



LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: Master of Computer Applications **Class & Section: NMCA – IV SEM** **Course Code: MCA23401B**

Name of the Faculty Member: P VANDANA **Course Title: CLOUD COMPUTING**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Cloud Computing** ● Cloud Computing in a Nutshell ● System Models for Distributed and Cloud Computing ● Roots of Cloud Computing ● Grid and Cloud ● Layers and Types of Clouds ● Desired Features of a Cloud ● Basic Principles of Cloud Computing, Challenges and Risks ● Service Models	Lecture Method using ICT Tools: Discussion-based Learning: Presentation, Flipped Classroom.	Demonstrate knowledge of the main concepts, features, challenges and risks in cloud computing.	Q&A, Assignments
II.	● Virtual Machines and Virtualization of Clusters and Data Centers ● Levels of Virtualization, Virtualization Structures/Tools and Mechanisms ● Virtualization of CPU, Memory and I/O Devices ● Virtual Clusters and Resource Management, Virtualization ● Data-Center Automation	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk,	Describe virtualization of clusters and Data centres, virtual clusters and resource management.	Online quiz

III.	Cloud computing architectures over Virtualized Data Centers • Data-Center design and Interconnection networks • Architectural Design of Compute and Storage Clouds • Public Cloud Platforms, GAE, AWS, Azure • Inter-cloud Resource Management	Lecture-Based Teaching Flipping Classroom, Presentations	Identify the architectures over virtualized data centres.	Weekly test, Assignments
IV.	Cloud Security and Trust Management, Data Security in the Cloud • An Introduction to the Idea of Data Security • The Current State of Data Security in the Cloud Homo Sapiens and Digital Information • Cloud Computing and Data Security Risk • Cloud Computing and Identity • The Cloud, Digital Identity, and Data Security • Content Level Security—Pros and Cons	Lecture-Based Teaching Flipping Classroom, Presentations	Explain the core issues of cloud computing such as cloud security and trust management.	Group discussion
V.	End-User Access to Cloud Computing: • You Tube, You Tube API Overview, widgets, You Tube Player APIs • The YouTube Custom Player YouTube Data API • Zimbra, Zimbra Collaboration Suite (ZCS) • Facebook, Facebook Development • Zoho, Zoho Cloud SQL • Dim Dim Collaboration Cloud Programming and Software Environments: • Features of Cloud and Grid Platforms • Parallel and distributed Programming Paradigms • Programming Support of Google App Engine • Programming on Amazon AWS and Microsoft Azure	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Explain the core issues of cloud computing such as cloud security and trust management.	Case Studies

List of References (Book / ICT / Weblinks):

1. RajkumarBuyya, James Broberg and Andrzej M. Goscinski. **Cloud Computing: Principles and Paradigms (Wiley Series on Parallel and Distributed Computing).** Wiley Publishing. 2011 (unit-I,IV some part)

2. John W. Rittinghouse, James F. Ransome. **Cloud Computing: Implementation, Management, and Security**. CRC Press. 2009 (unit-V)

3. Kai Hwang. Geoffrey C.Fox, Jack J. Dongarra, **Distributed and Cloud Computing From Parallel Processing to the Internet of Things**. 2012. Elsevier. (unit-II, unit-III, unit-V)

Web resources:

1. http://aws.amazon.com
2. http://code.google.com/appsengine
3. http://www.buyya.com/

SUGGESTED READING

1. Raluca Ada Popa, Catherine M.S. Redfield, NickolaiZeldovich, and HariBalakrishnan. **CryptDB: Protecting Confidentiality with encrypted Query Processing.**23rd ACM Symposium on Operating Systems Principles (SOSP 2011), Cascais, Portugal.

2. Craig Gentry. September **A Fully Homomorphic Encryption Scheme**. 2009.

3. David Marshall, Wade A. Reynolds. **Advanced Server Virtualization: VMware and Microsoft Platform in the Virtual Data Center**. Auerbach Publications. 2006.

Name of the faculty member & Signature: P VANDANA Vandana

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: Master of Computer Applications Class & Section: NMCA – IV SEM Course Code: MCA21401C

Name of the Faculty Member: MEHRUNNISSA Course Title: CYBER SECURITY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Cybercrime: • Introduction, Cybercrime and Information security • who are cybercriminals? Classifications of Cybercrimes • Cybercrime: The legal Perspectives and Indian Perspective • Cybercrime and the Indian ITA 2000 • A Global Perspective on Cybercrimes. • Cyber offenses: • How criminals Plan Them Introduction • How Criminals plan the Attacks, Social Engineering • Cyber stalking, Cyber Cafe and Cybercrimes • Botnets: • The Fuel for Cybercrime, Attack Vector • Cloud Computing	Lecture Method usingICT Tools: Discussion-based Learning: Presentation, Flipped Classroom, Think Pair Share	Ability to understand about cybercrimes, cyber offenses, and attacks.	Q&A, Small Groups Assignments
II.	Cybercrime: • Mobile and Wireless Devices Introduction	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share,	Analyze and evaluate the cyber security needs of an organization.	Small Assignments, online quiz

	• Proliferation of Mobile and Wireless Devices, Trends in Mobility Credit card Frauds in Mobile and Wireless Computing Era • Security Challenges Posed by Mobile Devices • Registry Settings for Mobile Devices, Authentication service Security • Attacks on Mobile/Cell Phones, Mobile Devices: • Security Implications for Organizations, Organizational Measures for Handling Mobile • Organizational Security Policies and Measures in Mobile Computing	Chalk & Talk, Jigsaw		
III.	Cybercrimes and Cyber security: • The Legal Perspectives Introduction Cyber Crime and Legal Landscape around the world • Why Do We Need Cyber laws: • The Indian Context, The Indian IT Act Challenges to Indian Law and Cybercrime Scenario In India • Digital signatures and the Indian IT Act, Amendments to the Indian IT Act • Cybercrime and Punishment, Cyber law, Technology and Students: Indian Scenario	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Explain cyber laws and its implications	Weekly test, Assignments
IV.	• Understanding Computer Forensics: • Introduction, Historical background of Cyber forensic Digital Forensics Science, The Need for Computer Forensics	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Understand the concepts of computer forensics	Interactive methods like group discussion

	• Cyber Forensics and Digital evidence • Forensics Analysis of Email Digital Forensics Lifecycle Chain of Custody concept • Network Forensics, Approaching a computer • Forensics Investigation, Challenges in Computer Forensics • Special Tools and Techniques Forensics Auditing			
V.	**Cyber Security:** • Organizational Implications Introduction Cost of Cybercrimes and IPR issues • Web threats for Organizations • Security and Privacy Implications • Social media marketing: • Security Risks and Perils for Organizations • Social Computing and the associated challenges for Organizations	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Understand cyber security concepts and social media marketing	Real-world Case Studies

List of References (Book / ICT / Weblinks):

ESSENTIAL READING:

1. Cyber Security: Understanding Cyber Crimes, Computer Forensics and Legal Perspectives, Nina Godbole and Sunil Belapure, Wiley INDIA, 1 edition (January 1, 2011).
2. Introduction to Cyber Security, Chwan-Hwa(john) Wu,J.DavidIrwin.CRC Press T&F Group, 1 edition.

SUGGESTED READING:

1. Cyber Security Essentials, James Graham, Richard Howard and Ryan Otson, C

Name of the faculty member & Signature: MEHRUNNISSA

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: Master of Computer Applications **Class & Section: NMCA – IV SEM** **Course Code: MCA23402A**

Name of the Faculty Member: P DAYAKER **Course Title: NATURAL LANGUAGE PROCESSING**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	▪ **Introduction to NLP,** Background, and Overview ▪ NLP Applications -NLP hard Ambiguity- Algorithms and models, ▪ Knowledge Bottlenecks in NLP- Introduction to NLTK, Case study	Lecture Method usingICT Tools: Discussion-based Learning: Presentation, Flipped Classroom, Think Pair Share	Understand about Background of NLP, NLP applications, and NLTK.	Q&A, Small Groups Assignments
II.	**Parsing and Syntax** ▪ Word Level Analysis: Regular Expressions, Text Normalization ▪ Edit Distance, Parsing, and Syntax- Spelling, Error Detection, and correction ▪ Words and Word classes- Part-of Speech Tagging. ▪ Naive Bayes and Sentiment Classification: Case study	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk, Jigsaw	Understand various approaches to parsing and syntax	Small Assignments, online quiz
III.	▪ **Smoothed Estimation and Language Modelling** ▪ N-gram Language Models: N-grams ▪ Evaluating Language Models -The language modelling problem	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Describe n-gram models, pos tagging, semantic analysis, and discourse processing.	Interactive methods like group discussion

	▪ **Semantic Analysis and Discourse Processing** ▪ Semantic Analysis: Meaning Representation, Lexical Semantics ▪ Ambiguity, Word Sense Disambiguation			
IV.	▪ **Natural language Generation and Machine Translation** ▪ Natural Language Generation: Architecture of NLG Systems, Applications ▪ **Machine Translation:** Problems in Machine Translation ▪ Machine Translation Approaches- Evaluation of Machine ▪ Translation systems ▪ Case study: Characteristics of Indian Lang	Student Centric Learning: Flipping Classroom, Think Pair Share	Analyze various methodologies used in Machine Translation, and know about natural language generations with translation systems.	Weekly test, Assignments
V.	▪ **Information Retrieval and Lexical Resources** ▪ Information Retrieval: Design features of Information Retrieval Systems ▪ Classical, Non- classical, Alternative Models of Information Retrieval, ▪ Valuation Lexical Resources: Word Embeddings - Word2vec-Glove. ▪ Recommended Systems, Long short-term memory (LSTM), ▪ Linear Discriminant Analysis (LDA)	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Jigsaw	Understand Information Retrieval and Lexical resources	Assignments, Quiz

List of References (Book / ICT / Weblinks):

1. Speech and Language Processing, Daniel Jurafsky and James H., 2nd Edition, Martin Prentice Hall,2013.
2. Foundations of Statistical Natural Language Processing. Cambridge, MA: MIT Press, 1999.

SUGGESTED READING

1. Foundations of Computational Linguistics: Human-computer Communication in Natural Language, Roland R. Hausser, Springer, 2014.
2. Steven Bird, Ewan Klein and Edward Loper Natural Language Processing with Python, O'Reilly Media; 1 edition, 2009

Name of the faculty member & Signature: P DAYAKER

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: Master of Computer Applications **Class & Section: NMCA – IV SEM** **Course Code: MCA23402B**

Name of the Faculty Member: K S L PRASAD **Course Title: BIG DATA ANALYTICS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• What is Big Data? History of Data Management-Evolution of Big Data • Structuring Big Data, Elements of Big Data • Big Data Analytics, Careers and Future of Big Data • Importance and Scope of Big Data Jobs, Opportunities • Skill assessment, Roles, and Responsibilities in Big Data Jobs • Basic Educational and Technological Requirements for Big Data Jobs • Tools supporting Big Data	Lecture Method using ICT Tools: Chalk & Talk, Paper Presentation, Discussion based Learning	Understand Big Data and its analytics in the real world	Quiz, Assignments
II.	**Understanding Hadoop Ecosystem:** • Introducing Hadoop • Hadoop Ecosystem • Difference Between Client-Server and Distributed OS • Hadoop Distributed File System • Map Reduce, Hadoop Yarn, Introducing HBase • Combining HBase and HDFS • Hive, Pig and Pig Latin, Sqoop, Zookeeper, Flume and Oozie **Understanding MapReduce Fundamentals and Hbase** • The Map-Reduce Framework • Techniques to Optimize MapReduce Jobs • Uses of Map Reduce • Characteristics of HBase	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk	Understand the Hadoop Ecosystem. Design of Algorithms to solve Data-Intensive Problems using the Map Reduce Paradigm	Weekly Test
III.	**Understanding Hadoop YARN Architecture:** • Background and Advantages of YARN • YARN Architecture • Working of YARN, YARN Schedulers	Lecture-Based Teaching Flipping Classroom, Presentations, Chalk & Talk,	Design algorithms to solve Data Intensive problems using the YARN Map Reduce	Weekly Test and Online Test, Seminar

	• YARN Configurations • YARN Commands • YARN Container		paradigm.	
IV.	**Exploring HIVE:** • Introducing Hive • Getting started with Hive • Data Types and Built-in functions in Hive • Hive DDL • Data manipulation in Hive • Data Retrieval Queries • Using Joins in Hive	Lecture Method using ICT Tools: Chalk & Talk, Paper Presentation, Discussion based Learning	Develop skills in writing Hive queries and managing data with Hive.	Assignments, Quiz, Viva
V.	**Analyzing Data with Pig** • Introducing Pig, Running Pig • Getting Started with Pig Latin • Working with Operators in Pig • Working with Functions in Pig • Debugging Pig, Error Handling in Pig **NoSQL Data Management:** • Introduction to NoSQL • Types of NoSQL Data Models • Schema-Less Databases, Materialized Views • Distribution	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	write complex MapReduce transformations using a simple scripting language called Pig Latin Explain and compare different types of NoSQL Databases	Regular assessments, Quiz, Seminar

List of References (Book / ICT / Weblinks):

1. DT Editorial Services. 2016. Big Data Black Book. Dreamtech Press
2. Tom White, Hadoop: The Definitive Guide, 3rd Edition, O'Reilly

Suggested Readings

1. Chuck Lam, Hadoop in Action, MANNING Publication,2010.
2. Dirk deRoos, Paul C.Zikopoulos, Roman B.Melnyk, Bruce Brown, Rafael Coss, Hadoop for Dummies, Wiley Publication, 2014

Name of the faculty member & Signature: K S L PRASAD K.S.L. Prasad.

Approved by the Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: Master of Computer Applications **Class & Section: NMCA – IV SEM** **Course Code: MCA23402C**

Name of the Faculty Member: P VANDANA **Course Title: SOCIAL MEDIA ANALYTICS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Social Media and Its Importance • Various Social Media Platforms • Social Media Mining • Challenges for Social Media Mining • Social Media Mining Techniques	Lecture Method using ICT Tools: Discussion-based Learning: Presentation, Flipped Classroom.	Identify various platforms in social media.	Q&A, Assignments
II.	• Types of Social media Networks • Generic process of social media mining • Preprocessing and cleaning in R • Data Modeling Steps Sentiment Analysis • Steps in sentiment analysis • Business Case	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share, Chalk & Talk,	Understand processing of social media.	Online quiz

III.	Twitter: • Twitter and its importance • Understanding Twitters APIs • Collecting Twitter user features from APIs • Twitter vocabulary • Twitter sentiment analysis: Business Case	Lecture-Based Teaching Flipping Classroom, Presentations	Compare differences between twitter and other social media networks.	Weekly test, Assignments
IV.	Facebook: • Social network analysis and visualization • Getting face book page data • Trend analysis • Spam detection • Business Case Instagram: • Access Data from R • Building a dataset • Popular personalities • Finding most popular destination • Clustering the pictures • Recommendations to the users, Business case	Lecture-Based Teaching Flipping Classroom, Presentations	Analyze Facebook information and write business cases.	Group discussion
V.	More Social Media Websites: • Searching on social media, Accessing Product Reviews from Sites • Retrieving Data from Wikipedia, Accessing Data from Quora • Mapping Solutions from Google Maps • Professional Network Data from LinkedIn • Getting Blogger data	Lecture-Based Teaching Flipping Classroom, Presentations, Think Pair Share	Differentiate social media networks Instagram (i.e., usage of Instagram and data processing techniques also they will get idea)	Case Studies

List of References (Book / ICT / Weblinks):

1. Ravindran, Sharan Kumar. Garg, Vikram. 2015. Mastering Social Media Mining with R.
2. Social Media Data Mining and Analytics, Gabor Szabo, Gungor Polatkan, P. Oscar Boykin · 2018 Wiley publishers

Name of the faculty member & Signature: P VANDANA

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: ENGLISH **Class & Section: ACSCS** **Course Code: EN23101**

Name of the Faculty Member: ASHA JOHN **Course Title: GENERAL ENGLISH-1**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Short Story – The Mystery Story Present Tense Past Tense Future Tense Paragraph Writing	Lecture Method using ICT Tools	To learn about the fundamentals Of communication	Solving mixed tense exercises Narrating mystic experiences Writing paragraphs on various topics
II.	Poem – Goodbye Party for Miss Pushpa T.S. Subject- Verb Agreement Punctuations Review Writing	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Explanation of the poem by students Grammar exercises Film review writing
III.	Lesson – Wit and Humour Nouns and Articles Homophones, Homonyms, Homographs Note making	Lecture Method using ICT Tools	To identify the different types of nouns and articles in a sentence composition and to learn the correct usage and spelling of different words which spell or sound similar.	Character sketch of the story characters Grammar exercises like fill in the blanks, multiple choice and true or false.
IV.	Lesson – India's Contribution to World Unity Adverbs	Lecture Method using ICT Tools	To think critically, demonstrate an understanding of diverse cultures and historical	Description of the message conveyed by the author and its relevance in the day today world.

	Adjective and adverb Suffixes Formal letters and Curriculum Vitae		movements. To recognize the different parts of speech	Practice in Formal letter and Curriculum Vitae writing
V.	Lesson – Sachin Tendulkar Adjectives, Comparison of Adjectives Common Errors, Commonly misspelt words, Commonly Confused words	Lecture Method using ICT Tools	To write grammatically correct sentences and to identify different degrees of comparison.	Text book exercises and worksheets

List of References (Book / ICT / Weblinks):

1. Skills Annexe. Functional English for Success. Orient Black Swan

SUGGESTED READING:

- Balasubramaniam, M. 1985 Business Communication. New Delhi: Vani Educational Books.
- Krishna Mohan and Meera Banerjee, 1990. Developing Communication Skills. New Delhi: Macmillan India Ltd.
- Krishnaswamy.N. and Sriraman, T. 1995. Current English for Colleges. Madras: Macmillan India Ltd.
- Narayanaswamy.V.R. 1979 Strengthen Your Writing. New Delhi: Orient Longman.
- Sharma.R.and Krishna Mohan. Business Correspondence. 1978. New Delhi. Tata McGraw-Hill Publishing Co

Asha John

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - V

Department: B.Sc.Computer Science & Cyber Security

Class & Section:DCSCS

Course Code: CSCS23503

Name of the Faculty Member: Y. Rathna Deepthi

Course Title: Golang Programming

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introducing Go, Installing Go &Setting Up Your Environment, Writing Your First Go Program- Hello World, Data type-Static and Dynamic, Checking and converting between Types	Lecture Method using black board	To Learn about the importance and implementation of GO lang	Discussion on golang importance and Assignment on datatypes
II.	Operators- Types, Reading Input from User, Comments, Control Flow, Functions – User-defined and Built-in	Lecture Method using ICT Tools and black board	To differentiate between types of Operators and types of functions	Assignment on Operators
III.	Arrays ,Slices and Maps, Strings, Structs, Methods and Interfaces, Package	Lecture Method using ICT Tools	To understand arrays ,structures and its types	Discussion on user defined datatypes
IV.	Error Handling- Defer(),panic() and recover(), Logging, File Operations	Lecture Method using black board	To learn about error handling techniques and file operations	Writing programs for creating own errors using error package
V.	Understanding Concurrency, Concurrency vs Parallelism, Understanding Concurrency Through a Web browser, Handling Concurrent Operations with Goroutines, Hashing & Cryptography	Lecture Method using ICT Tools	To understand hashing and Cryptography	Seminars on hashing and Cryptography

List of References (Book / ICT / Weblinks):

1. Go Programming by Example, 1st Edition- Agus Kurniawan,2015
2. https://go.dev/doc/tutorial
3. https://youtu.be/-vjvyYvzS8I

Name of the faculty member & Signature: Y. Rathna Deepthi Deepthi

Approved by Head of the Department:

LOYOLA ACADEMY
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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: B.Sc Computer Science &Cyber Security

Class & Section:B.Sc

Course Code:49

Name of the Faculty Member: M.Sai Chitra

Course Title: Disaster recovery and risk management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to cyber secuirty, Cyber secuirty management concepts, threats and consequences	Lecture Method using Black Board & Chalk.	To understand need of cyber security	How to learn concepts of cyber secuirty components
II.	Strategic plan and secuirty plans	Lecture Method using Black Board & Chalk.	To Learn about field of security threats , vulnerabilities and consequences	How to use Strategic plan
III.	Risk management,risk strategies, security authentication	Lecture Method using Black Board & Chalk.	To Learn about cyber secuirty lifecycle,strategy for key factors in securtiy services	How to solve Risk management
IV.	Secuirty awarness, education,training	Lecture Method using ICT Tools, Black Board & Chalk.	To learn Secuirty awarness, education,training	How to give Secuirty awarness, education,training
V.	Security plan, future of cyber secuirty, cross domain training	Lecture Method using ICT Tools	To Learn about Security plan	How to improve the future of cyber security

List of References (Book / ICT / Weblinks):

1. Whiteman michael, E and Mattord herbert J ,Principlesand parctices of inforamtions security, 4th edition.
2. Rhodes- Ousley Mark. 2013 Information secuirty:the complete refeence, information security management concepts and practice, 2nd edition

Name of the faculty member & Signature:M.Sai Chitra Chitra

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: BSC Computer science and Cyber Security

Class & Section:DCSCS

Course Code: CSCS23501A

Name of the Faculty Member:N Manisha

Course Title: Steganography

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Steganography overview and history, methods for hiding ,steganalysis	Lecture Method using Ppts, ICT Tools	Basic concept of information hiding	Quiz, Discussion on methods for hiding in steganography
II.	Framework for secret communication, pure steganography	Ppt , ict tools	Current techniques of steganography	Assignment on pure steganography, secret keys and public keys
III.	Steganography techniques, cover selection and cover generation, detection and distortion, LSB embedding.	Ppt , ict tools	Analyze how to detect and extract hidden information	Discussion on texture based techniques, detection and distortion.
IV.	Digital watermarking , history, characteristics and applications, attacks and tools.	Ppts ict tool	Learning watermarking techniques	Discussion on digital watermarking techniques
V.	Watermark security and authentication , recent trends in steganography, case study of LSB embedding.	Ppts ict tool	Understanding Steganography with case studies	Presentations on watermark security & authentication, case study of LSB embedding, LSb steganalsis.

List of References (Book / ICT / Weblinks):

1. Disapperaning cryptography information hiding: Steganography& watermarking, Morgan Kaufmann publishers, New York.
2. Digital watermarking and steganography, Kaufmann publishers, New York.

Name of the faculty member & Signature: N Manisha

Approved by Head of the Department:

Internal Quality Assurance Cell *2023-2024*

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER V

Department:CSCS **Class&Section:DCSCS** **CourseCode: CSCS23502A**

Nameofthe FacultyMember: Bhanu sree S **CourseTitle: Cloud computing**

Unit	Topics to be covered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Eras of computing, parallel vs distributed computing .elements of parallel computing .elements of distributed computing technologies for distributed computing Rpc, distributed object framework	Ppts.flow charts, diagrams, ict tools	Explain differences of system models	Discussion on evolution of multiple processors and computing speed
II.	Introduction to cloud, benefits – scalability, vendors, Limitations, developing your own applications ,features of cloud platform , system models for advanced computing – clusters of cooperative computing , grid and cloud computing	Ppt ,real world examples of AWS,ict tools	Identify different types of clouds	Assignment on application of cloud .
III.	Architecture, Infrastructure and types of services ,Types of cloud, economics of cloud , cloud interoperability and standards, scalability and fault tolerance, security , trust and privacy and organizational aspects	Ppt ,ict tools, Architecture of clouds, diagrams	Classify public cloud platforms	Quiz on types of cloud . analyze the different architecture of clous
IV.	Introduction and characteristics of virtualized environments taxonomy of virtualization techniques : execution virtualization , other types of virtualization, virtualization and cloud computing , pros and cons of virtualization technology examples-	PPT, Ict tools	Analyze virtualization and data centre working procedure	Class activity on virtualization , hands on using AWS

	Xen: para virtualization, VMware, Microsoft Hyper V			
V.	Risks, consequences for cloud computing cloud certifications and audit , SLA with cloud service providers .Host security for SAAS, IAAS , PAAS. Data security in the cloud , application security in the cloud , security as a service	PPT, Ict tools	Choose a particular data security in the cloud	Presentations , Text book reading , summarizing the importance of cloud

Listof References (Book/ICT/ Weblinks):

1. Buyya Raj kumar Mastering Cloud computing
2. Cloud computing Dream tech press
3. https://docs.aws.amazon.com/

Nameofthefacultymember&Signature: S.Bhanu Sree

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

ODD SEMESTER

Department: BSC computer science and cyber security **Class & Section: DCSCS** **Course Code:**CSCS23505

Name of the Faculty Member: Ch. SRIYA **Course Title:** DATABASE TECHNOLOGY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction, data base applications and purpose • View of data, data base languages-DDL,DML • Data base architecture, users and administrators • Design process overview, Entity relational ship model, Constraints • ER diagrams, design issues, weak entity sets • Extended ER features	Interactive Learning Problem-Solving, Coding Challenges, Lecturing using traditional methods	To design a database and enforce Integrity Constraints to keep database consistent Represent logical database using Entity Relationship and Enhanced ER model	Quiz, PPT presentation for students and small assignments, problem solving methods
II.	• Structure of Relational model, Reduction to schema • Relational algebra- union, project, select and other operations • SQL- data definition, structure, set operations, Aggregate functions • Modification of data base, Nested sub queries, views, Joins and Null values • Introduction to Normalization, 1NF, 2NF and 3NF, BC	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools	Formulate database using relational algebra and organize using normalization. Gain proficiency in the relational model's structure, relational algebra operations, and SQL for data definition, manipulation, and querying.	Regular Assessments group discussion on programming and PPT presentation, problem solving methods

III.	• Introduction, Programming, Functions and Procedures • Triggers, Cursors-implicit, explicit • Error handling in PL/SQL • Transactions- concepts, states • Concurrent executions, Serializability • Recoverability, Testing for Serializability • Concurrency control, lock based protocols, locks and granting locks • Two Phase locking and dead lock handling	Interactive Learning Problem-Solving, Coding Challenges, lecture based teaching using ICT tools, Lecturing using traditional methods	Develop programs using PL/SQL and the need for Transaction. Develop proficiency in PL/SQL programming, encompassing functions, procedures, triggers, error handling, transactions, concurrency control, and recovery mechanisms	Regular Assessments, self-coding techniques and gaining ideas to develop the code
IV.	• Homogeneous and Heterogeneous Databases, Distributed Data Storage,Distributed Transactions, Commit Protocols. • Getting Started with NoSQL • History, Introduction and need of NoSQL • NoSQL Databases • SQL versus NoSQL, ACID vs HBASE • CAP theorem • Key value pair, Document, Column family and Graph database	Lecture-Based Teaching Flipping method-review materials independently before class	Explain the need for NOSQL and its characteristic. Gain understanding of distributed databases, NoSQL fundamentals, and the distinction between SQL and NoSQL databases, including the CAP theorem and various NoSQL database types like key-value, document, column-family, and graph databases.	Regular Assessments, PPT presentation and active learning in coding. problem solving methods
V.	• Schema less databases, Materialized views, • Distribution Models: Single Server, Sharding, Master-Slave Replication, Peer-to-Peer Replication, Combining Sharding and Replication • Introduction, Terms used in MongoDB and RDBMS • CRUD operations- create, drop database, data types, Arrays • Arrays, aggregate function, map reduce framework, cursors • Indexes, MongoImport, MongoExport, Automatic generation	Lecture Method using ICT Tools Lecture-Based Teaching	Implement document databases such as MongoDB Students will gain proficiency in schema-less databases, distribution models, CRUD operations, and MongoDB/RDBMS comparisons, enabling them to work with diverse data management systems effectively.	Regular Assessments, seminars and developing new simple projects, problem solving methods

	of unique Numbers for the _id field			

List of References (Book / ICT / Weblinks):

1. Korth Henry, F. SilberSchatz Avi. And Sudarshan, S. 2021. Database System Concepts. 7 th Edition. Noida: McGraw-Hill. UNIT I,II and I
2. Acharya, Seema. 2020. Demystifying NoSQL. 1 st Edition. Wiley Emerging Technology Series. India: New Delhi. UNIT-IV,V
3. Sadalage, Pramod J and Fowler, Martin. 2013. NoSQL Distilled. Addison Wesley. Pearson Education. (UNIT -V-S.no 1,2)

Name of the faculty member & Signature: Ch. Sriya ,

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

ODD SEMESTER

Department: BSC computer science and cyber security

Class & Section: DCSCS

Course Code: CSCS23501B

Name of the Faculty Member: Ch. SRIYA

Course Title: SECURE E-COMMERCE

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction to E-Commerce: Defining Commerce, Broad Goals of Electronic Commerce • Main Components of E-Commerce, Functions of E Commerce • Types of E-Commerce; Role of Internet and Web in E Commerce • Technologies used; Pre-Requisites of E-Commerce • Process Management, Service Management • Process of E-Commerce	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Students will gain a solid understanding of electronic commerce, its main components, and functions. They will also identify various e-commerce types, the pivotal role of the internet and web, and the essential technologies and prerequisites for e-commerce. Additionally, students will explore process management and service delivery, comprehending the holistic e-commerce process.	Quiz, interactive methods like group discussion and PPT presentations
II.	• E-Security: Security on the Internet; Network and Website Security Risks • Network and Website Security, Transaction Security and Data Protection • Security Audits and Penetration Testing, E- Business Risk Management Issues • Defining Enterprise Wide Security Frames	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Students will understand internet security, network, and website security risks, as well as transaction security and data protection measures. You'll also gain insights into security audits and penetration testing, along with e-business risk management strategies, culminating in the ability to define enterprise-wide security frameworks for comprehensive online security.	Debate, Interactive methods like group discussion and PPT presentation, Online Courses and Certification ions.

III.	• E-Payment Systems: Electronic Funds Transfer • Digital Token Based E-payment System, • Steps for Electronic Payment; Payment Security, Net Banking, Online Commercial Environments; • Digital Currencies and Payment Systems, Private Data Networks, Security Protocols. • Digital Payment Systems- First Virtual Internet Payment System, Cyber Cash Model. • On-Line Commerce Environments ,E-Commerce Servers	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Grasp the fundamentals of e-payment systems and electronic funds transfer. You'll learn about digital token-based e-payment methods and steps for secure electronic payments in online commerce environments. Additionally, you'll explore digital currencies, payment systems, and security protocols, along with insights into pioneering models like the First Virtual Internet Payment System and Cyber Cash Model.	Online Courses and Certification, Real-world Case Studies, Regular assessments
IV.	• Electronic Data Interchange: Benefits of EDI, Technology and Standards • EDI Communications, Agreements, Implementations and EDI Security • Need of Electronic payment System, Study and Examine the use of Electronic payment system and the protocols used • Study Electronic Fund Transfer and Secure Electronic Transaction Protocol for Credit Card Payment • Digital Economy: Identify the methods of payments on net • Electronic Cash ,cheques and Credit card system	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Flipping method-review materials independently before class	Students will understand the advantages of Electronic Data Interchange (EDI), including its technology and standards. They'll grasp the concepts of EDI communications, agreements, and security, and explore the need for electronic payment systems and their protocols. Furthermore, they'll study Electronic Fund Transfers and Secure Electronic Transaction Protocols for credit card payments and identify various methods of online payments in the digital economy, including electronic cash, checks, and credit card systems	Real-world Case Studies, Regular assessments, Security Case Studies
V.	• Operational process of DigiCash, eCash Trail • Using eCash-; Smart cards • Electronic Data Interchange: basics, EDI versus Internet and EDI over Internet	Lecture Method using ICT Tools Lecture Method, Discussion based Learning	Understand the operational process of DigiCash and the eCash trail in digital payment systems. Explore the use of eCash,	Real-world Case Studies, Seminars and active learning, Regular assessments

	• Strategies, Techniques and Tools-, Shopping Techniques and Online Selling Techniques • Implementation of E-Commerce: WWW.EBAY.COM - B2C Website - Registration. • Time Factor, Bidding Process. Growth of eBay, PayPal - New Trend in Making Payments Online; National Electronic Funds Transfer.	Flipping method-review materials independently before class	particularly with smart cards, in e-commerce transactions. Comprehend electronic data interchange (EDI) basics, differentiating EDI from Internet-based systems and EDI over the Internet, while also learning strategies and techniques for online shopping and selling.	

List of References (Book / ICT / Weblinks):

1. Elias. M. Awad,2001. Electronic Commerce, Prentice-Hall of India Pvt Ltd.
2. Ravi Kalakota, Andrew B. Whinston, 1997. Electronic Commerce-A Manager's guide, Addison-Wesley.
3. Efraim Turban, Jae Lee, David King, H.Michael Chung, 2002. Electronic Commerce-A Managerial Perspective, Addison-Wesley

Name of the faculty member & Signature: Ch. Sriya.

Approved by Head of the Department:

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

ıing Plan for the Academic Year 2023 – 2024

SEMESTER III

Department: B.Sc Computer Science &Cyber Security

Class & Section:B.Sc

Course Code:49

Name of the Faculty Member: M.Sai Chitra

Course Title:Principles of information security

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Information security,NSTISSC, SDLC	Lecture Method using ICT Tool& Black Board & Chalk.	To understand CIA in information security	How to use CIA
II.	Need for security , threats,attacks	Lecture Method using ICT Tools	To Learn about risks, assess and risk control strategies	How to use security
III.	Firewall, catergories, VPN	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about firewall architecture	How to use firewall ;VPN
IV.	IDPS,honeypots,honeynets	Lecture Method using ICT Tools, Black Board & Chalk.	To explore different types of IDPS	How to use IDPS
V.	Overview of steganography, SSL,WEP,WPA	Lecture Method using ICT Tools	To Learn about secure communication	How to use steganography

List of References (Book / ICT / Weblinks):

Whiteman michael, E and Mattord herbert J ,Principlesand parctices of inforamtions security, 4th edition.

Name of the faculty member & Signature:M.Sai Chitra

Approved by Head of the Department:

LOYOLA ACADEMY
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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER III

Department: B.Sc Computer Science &Cyber Security **Class & Section:B.Sc** **Course Code:49**

Name of the Faculty Member: M.Sai Chitra **Course Title:Python Programming**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Basics of python programming, operators,expressions,decsion control statements	Lecture Method using Black Board & Chalk.	To understand basics of python programming constructs	How to learn python
II.	Functions, modules,recursive functions,packages	Lecture Method using Black Board & Chalk.	To Learn about need for functions	How to use functions
III.	Python string, regular expression, data structures	Lecture Method using Black Board & Chalk.	To Learn about data structures for problem solving	How to use data structures
IV.	Classes and objects,data members, inheritance,operator overloading	Lecture Method using ICT Tools, Black Board & Chalk.	Tolearn OOP features for problem solving	How to use OOP
V.	Error and exception handling, file han dling, reading and writing files	Lecture Method using ICT Tools	To Learn about Error and exception handling	How to solve Error and exception handling

List of References (Book / ICT / Weblinks):
Thareja ,Reema. 2017 Python Programming 3rd edition
Name of the faculty member & Signature:M.Sai Chitra

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-III

Department: Environmental Science **Class: NCSCS** **Course Code:ES23301**

Name of FacultyMember:S.BALACHANDAR **Course Title: EVS&GS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable & Non Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of naturalresources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earth quakes, and Cyclones**	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge onsolid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	**Rain-Water Harvesting, Water-shed Management** **Global Warming Ozone depletion, and Acid rains Environmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	Lecture Method using ICT Tools and Board	Apply the environmental science knowledge to improve the resources Evaluate and understand the sustainable environmental conditions and control methods	Oral question and answers To understand the environmental policies and regulations

IV.	**Why should we study gender issues?** **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	Lecture Method using ICT Tools and Board	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	Oral question and answers To develop students' sensibility with regard to issues of gender in contemporary India
V.	**Sexual harassment** **Say no eve teasing** **The caste based violence** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act(2005)**	Lecture Method using ICT Tools and Board	Understand the gender problems and ways of addressing them, including interactionsacross local to global scales in communities and overcome inequalities with legislation	Oral question and answers To expose the students to debate on the politics and economic works and on gender violence

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition.Chennai: Oxford University Press.

Dr D K Asthana and Dr Meera Asthana. 2014.

2.**A Text Book of EnvironmentalStudies** Revised Edition. New Delhi: S. Chand & Company

3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomen in the Telangana People's Struggle**. New Delhi: Kali for Women.

4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.**Hyderabad: National Institute of Nutrition, Indian Council of Medic Research .1993

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

ODD SEMESTER

Department: BSC computer science and cyber security

Class & Section: NCSCS

Course Code:CSCS21302

Name of the Faculty Member: Ch. SRIYA

Course Title: Cryptographic Algorithms

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Symmetric cipher model • Substitution Techniques-Caesar Cipher, Mono alphabetic cipher, Play fair cipher, Hill cipher, Polyalphabetic cipher, Transposition Techniques • The DES encryption, • Details of Single Round, Key Generation • DES Decryption, • The Avalanche Effect, • The Strengths of DES	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Problem-Based Learning (PBL)	Identify information security goals, classical encryption techniques and acquire fundamental knowledge on the concepts of finite fields and number theory. Learning about symmetric cipher models, like DES, and various encryption techniques (substitution and transposition) is crucial for a foundational understanding of cryptography.	Quiz, Solving Problems using interactive teaching section.
II.	• Multiple Encryption and Triple DES Key Distribution, Random Number Generation • The principles of public-key cryptosystems and essential steps of Public key Cryptosystems, Public key encryption to provide Authentication, Applications of Public key cryptosystems, Requirements for public-key cryptography, Public-key cryptanalysis • The RSA algorithm-Description of algorithm, computational Aspects,	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools Problem-Based Learning (PBL)	Apply Public Key Cryptographic Technique for securing messages Studying multiple encryption, like Triple DES, enhances data security. Understanding key distribution and random number generation is essential for cryptographic applications. Exploring public-key cryptosystems, their principles, and steps enables authentication.	Quiz, interactive methods like group discussion and PPT presentations.

	Key generation and Security of RSA			
III.	• Distribution of public keys, public announcement of Public keys, publicly available directory, public-key Authority, public-key Certificates, Distribution of secret keys using public-key cryptography • Diffie-Hellman key exchange • Authentication Requirements, Authentication Functions-Message Encryption, Message Authentication code. • Hash Functions-Requirements for a hash function, Simple Hash Functions, Birthday Attacks, Block Chaining Techniques • Security of Hash functions and MACS-Brute-force attacks, Message Authentication codes	Lecture-Based Teaching Flipping method-review materials independently before class Lecture Method using ICT Tools Problem-Based Learning (PBL)	In these topics, you'll learn about distributing public keys and using public-key authorities and certificates for secure communication. You'll understand the Diffie-Hellman key exchange for secure key negotiation. Additionally, you'll explore authentication, covering message encryption, message authentication codes (MACs), and hash functions, along with their security requirements and vulnerabilities. Use an appropriate message authentication code.	Interactive methods like group discussion and PPT presentations, problem solving methods
IV.	• Secure Hash Algorithm (SHA), • MD5 Algorithm. • Kerberos, X.509 Authentication Services • Digital Signatures • Whirlpool	Lecture Method using ICT Tools Lecture-Based Teaching	In these topics, you will learn about cryptographic hash functions like SHA and MD5, gaining an understanding of their applications. You'll explore authentication services such as Kerberos and X.509, uncovering their role in user verification in network environments. Compare the performance of different message digest algorithms for verifying the integrity of varying message sizes	Interactive methods like group discussion and PPT presentations,
V.	• E –Mail System • Pretty Good Privacy, S/MIME. • Overview, Architecture, Authentication Header, Encapsulating security payload, • combining security associations, key	Lecture Method using ICT Tools Lecture-Based Teaching Flipping method-review materials	Encryption methods like Pretty Good Privacy (PGP) and Secure/Multipurpose Internet Mail Extensions (S/MIME). Furthermore, you'll explore the basics of IPsec, including its	Interactive methods like group discussion and PPT presentations, seminars by students.

	management • Modes of IPSEC • Web Security Considerations , Secure Socket Layer (SSL) and Transport Layer • Security (TLS), Secure Electronic Transaction	independently before class	architecture, authentication headers, encapsulating security payload, and modes of operation, improving your understanding of network security. Compare different IEEE standards and electronic mail security	

List of References (Book / ICT / Weblinks):

1. Stallings, William. 2005. Cryptography and Network Security Principles and Practices. 4 th Edition. New Delhi: Prentice Hall of India.
2. Forouzan, Behrouz A. 2008. Cryptography and Network Security. Special Indian Edition. New Delhi: Tata McGraw-Hill.

Name of the faculty member & Signature: Ch. Sriya, Sriya

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - III

Department: B.Sc.Computer Science & Cyber Security

Class & Section: NCSCS

Course Code: CSCS22303

Name of the Faculty Member: Y. Rathna Deepthi

Course Title: Server Administration

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Linux based Server operating system, Editions of Fedora Media types, Processor and Architecture types, Installing Fedora, Opening graphical applications from the Command line and Desktop Menu, System Locale and Keyboard Configuration, Using the timedatectl command, date command and hwclock command, Managing Users and Groups(Graphical and Command Line)	Lecture Method using black board	To learn about installation of Linux and User administration	Writing commands for managing time and date on fedora server and Assignment on editions of fedora and media types
II.	The su command, sudo command Package management-DNF, Infrastructure Services- Services and Daemons, Checking the service status, running, stopping and restarting a service, Configuring VNC Server for Two users, Starting and Terminating a VNC Session	Lecture Method using ICT Tools and black board	To learn about the use of sudo and configuring VNC	Discussion on different services
III.	The Apache HTTP Server- Running the httpd service, Editing the configuration files, Mail Servers- Email Protocols- SMTP,POP and IMAP, Email Program Classification- MTA,MDA,MUA	Lecture Method using black board	To learn about the configuration of http and mail server	Quiz on Email protocols

IV.	File and Printer Servers- samba, Introduction to Samba Services, Connecting to Samba Share, Mounting the Share, Configuring a Samba Server, Open LDAP – Introduction and Terminology	Lecture Method using ICT Tools	To know about the configuration of samba and LDAP	Discussion on samba server
V.	System Monitoring tools- ps command, top command, System Monitor tool, rsylog, Viewing and Managing Log files, Automating System tasks using Cron and Anacron, Introduction to Network Time Protocol	Lecture Method using ICT Tools	To learn about the concepts of Infrastructure services	Seminar on system monitoring tools

List of References (Book / ICT / Weblinks):

1. A Practical Guide to Fedora and Red Hat Enterprise Linux,7th Edition – Sobell Mark, G 2014
2. https://jfearn.fedorapeople.org/fdocs/en-US/Fedora_Draft_Documentation/0.1/html/System_Administrators_Guide/ch-Opening_GUI_Applications.html

Name of the faculty member & Signature: Y. Rathna Deepthi Deepthi

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: BSC Computer science and Cyber Security

Class & Section:NCSCS

Course Code: CSCS22301

Name of the Faculty Member:N Manisha

Course Title: Ethical Hacking

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Information security overview, hacking concepts, footprinting methodolgy and tools	Lecture Method using Ppts, ICT Tools	Understand essential terminology and phases of hacking	Quiz, Discussion on security Threat, types of hackers
II.	Network scanning, various scanning techniques, banner grabbing	Ppt , ict tools	Identify different types of scanning methods	Assignment on types of scanning methods
III.	Vulnerability scanning, proxies, ip spoofing, scanning pen testing, sniffing concepts	Ppt , ict tools	Analyze how to perform IP spoofing	Discussion on proxies , ip spoofing, mac attack
IV.	Sniffing tools, countermeasures, social engineering techniques and Insider Threat	Ppts ict tool	Understanding sniffing and social engineering concepts and techniques	Discussion on Social Engineering techniques
V.	Dos and ddos attacks, botnet network, session hijacking	Ppts ict tool	Understanding Session hijacking and dos DDos techniques	Presentations on session hijacking.

List of References (Book / ICT / Weblinks):

1. **Ethical hacking and countermeasure V9, by EC-Council.**
2. **Mc Clure, Stuart, Scambray, Joel and Kuetz, George,2009. Hacking Exposed. 7th edition, New Delhi, McGraw Hill.**

Name of the faculty member & Signature: N Manisha

Manisha

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year

2023–2024 SEMESTER I

Department: CSCS | **Class &Section: ACSCS** | **Course Code: CSCS21102**

Name of the Faculty Member: Muskan Goyal | **Course Title: Mathematical Foundation for Cyber Security**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	The basics of Logic Statements, Compound Statements, Logical Equivalence(Tautology-Contradiction-Contingency), Constructive Proofs, Direct proof, Indirect and contrapositive proof	Board	Constructs simple mathematical proofs and possess the ability to verify them.	Problem Solving using Truth Tables.
II.	Basics of Counting, Permutations and Combinations(with and without repetitions), Derangements, Circular Permutations, Combinatorial Proofs, Principle of Inclusion-Exclusion and its applications.	Board	Apply basic counting techniques to solve combinatorial problems.	Assignments
III.	Recurrence Relations, Solving linear homogeneous recurrence relation (by substitution method, generating functions and method of characteristic roots), Solving non-homogeneous recurrence relations.	Board	Solve problems using recurrence relations and recursion to analyze algorithms and programs such as finding Fibonacci numbers and Tower of Hanoi problems.	Group Discussions
IV.	Rank Of a Matrix, Rank-Echelon Form , Normal form—Solution of Linear Systems, Homogeneous and Non-Homogeneous Equations.	Board	Understand to find the rank of a matrix and to solve systems of linear equations applying matrix techniques.	Presentations

V.	Eigenvalues-Eigenvectors Properties, Cayley-Hamilton Theorem (Without Proof), Inverse and powers of a matrix by using Cayley-Hamilton, Quadratic Forms-Reduction Of Quadratic form to canonical form	Board	Determine Eigenvalues And Eigenvectors of a given matrix and to apply these concepts to quadratic forms.	Assignments.

Listof References (Book/ICT/ Weblinks):

1. Discrete Mathematics for Computer Scientists & Mathematicians. 2/e. Mott, Kandel, Baker
2. Matrices By Alt Vasishtha Krishna Prakashan Inandir

Nameofthefacultymember&Signature: Muskan

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - I

Department: B.Sc.Computer Science & Cyber Security

Class & Section: ACSCS

Course Code: BS21104

Name of the Faculty Member: Y. Rathna Deepthi

Course Title: Problem Solving and Programming through C

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to C programming, Structure of C program, Files used in a C program, Compiling and Executing C program, C Tokens, Constants, Character set in C, Keywords, Identifiers	Lecture Method using black board	To Learn the basic Concepts of C programming	Discussion on C language an its structure and Assignment on C language,structure of C program
II.	Datatypes in Enumerated datatypes, typedef, Variables and scope of a variable, Data input and output statements in C, Operators and Expressions, Type Conversion and Type Casting, Conditional Branching Statement- if, if-else, if else-if, switch case	Lecture Method using black board and ICT tools	Develop programs using C Control Structures	Solving problems by writing programs using C language
III.	Iterative statements- while loop, do-while loop, for loop, Nested loops, break and continue statements, goto statement, Arrays- Single and double dimensional arrays, String- string input-output functions, String manipulation functions	Lecture Method using black board and ICT tools	Organize data using arrays and Strings	Discussion on arrays and strings & Test on looping statements
IV.	Function – Declaring, defining and invoking functions, Categories of functions-Built-in functions	Lecture Method using black board	Sub dividing larger problems into smaller ones using C functions	Quiz on pointers and Discussion on storage classes.

	Passing parameters to functions - Call by value & Call by reference, Storage classes, Recursion, Pointers - Declaration, passing pointer to functions, Pointers and one-dimensional arrays, Dynamic memory allocations			
V.	Structures- Simple structures, nested structure, Array of structures Unions- Difference between structure and Unions, File handling- various modes, File operations-fopen(), fclose(),File input output functions - fputc(),fgetc(),fputs(),fgets(),getw(),putw(),getc(),putc(),fprintf(),fscanf(),getchar(),putchar() &Random Accessing file-fseek(),ftell(),rewind()	Lecture Method using ICT Tools	Create programs using the concept of structures, union and file handling in C	Group Discussion on files and their operations

List of References (Book / ICT / Weblinks):

1. Programming in C, 2nd Edition – Thareja Reema
2. https://youtu.be/EjavYOFoJJ0?si=pZ_BQVxNk3V5TNTk
3. https://www.programiz.com/c-programming/

Name of the faculty member & Signature: Y. Rathna Deepthi R.Deepthi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: BSC Computer science and Cyber Security

Class & Section:ACSCS

Course Code: CSCS21101

Name of the Faculty Member:N Manisha

Course Title: Computer Fundamentals

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Primary memory, main memory, secondary storage devices,history and classification of a computer	Lecture Method using Ppts, flowcharts, ICT Tools	Understand various I/O devices and functionality of computer	Quiz, Discussion on storage devices
II.	Pipelining and parallel processing, types of processors,binary number system, octal number system, hexadecimal number system conversions	Lecture method using board	Solve arithmetic operations using different types of number system	Assignment of different types of number system conversions
III.	Data and file organixation, file oriented approach, components of dbms, database models.	Ppt , ict tools	Understand the concept of Data Organization	Discussion of data and file organization
IV.	Internet history, intranet, extranet,ip address types, dns, url,internet services,types of internet connections.	Ppts ict tool	Understand the concepts of internet, services provided by internet.	Activity on internet services
V.	Design and implementation of programs, program design tools,popular high level languages, generations of programming languages.	Ppts ict tool	Concept of problem solving using computers and understanding the importance of programming languages	Presentations, quiz, understanding the importance of programming languages.

Thareja Reema. 2020. Fundamentals of computers, 2nd Edition

Name of the faculty member & Signature: N Manisha

Manisha

Approved by Head of the Department:

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ıing Plan for the Academic Year 2023 – 2024

SEMESTER I

Department: B.Sc Computer Science & Cyber Security | **Class & Section:B.Sc** | **Course Code:49**

Name of the Faculty Member: M.Sai Chitra | **Course Title:IT Hardware aand networking**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to motherboard and its components	Lecture Method using ICT Tools,	To identify motherboard and its components	How to use right motherboard
II.	SMPS,UPS,RAM & ROM,Raspberry pi	Lecture Method using ICT Tools	To Learn about hardware devices	How to use hardware devices
III.	Computer networks,network devices,data transmission modes	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about computer network	How to use computer network
IV.	Switches, hub, LAN,routers,modem	Lecture Method using ICT Tools, Black Board & Chalk.	To explore different networking devices	How to use network devices
V.	Overview of UBUNTU operating system	Lecture Method using ICT Tools	To Learn about ubuntu operating systems	How to use ubuntu OS

List of References (Book / ICT / Weblinks):

1. Mueller scott, M.2015. Upgrading and repairing PC's. 22nd edition.USA Person education.
2. Thareja ,Reema 2020.Fundamentals of computer. 2nd edition. Oxford higher education

Name of the faculty member & Signature:M.Sai Chitra

Approved by Head of the Department:

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Teaching Plan for the Academic Year 2023 –24 2024

SEMESTER

Department: BSc. Computer Science and Cyber Security

Class & Section: ACSCS

Course Code: VE18001

Name of the Faculty Member: Larissa Sequeira

Course Title: Value Education and Personality Development

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Ethics	Lecture Method	To Learn to differentiate between accepted and Counter norms and to be able to identify the various Dimensions of Human Development	Group discussion to understand the value system in the society.
II.	Approach to Life	Lecture Method	To Learn to demonstrate Love and experience of God and to be able to identify the Basic issues of Life and the Happiness as Life's goal.	Debate on the topics covered
III.	Concern for others	Lecture Method	To Understand the importance of concern for others and critic the various problems that deter the growth of the society	Scenario discussion
IV.	Transformation of Self	Lecture Method	To be able to recognize the traits of a good personality and practice self exploration	Self reflection and discovery of one's true self.
V.	Life Enrichment Skills	Lecture Method	To learn to be able to interpret the purpose of life and goal setting and demonstrate self management.	Exploring of personal skills through peer discussions.

List of References (Book / ICT / Weblinks):

1. Human Values – Development Programme – AIACHE

2. In Harmony – Value Education at College level. By a Team of Ethics Teachers (G.M. James , B.J JAYARAJ , K.CANDASSAMY, BERNARD D'SAMI , S.J.A PACKIARAJ)

Name of the faculty member & Signature:
Mrs. Larissa Sequeira



Approved by Head of the Department:

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: B.Sc Computer Science & Cyber Security **Class & Section:B.Sc** **Course Code:39**

Name of the Faculty Member: S.Lakshmi **Course Title:Web Application Testing**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Evolution of Web Applications.Handling Attackers,Managing the applications	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Web application,handling Attackers	How to use Web applications
II.	HTTP, Web Functionality	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Protocols of HTTP	How to useHTTP Protocols with codes
III.	Attacking Authentications, Flaws in authentication	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Attacking the Authentication	How to cattack authentication
IV.	Attacking Data Stores,Finding SQL injection Bugs	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Attacking Data Stores,Finding SQL injection Bugs	How to attack data and to find SQL Injection
V.	Attacking Application Logic	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about XSS	How to use XSS

List of References (Book / ICT / Weblinks):

1. Gupta,Richa.2021.Hands-on Penetration testing for Web applications.1st edition.BPB Publications,India:New Delhi

Name of the faculty member & Signature:S.Lakshmi

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: B.Sc Computer Science & Cyber Security **Class & Section:B.Sc** **Course Code:39**

Name of the Faculty Member: S.Lakshmi **Course Title:Web Technologies**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to HTML,Formatting tags,Images,Hyperlink,Frames,Forms	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Introduction to HTML,Forms and frames	How todesign the web page
II.	Introduction to CSS	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about cascading Style sheet	How to use CSS
III.	Introduction to Java Script	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Java script dataypes.Functions, operators. Control Structures	How to create web page using java script
IV.	Introduction to XML	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about XML applications	How to create XML applications
V.	Introduction to PHP	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about PHP Functions,cookies,Database access	How to Design web page using PHP

List of References (Book / ICT / Weblinks):

1. Sebesta, Robert W.2008.Programming the world wide web.4th Edition.New delhi: Pearson Education

Name of the faculty member & Signature:S.Lakshmi

Approved by Head of the Department:

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER II

Department: B.Sc Computer Science & Cyber Security **Class & Section:B.Sc** **Course Code:39**

Name of the Faculty Member: S.Lakshmi **Course Title:C++ and Data Structures**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introductionto object oriented Programming	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Introduction to OOPs ,Keywords,datatypes,Functions & Classes	How to use classes and objects in C++
II.	Constructors, Inheritance,Pointers and Templates	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Constructors,Overloading,Pointers	How to use pointers and constructors
III.	Data Structures,Stack,queue	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Stacks & Queues	How to create insert and delete an element from stack and queue
IV.	Linked List,Sorting	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Linked List,various techniques of Sorting	How to create Linked List and sorting the elements using different techniques.
V.	Trees & Graphs	Lecture Method using ICT Tools, Black Board & Chalk.	To Learn about Trees Traversal and Graph traversal	How to Insert and Delete a node from trees and graphs

List of References (Book / ICT / Weblinks):

1. Balaguruswamy,E.2008.Object oriented programming with C++,4th edition.New Delhi:Tata MC graw-Hill Publications.
2. Kanetkar Yashwanth,P.2007.Data Structures through C++.2nd edition.New Delhi:BPB publications

Name of the faculty member & Signature:S.Lakshmi

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

EVEN SEMESTER

Department: BSC computer science and cyber security **Class & Section: DCSCS** **Course Code: CSCS23603**

Name of the Faculty Member: Ch. TEJA SRIYA **Course Title:** DATABASE SECURITY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Importance of database security • Common threats and challenges on Databases • Data Protection tools and platform • Database security best practices • Database security solutions • Database security and General Data Protection Regulation	Interactive Learning Problem-Solving, Coding Challenges, Lecturing using traditional methods	To design a database and enforce Integrity Constraints to keep database consistent Represent logical database using Entity Relationship and Enhanced ER model	Quiz, PPT presentation for students and small assignments, problem solving methods
II.	• Operating system security environment from a database perspective • Components of an operating system security environment • Differences between authentication methods • User administration best practices • Strong password policies, operating system vulnerabilities, • security risk in e-mail services	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools	Formulate database using relational algebra and organize using normalization. Gain proficiency in the relational model's structure, relational algebra operations, and SQL for data definition, manipulation, and querying.	Regular Assessments group discussion on programming and PPT presentation, problem solving methods
III.	• Operation system Authentication. • Creating users, • Removing users, • Modify users. • Database, Remote users authentication • Database link, authentication links • Security Auditing	Interactive Learning Problem-Solving, Coding Challenges, lecture based teaching using ICT tools, Lecturing using traditional methods	Develop programs using PL/SQL and the need for Transaction. Develop proficiency in PL/SQL programming, encompassing functions, procedures, triggers, error handling, transactions, concurrency control, and recovery mechanisms	Regular Assessments, self-coding techniques and gaining ideas to develop the code

	• Define and use a profile, Design and implement password policies • Implementation of password policies • Grant and revoke user privileges , Create, assign, and revoke user roles			
IV.	• Define virtual private database ,Necessity of VPD, Implementation of VPD , • Problems of VPD • Implementing a virtual private database by using the VIEW database object • Data dictionary to view virtual private database • Policy Manager to view virtual private database • Implementing row-level and column-level security • Launch SQL injection attacks , Countermeasures	Lecture-Based Teaching Flipping method-review materials independently before class	Explain the need for NOSQL and its characteristic. Gain understanding of distributed databases, NoSQL fundamentals, and the distinction between SQL and NoSQL databases, including the CAP theorem and various NoSQL database types like key-value, document, column-family, and graph databases.	Regular Assessments, PPT presentation and active learning in coding. problem solving methods
V.	• Action Auditing Architecture and DML changes • fine-grained auditing , DML statement audit trail, Data manipulation history • DML statement auditing using a repository, application errors auditing • Database as a service • Challenges in outsourced database,Merke Hash Tree,Data confidentiality: relational encryption	Lecture Method using ICT Tools Lecture-Based Teaching	Implement document databases such as MongoDB Students will gain proficiency in schema-less databases, distribution models, CRUD operations, and MongoDB/RDBMS comparisons, enabling them to work with diverse data management systems effectively.	Regular Assessments, seminars and developing new simple projects, problem solving methods

List of References (Book / ICT / Weblinks):

1. Hassan A. Afyouni, 2013. **Database Security and Auditing: Protecting Data Integrity and Accessibility,** Thomson Course Technology (c2006).
2. Ron Ben-Natan,2009. **Secure and Audit Oracle 10g and 11g** Auerbach Publications; 1 edition ISBN-10: 1420084127 ISBN-13: 978- 1420084122
3. Natan,2022. **Implementing Database Security and Auditing** 1St Edition, Elsevier India.

Ch. TejaSriya.

Name of the faculty member & Signature: Ch. Sriya

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- II

Department: B. Sc, Computer Science & Cyber Security

Class : ACSCS

Course Code:IC-23101

Name of the Faculty Member:Dr.K.Musalaiah

Course Title: Indian Heritage and Culture

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation

IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the constitution.	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Hai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr.K.Musalaiah

Approved by Head of the Department:

Mrs.Sunindita Pan

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

EVEN SEMESTER

Department: BSC computer science and cyber security

Class & Section: NCSCS

Course Code: CSCS21405

Name of the Faculty Member: Ch. TEJA SRIYA

Course Title: NETWORK SECURITY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Network Security Principles-Need of Security Data, Vulnerabilities, and Countermeasures Data Classification, Adversaries, Methodologies, and Classes of Attack Security Policies Principles of Secure Network Design Secure Network LifeCycle Management	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Problem-Based Learning (PBL)	This course equips students with essential knowledge of network security principles, covering data classification, vulnerabilities, adversaries, and attack classes. Through understanding security policies and secure network design principles, students develop the expertise to implement effective countermeasures and manage secure networks throughout their lifecycle.	Quiz, Solving Problems using interactive teaching section.
II.	The Need for IPv6, IPv6 Features and Enhancements IPv6 Addressing, Representation, Testing Assigning IPv6 Global Unicast Addresses IPv6 and Cisco Routers Revisiting Threats: Considerations for IPv6, Examples of Possible IPv6 Attacks	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools Problem-Based Learning (PBL)	This course emphasizes the necessity for IPv6 adoption, highlighting its features and enhancements. Students will learn about IPv6 addressing, representation, and testing, including the assignment of IPv6 global unicast addresses.	Quiz, interactive methods like group discussion and PPT presentations.
III.	Threats Against the Network Infrastructure Cisco NFP Framework Configuring Secure Administration	Lecture-Based Teaching Flipping method-review materials	This course addresses threats to network infrastructure, focusing on implementing Cisco's NFP framework for secure administration access, including	Interactive methods like group discussion and PPT presentations, problem solving

	Access Configuring the Console password, Securing the Cisco ISO image and Configuration files Setting Timeouts for Router Lines, Enhanced Username and Password Security Securing ROM Monitor, Configuring Role based Command-Line Interface Access	independently before class Lecture Method using ICT Tools Problem-Based Learning (PBL)	configuring console passwords, securing Cisco ISO images and configuration files, setting timeouts, enhancing username and password security, and securing ROM Monitor with role-based command-line interface access.	methods
IV.	Network Time Protocol Using Syslog Logging for Network Security, Configuring AAA on a cisco router using the local database Cisco Secure ACS Overview TACACS+ and RADIUS protocols , comparison, AAA Configuration for TACACS+ Example	Lecture Method using ICT Tools Lecture-Based Teaching	This course covers Network Time Protocol implementation, Syslog logging for network security, and configuring AAA on Cisco routers using the local database, along with an overview of Cisco Secure ACS, TACACS+, and RADIUS protocols, including AAA configuration examples for TACACS+.	Interactive methods like group discussion and PPT presentations,
V.	Network Security using Cisco IOS Firewalls, Firewall Technologies and fundamentals Firewalls in a Layered defence strategy Static Packet filtering firewalls Application Layer Gateways Dynamic Packet Filtering Firewalls ACL Fundamentals	Lecture Method using ICT Tools Lecture-Based Teaching Flipping method-review materials independently before class	This course delves into network security with Cisco IOS Firewalls, covering firewall technologies such as static packet filtering and application layer gateways within a layered defense strategy. It also explores dynamic packet filtering firewalls and ACL fundamentals for comprehensive network protection.	Interactive methods like group discussion and PPT presentations, seminars by students.

List of References (Book / ICT / Weblinks):

1. Catherine Paquet, **Implementing Cisco IOS Network Security (IINS),Cisco Press.**
2. CCNA Security 210-260 Official Cert Guide | Cisco Press

Ch. Tejasriya.

Name of the faculty member & Signature: Ch. Sriya

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department BSC COMPUTER SCIENCE AND CYBER SECURITY **Class & Section: NCSCS** **Course Code: CSCS22403**

Name of the Faculty Member: N MANISHA **Course Title: CYBER ETHICS AND IPR**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Information Security and Cyber Laws Introduction, Cyber security policy,IT Act, Mision and Vision of Cyber security program,cyber security strategies	Lecture Method using ICT Tools	To learn conceptual and theoretical perspective of cyber laws	Group Discussion
II.	IT Act , Offences, Offences Uder IT Act 2000, Compounding of Offences, Digital Signature, Electronic Signature, Web Content Accessibility Guidelines.	Lecture Method using ICT Tools	To understand the legalities through analysis of IT act 2000	Seminars
III.	Trade Marks: Purpose and function of trademarks , selecting and Evaluating Trademark,Trade secret law, false advertisement, social networking sites v/s human rights.	Lecture Method using ICT Tools	To understand the concept of trademark	Questionnaire
IV.	Copyright law, copyright ownership issues,right of reproduction, foundation of patent law, patent searching process	Lecture Method using ICT Tools	To underatnd the relation between IPR laws Presentation	Slip test
V.	E-Commerce, legal aspects of E commerce, technical and legal issues, trends of prospects of e commerce, Online publishing and online credit	Lecture Method using ICT Tools	To understand the importance of E-commerce.	quiz

	card payment, employment contracts-non disclosure agreements			

SUGGESTED READING:

1. Justice Yatindra Singh, cyber laws, Universal law publishing,UP,2016.
2. Indian Law Institute, legal dimensions of cyberspace,New Delhi.
3. Farouq Ahmed, cyber law in India, Allahabad Law Agency,2015.

Name of the faculty member & Signature: N Manisha

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

EVEN SEMESTER

Department: BSC computer science and cyber security **Class & Section: ACSCS** **Course Code:CSCS21203**

Name of the Faculty Member: K. Padma **Course Title:** Principles of Information Security

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction to Security, Critical Characteristics of Information • NSTISSC Security Model, Components of Information Security. Balancing Information Security and Access • Approaches to Information Security Implementation, System Development Life. • Security System Development Life Cycle, Information Security :Art of Science	Interactive Learning. Lecturing using traditional methods and ICT tools.	Gain knowledge in concepts of Information security. Knowledge to apply SDLC methods to develop a model using NSTISSC guidelines.	Interactive group discussions, PPT presentation for students and small assignments.
II.	• Important functions of Information security • Threats and category of Threats • Attacks and Types of Attacks • Secure Software development	Lecture-Based Teaching Lecture Method using ICT Tools	Gain expertise in risk assessment by learning indepth about security threats and attacks and there by developing control statergies.	Regular Assessments. Quiz and interactive sessions.
III.	• Firewalls: Processing modes, categorizations • Firewall Architecture, Choosing a Firewall • Configuring and Managing a Firewall • Protecting Remote Connections: Securing Authentication with	Interactive Learning lecture based teaching using ICT tools, Lecturing using traditional methods	Students gain knowledge in security controls including configuring and managing firewalls, user access controls and network filtering. Knowledge about securing remote connections with VPN.	Regular Assessments. Assignments, PPT.

	Kerberos • Firewall Rules • VPN: Transport and Tunnel Mode			
IV.	• IDPS terminology, types of IDPS • IDPS Detection Methods, IDPS Response behavior. Strengths and Limitations of IDPS. • Honeypots, Honeynets and Padded Cell Systems. Port Scanners, Firewall Analysis Tools • Operating System Detection Tools, Vulnerability Scanners • Packet Sniffers, Wireless Security Tools	Lecture-Based Teaching using traditional methods and ICT tools.	Gain knowledge about methods, tools and techniques for securing digital information within an organization. Knowledge in Operating system detection tools such as NMAP and Wireless security tools.	Regular Assessments, PPT presentations. Interactive discussions and small seminars.
V.	• Terminology, Cryptographic Tools, PKI, • Digital Signature, Digital Certificate and Steganography. • Protocol for Secure Communication: Securing Internet with SSL • Securing Email with S/MIME, PGP • Securing web Transactions SET • Securing wireless Network with WEP and WPA • Securing TCP/IP with IPSEC	Lecture Method using ICT Tools Lecture-Based traditional Teaching	Develop working knowledge in Cryptographic tools such as Hash algorithms. Gain proficiency in working with and creating digital signatures, certificates and public and private keys. Knowledge about secure protocols.	Regular Assessments, seminars, CBT and Group discussions.

List of References (Book / ICT / Weblinks):

1. Whitman Michael, E. and Mattord Herbert, J. 2011. Principles of Information Security. 4th Edition. USA : Course Technology.

Name of the faculty member & Signature:

Approved by Head of the Department:

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Internal Quality Assurance Cell

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department Bsc Computer Science and Cyber Security **Class & Section: ACSCS** **Course Code: CSCS21201**

Name of the Faculty Member: N MANISHA

Course Title: COMPUTER NETWORKS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I	Data Communication, Protocols and standards, TCP/Ip Protocol suite, Analog and digital signal, Multiplexing:Frequency division, wavelength and time division.	Lecture Method using Blackboard.	Identify Basic Computer network topologies and protocols	Slip test
II	Error detection and Correction- Parity, checksum, CRC, hamming code Data Link control: Framing, Flow and Error control. Stop and wait ARQ, Go Back N ARQ, Selective Repeat Arq. ALOHA, CSMA, CSMA/CD, CSMA/CA	Lecture Method using Blackboard.	Classify different error detecting techniques.	Group discussion
III	Ip Address space, Classful and Classless Addressing, Subnetting and Supernetting, IPV4 datagram, Fragmentation, checksum. Internet Control Protocols- ICMP,IGMP,ARP,RARP. Unicast Routing protocols- RIP, OSPF,BGP.	Lecture Method using Blackboard.	Construct subnetting and routing mechanism.	viva
IV	UDP operations, use of UDP, Numbering Bytes, TCP Services, Silly Window Syndrome, TCP connection, Congestion Control,	Lecture Method using ICT Tools	Sketch the routing protocols and analyse how to assign the ip addresses.	seminar

	Timers.			
V	DNS- Namespace, distribution of name space, DNS in internet, DNS messages, TELNET, E-mail architecture, SMTP, POP, FTP,HTTP.	Lecture Method using ICT Tools	Develop network design and implementation.	.quiz

SUGGESTED READING:

1. Forouzan, Beharouz A. 2011, Data Communications and Networking 3rd Edition.New Delthi : Tata Mc Graw Hill
2. Forouzan, Beharouz A 2005. TCP?IP Protocol Suite. 3rd Edition.New Delthi : Tata Mc Graw Hill

Name of the faculty member & Signature: N MANISHA

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department : cyber security **Class & Section: DCSCS** **Course Code: CSCS23601B**

Name of the Faculty Member: N Manisha **Course Title: BLOCKCHAIN AND CYRPTOCURRENCY**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I	Data Distribution database, Hadoop Distributed File System, Asic Resistance, Hash Function, Digital Signature, Memory hard algorithm	Lecture Method using ICT Tools	Understand that how bitcoin works, when a transaction is created and when it is considered as a part of the blockchain	Questionnaire session
II	Blockchain Introduction-Advantage over Conventional distributed database, Blockchain Network, mining, gas limit, transaction and fees, private and public blockchain.	Lecture Method using ICT Tools	To interact with a blockchain system by sending and reading transaction.	seminars
III	Nakamoto Consensus, Proof of work, proof of Stake, Proof of Burn, Sybil attack, Energy utilization and alternate.	Lecture Method using ICT Tools	To learn about different kinds of forking and explain the bitcoins network mechanisms for maintaining and upgrading.	Conducted Slip test
IV	Cryptocurrency History, Bitcoin Protocols- mining strategy and rewards, Ethereum construction, DAO, Vulnerability, attack, Namecoin Cryptocurrency, Roots of Bitcoin.	Lecture Method using ICT Tools	To describe differences between proof of work and proof of stake consensus.	Viva
V	Case Study: Internet of Things, Medical Record Management System, Domain Name Services and future of Blockchain	Lecture Method using ICT Tools	Design , build and deploy smart contracts and distributed applications.	Quiz

SUGGESTED READING:

1. Arvind Narayan, Joseph Bonneau, Edward felten, andrew miller and steven goldfeder, Bitcoin and Crpyptocurrency Technologies: A Comphrensive Introduction, Princeton University Press.
2. Antonopoulos,2014, Mastering Bitcoin: Unlocking Digital Cryptocurrencies.
3. Satoshi Nakamoto, 2008 Bitcoin: A peer to peer electronic cash system.

Name of the faculty member & Signature: N MANISHA

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

EVEN SEMESTER

Department: BSC computer science and cyber security

Class & Section: NCSCS

Course Code:CSCS21406

Name of the Faculty Member:K.Balaji , venugopal.

Course Title: Python Scripting

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1.Introducing System modules in Python 2. Python Socket.io 3. Introduction to sockets 4. Creating simple TCP client and TCP server 5. Creating simple UDP client and UDP server 6. Resolving IP addresses and Domains	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Problem-Based Learning (PBL)	1. Learners will master Python's system modules for efficient system interaction. 2. Participants will develop real-time web applications using Python's Socket.io. 3. Students will grasp socket programming fundamentals for network communication. 4. Proficiency in creating TCP client and server applications will be achieved.	Quiz, Solving Problems using interactive teaching section.
II.	Analysing Network Traffic: 1. Capturing and injecting packets with pcapy 2. Capturing and injecting packets with scapy 3. Port Scanning and traceroute with scapy 4. Reading pcap files with scapy	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools Problem-Based Learning (PBL)	1. Participants will learn to capture and inject packets using pcapy for network traffic analysis. 2. Learners will gain expertise in capturing and injecting packets with scapy to analyze network traffic. 3. Proficiency in conducting port scanning and traceroute using scapy will be attained. 4. Students will develop the ability to read pcap files efficiently using scapy for network traffic analysis.	Quiz, interactive methods like group discussion and PPT presentations.

	Gathering information from Servers: 1. Extracting information from servers with Shodan 2. Using python to obtain server information 3. Getting information on DNS servers with DNS Python 4. Connecting with FTP servers	Lecture-Based Teaching Flipping method-review materials independently before class	1. Participants will acquire the skill to extract server information using Shodan for comprehensive data gathering. 2. Learners will utilize Python to obtain detailed server information efficiently. 3. Students will learn to gather information on DNS servers effectively using DNS Python. 4. Proficiency in connecting with FTP servers for information retrieval will be developed.	Interactive methods like group discussion and PPT presentations, problem solving methods
IV.	Working with Nmap Servers Introducing port scanning with Nmap Port scanning with python-nmap Scan modes with python-nmap Vulnerabilities with Nmap scripts Introducing Metasploit framework Introducing and interacting with Metasploit framework	Lecture Method using ICT Tools Lecture-Based Teaching	1. Understand the fundamentals of port scanning using Nmap, including its significance in network reconnaissance and security assessment. 2. Gain proficiency in utilizing the python-nmap library to perform port scanning tasks programmatically, enabling automation and customization of scanning processes. 3. Learn about various scan modes available in python-nmap, allowing for tailored scanning approaches based on specific requirements	Interactive methods like group discussion and PPT presentations,
V.	Introducing vulnerabilities Introducing Nessus Vulnerabilities Scanner Accessing Nessus API with python Introducing Nexpose vulnerabilities scanner Accessing Nexpose AI with python	Lecture Method using ICT Tools Lecture-Based Teaching Flipping method-review materials independently before class	1. Acquire proficiency in utilizing the Nessus Vulnerability Scanner to conduct comprehensive vulnerability assessments, identify security weaknesses, and prioritize remediation efforts effectively. 2. Develop skills in accessing the Nessus API using Python, enabling automation of vulnerability scanning processes, integration with other tools, and customization of scan configurations.	Interactive methods like group discussion and PPT presentations, seminars by students.

List of References (Book / ICT / Weblinks):

Jose Manuel Ortega. 2021 Mastering Python for Networking and Security. 2nd Edition. Packt Publishing. UK: Birmingham.

Name of the faculty member & Signature: A. Vengopal

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

EVEN SEMESTER

Department: BSC computer science and cyber security

Class & Section: DCSCS

Course Code: CSCS23601A

Name of the Faculty Member: K. Balaji , Vemugopal.

Course Title: Cyber Threat Intelligence

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1.Defining Cyber Threat Intelligence: Introduction. 2. The Need for Cyber Threat Intelligence 3. The menace of targeted attacks, The monitor-and-respond strategy 4. Why the strategy is failing, Cyber Threat Intelligence defined 5. Key Characteristics: Adversary , Risk focused	Lecture Method using ICT Tools Lecture Method, Discussion based Learning Problem-Based Learning (PBL)	1. Understand the importance of Cyber Threat Intelligence and its role in modern security landscapes. 2. Identify the necessity of Cyber Threat Intelligence for enhancing security measures. 3. Gain insights into targeted attacks and develop response strategies. 4. Evaluate existing strategies, define Cyber Threat Intelligence, and analyze failures.	Quiz, Solving Problems using interactive teaching section.
II.	1. Developing Cyber Threat Intelligence Requirements : Assets That Must Be Prioritized: • Personal information, • Intellectual property, • Confidential business information, • Credentials and IT systems information, • Operational systems. 2. Adversaries: • Cybercriminals, • Competitors and cyber espionage agents, • Hacktivists. 3. Intelligence Consumers: Tactical users, Operational users, Strategic users	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools Problem-Based Learning (PBL)	1. Understand the importance of prioritizing assets in Cyber Threat Intelligence development. 2. Identify key assets including personal information, intellectual property, and confidential business data, among others. 3. Recognize various types of adversaries in the cyber landscape, including cybercriminals, competitors, and hacktivists.	Quiz, interactive methods like group discussion and PPT presentations.

III.	Collecting Cyber Threat Information: Level 1: Threat Indicators, File hashes and reputation data, Technical sources: honeypots and scanners, Industry sources: malware and reputation feeds. Level 2: Threat Data Feeds, Cyber threat statistics, reports, and surveys, Malware analysis. Level 3: Strategic Cyber Threat Intelligence, Monitoring the underground, Motivation and intentions, Tactics, techniques, and procedures.	Lecture-Based Teaching Flipping method-review materials independently before class Lecture Method using ICT Tools Problem-Based Learning (PBL)	1. Understand the significance of collecting cyber threat information at different levels. 2. Identify Level 1 sources including threat indicators, file hashes, and reputation data from technical and industry sources. 3. Recognize Level 2 sources such as threat data feeds, cyber threat statistics, reports, and surveys, and the importance of malware analysis.	Interactive methods like group discussion and PPT presentations, problem solving methods
IV.	1. Analyzing and Disseminating Cyber Threat Intelligence: Information versus Intelligence, 2. Validation and Prioritization: Risk scores, Tags for context, Human assessment. 3. Interpretation and Analysis: Reports, Analyst skills, Intelligence platform, Customization Dissemination: Automated feeds and APIs, Searchable knowledge base, Tailored reports	Lecture Method using ICT Tools Lecture-Based Teaching	Understand the distinction between raw information and actionable intelligence in the context of cyber threat intelligence, and develop skills for analyzing and disseminating relevant intelligence effectively. Gain proficiency in validating and prioritizing cyber threats through the use of risk scores, contextual tags, and human assessment methodologies, enabling informed decision-making and resource allocation.	Interactive methods like group discussion and PPT presentations,
V.	Selecting the Right Cyber Threat Intelligence Partner: Types of Partners: Providers of threat indicators, Providers of threat data feeds, Providers of comprehensive cyber threat intelligence. Important Selection Criteria: Global and cultural reach, Historical data and knowledge, Range of intelligence deliverables,	Lecture Method using ICT Tools Lecture-Based Teaching Flipping method-review materials independently before class	Develop the ability to assess and select the appropriate cyber threat intelligence partner based on understanding the distinct roles and offerings of different types of partners, including providers of threat indicators, threat data feeds, and comprehensive cyber threat intelligence solutions, to enhance organizational security posture effectively.	Interactive methods like group discussion and PPT presentations, seminars by students.

List of References (Book / ICT / Weblinks):

1. Jon Friedman. Mark Bouchard, CISSP. Foreword by John P. Watters,2015., Cyber Threat Intelligence, Definitive Guide TM .
2. Scott J. Roberts, Rebekah Brown, 2017., Intelligence- Driven Incident Response: Outwitting the Adversary, O'Reilly Media.

Name of the faculty member & Signature: A. Vennesopal

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-I

Department:BSc. Computer Science and Artificial Intelligence **Class&Section:ACSAI** **CourseCode:VE18001**

Nameofthe FacultyMember: Larissa Sequeira **CourseTitle:Value Education and Personality Development**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to Ethics	LectureMethod	ToLearnto differentiate between accepted and Counter norms and to be able to identify the various Dimensions of Human Development	Group discussion to understand the value system in the society.
II.	Approach to Life	LectureMethod	To Learn to demonstrate Love and experience of God and to be ableto identify the Basic issues of Life and the Happiness as Life's goal.	Debate on the topics covered
III.	Concern for others	LectureMethod	To Understand the importance of concern for others and critic the various problems that deter the growth of the society	Scenario discussion
IV.	Transformation of Self	LectureMethod	To be able to recognize the traits of a good personality and practice self exploration	Self reflection and discovery of one's true self.
V.	Life Enrichment Skills	LectureMethod	To learn to be able to interpret the purpose of life and goal setting and demonstrate self management.	Exploring of personal skills through peer discussions.

Listof References (Book/ICT/ Weblinks):

1. Human Values – Development Programme – AIACHE
2. In Harmony – Value Education at College level. By a Team of Ethics Teachers (G.M. James , B.J JAYARAJ , K.CANDASSAMY, BERNARD D'SAMI , S.J.A PACKIARAJ)

Nameofthefacultymember&Signature:
Mrs. Larissa Sequeira

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -I

Department:CSAI **Class&Section:ACSAI** **CourseCode: CSAI21103**

Nameofthe FacultyMember:BINDU BABU **CourseTitle:Mathematics for AI**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**SET THEORY** The basic of logic- Statements, compound statements(conjunction, disjunction,implication, negation, biconditional) Truth Table Logical equivalence-Tatutology, contradiction, contingency Proving methods in Mathematics-constructive proof, direct proof, indirect proof, contradiction	Ict tools, Lecture method Chalk and board method	• Students will be able to demonstrate a working knowledge of set notation and recognize the connection between set operations and logic • Students will be able to learn to construct mathematical proofs and possess the ability to verify them	•Quiz •SolvingProblems, •Oral test, •Presentations
II.	**BASICS OF COUNTING** Basics of counting-sum rule, product rule, Permutation and combination, Permutation with repetition and without repetition, Restricted permutation and combination, Pigeon hole principle and applications, Principle of inclusion and exclusion	Lecture method, Chalk and board method	• Students will be able to apply basic counting techniques to solve combinatorial problems	•Assignment on permutations and combinations • real life application problems •Group discussion
III.	***ADVANCED COUNTING TECHNIQUES*** Definition of Recurrence relation, Solving recurrence relation, Solving linear homogenous recurrence relation by substitution method, Solving linear homogenous recurrence relation by generating functions, Solving non-homogenous recurrence	Ict tools, Chalk and board method	• Students will be able to solve problems using recurrence relations and recursion to analyze algorithms and programs.	•Solving problems on recurrence relations

	relation			
IV.	Definition of a matrix, sub matrix and rank of matrix, Problems on finding rank of matrix using echelon form,Problems on finding rank using normal form,solving system of equation by homogenous equation,Solving system of equation by non homogenous equation	Chalk and board method	• Students will be able to find rank of a matrix and solve systems of linear equations applying matrix techniques	•Solving problems •Assignment on finding ranks •Presentations
V.	Definition of eigen value, eigen vector and characteristic roots, Finding characteristic roots and eigen values of a matrix, Statement of Cayley Hamilton theorem, Finding characteristic equation and verifying Cayley Hamilton theorem,Quadratic forms-Reducing quadratic form to canonical form	Icttools,ppt, chalk and board method	• Students will be able to calculate eigen values and corresponding eigen vectors. • Students will also have a knowledge of quadratic forms	•Group discussions •Assignment on finding eigen values and vectors

List of References (Book/ICT/ Weblinks):

1. Discrete Mathematics for computer scientists & mathematics, Joe L Mott, Kandel,Baker,PHI
2. Matrices by A.R Vasistha Krishna PrakashanMandir,Meerut

Name of the faculty member&Signature:
Bindu Babu

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: ENGLISH

Class & Section: ACSAI,ACDS,ACSIOT,ACSC

Course Code: EN23101

Name of the Faculty Member: P Saritha

Course Title: GENERAL ENGLISH-1

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Short Story – The Mystery Story Present Tense Past Tense Future Tense Paragraph Writing	Lecture Method using ICT Tools	To learn about the fundamentals Of communication	Solving mixed tense exercises Narrating mystic experiences Writing paragraphs on various topics
II.	Poem – Goodbye Party for Miss Pushpa T.S. Subject- Verb Agreement Punctuations Review Writing	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Explanation of the poem by students Grammar exercises Film review writing
III.	Lesson – Wit and Humour Nouns and Articles Homophones, Homonyms, Homographs Note making	Lecture Method using ICT Tools	To identify the different types of nouns and articles in a sentence composition and to learn the correct usage and spelling of different words which spell or sound similar.	Character sketch of the story characters Grammar exercises like fill in the blanks, multiple choice and true or false.

IV.	Lesson – India's Contribution to World Unity Adverbs Adjective and adverb Suffixes Formal letters and Curriculum Vitae	Lecture Method using ICT Tools	To think critically, demonstrate an understanding of diverse cultures and historical movements. To recognize the different parts of speech	Description of the message conveyed by the author and its relevance in the day today world. Practice in Formal letter and Curriculum Vitae writing
V.	Lesson – Sachin Tendulkar Adjectives, Comparison of Adjectives Common Errors, Commonly misspelt words, Commonly Confused words	Lecture Method using ICT Tools	To write grammatically correct sentences and to identify different degrees of comparison.	Text book exercises and worksheets

List of References (Book / ICT / Weblinks):

1. Skills Annexe. Functional English for Success. Orient Black Swan

SUGGESTED READING:

- Balasubramaniam, M: 1985 Business Communication. New Delhi: Vani Educational Books.
- Krishna Mohan and Meera Banerjee, 1990. Developing Communication Skills. New Delhi: Macmillan India Ltd.
- Krishnaswamy.N. and Sriraman, T. 1995. Current English for Colleges. Madras: Macmillan India Ltd.
- Narayanaswamy.V.R. 1979 Strengthen Your Writing. New Delhi: Orient Longman.
- Sharma.R.and Krishna Mohan. Business Correspondence. 1978. New Delhi. Tata McGraw-Hill Publishing Co

Name of the faculty member & Signature:

P Saritha Saritha.

Approved by Head of the Department: P. Bala Seshu Kumari BSK

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -I

Department:CSAI **Class&Section:ACSAI** **CourseCode:CSAI21101**

Nameofthe FacultyMember:
RUCHIKAMURTHY

CourseTitle:COMPUTER FUNDAMENTALS

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**INTRODUCTION TO COMPUTERS** Definition, characteristics, stored program concept, history and classificationApplications and basic organization of computer **INPUT AND OUTPUT DEVICES** Input devices- keyboard, pointing, handheld, optical, Audio-visual, card readersDigitizersOutput Devices- soft copy devices, Monitor and types, Hardcopy devicesVoice response systems, biometric devices	Chalk and board method	ToLearnabout basics about the computer	Quiz,SolvingProblemsusing thebasiccomputerinstruction
II.	**COMPUTER MEMORY** Introduction, memory organization, hierarchy, sequential and random access Process Registers, Primary memory and cache memorySecondary storage devices, Magnetic tapes, Hard disks- external, optical disks USB flash drives, Memory Cards, Mass storage devices **COMPUTER SOFTWARE** Introduction, classification, System software, application softwareFirm	Chalk and board method	memory organization, hierarchy,Primary memory and cache memorySecondary storage devices	Assignment on primary and secondary storage device

	ware, middle ware, procuring computer software			
III.	**NUMBER SYSTEMS AND COMPUTER CODES** Introduction, binary number system- working with binary numbers Octal number system- conversionsHexadecimal number system- conversions, addition and subtractionSigned number representation in binary formBCD and other codes	Chalk and board method	NUMBER SYSTEMS AND COMPUTER CODES	Interaction section on the topic conversion
IV.	**COMPUTER NETWORKS** Introduction, types of networks Physical components of a networWired media and wireless media Networking devicesNetworking topologiesData transmission modes	Icttools,ppt	Wired media and wireless media Networking topologies	Group discussion on topologies and network types
V.	**THE INTERNET** Internet-history, intranet and extranet, differencesIP address- types Domain Name System, Uniform resource locator, Internet browsers Internet servicesTypes of Internet connectionsInternet Security	Icttools,ppt	Internet,intranet and extranet, differencesTypes of Internet connectionsInternet Security	Class activity on uniform resource locator and internet browsers

***Listof* References (Book/ICT/ Weblinks):**

1. Thareja, Reema. 2020. **Fundamentals of Computers**. 2nd Edition. Oxford Higher Education.
2. Rajaraman. 2006. **Fundamentals of Computers.** 4th edition. PHI Publications.
3. https://www.youtube.com/@education4uofficial

Nameofthefacultymember&Signature: Ruchika murthy Ruchika BSK (HOD)

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - I

Department: CSAI **Class & Section: ACSAI** **Course Code:CSAI21101**

Name of the Faculty Member: Shaik Abdul Khadar **Course Title: Fundamentals of IOT and Robotics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition and Characteristics of IOT, IOT Enabling Technology, IOT Levels and Development Templates, M2M and IOT, Implementing of IOT module, Raspberry Pi (pin description), IOT Use Cases: Home, Government and Cities, Environment and Energy System, Agriculture, Health and Lifestyle.	Lecture Method using ICT Tools	To Understand and Learn fundamentals of IOT	Quiz, Case Study, PPT Presentation
II.	Classification, Components, Characteristics, Applications, Robotics Kinematics, Position Analysis, Robots as Mechanisms, Matrix Representation, Transformation Matrices, Forward and Inverse Kinematics.	Lecture Method using ICT Tools	Able to classify broad range of robotics, understand the physical interpretation of coordinate transformation and kinematics.	Brainstorming, Problem Solving approach
III.	Characteristics of Actuating Systems, Actuating Devices and Control, Use of Reduction Gears, Comparison of Hydraulic, Electric Actuators, Pneumatic Actuators, Hydraulic Actuators	Lecture Method using ICT Tools	Able to understand the concepts of actuators and their implementation.	Brainstorming, Quiz, PPT Presentation

IV.	Sensor Characteristics, Description of Different Sensors, Vision Sensors, Force Sensors, Proximity Sensors, Tilt Sensors.	Lecture Method using ICT Tools	To Learn broad types of sensors and their real time implementation.	Brainstorming, PPT Presentation, Physical Interpretation
V.	Point to Point Control, Continuous Path Control, Intelligent Robot, Control System for Robot Joint, Control Actions, Feedback Devices.	Lecture Method using ICT Tools	Able to demonstrate with trajectory planning and Robotic control techniques	Brainstorming, Quiz, Case Study

List of References (Book/ICT/ Weblinks):

1. Saeed B. Niku, Introduction to Robotics Analysis, Controls, Application, Willey, 2019, Third Edition.
2. Vijay Madisetti and Arshdeep Bahga, Internet of Things – A Hands-on Approach, First Edition, University Press, 2015.
3. https://www.youtube.com/watch?v=QIizAKfr5Zk

Name of the faculty member & Signature: SHAIK ABDUL KHADAR

Approved by Head of the Department: P. Bala Seshu Kumari 18/2

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER I

Department:CSAI **Class&Section:ACSAI** **CourseCode: BS21104**

Nameofthe FacultyMember:SARASHRI **CourseTitle: PROBLEM SOLVING AND PROGRAMMING IN 'C'**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to C programming, Algorithms and Flow charts, Structure of C program, Files used in a C program, Compiling and executing C program, C tokens, Constants, Character set in C, Keywords, Identifiers	ICT tools,Ppt	To Learn about the basics of C programming	Quiz, Creating flow charts creation
II.	Data Types in C, Enumerated data types, typedef ,Variables and scope of a variables.Data input and output statements in C,Operators and expressions,Type conversion and Typecasting,Conditional Branching Statement – if, if-else, if-else-if, switch case	ICt tools,Ppt,	Data types, Variables and operators in C	Creation of data types and Conditional branching
III.	Iterative Statements – while loop, do-while loop, for loop,Nested loops, break and continue statements, goto statement,Arrays - Single and double dimensional arrays,String- string input output functions,string manipulation functions	ICt tools,Ppt, Chalk and board method	Iterative Statements, Arrays, string manipulation functions	Assignment on loops and Arrays
IV.	Function- Declaring, defining and invoking functions,Categories of functions-Built-in functions,Passing parameters to functions – call by value	Chalk and board method	Function, Built-in functions, Recursion,Pointers	Group discussion on Functions and pointers

	& call by reference,Storage classes,Recursion,Pointers - Declaration, passing pointer to functions, Pointers and one dimensional arrays ,Dynamic memory allocations.			
V.	Structures - Simple structures, nested structure, Array of structures ,Unions- Differences between Structures and Unions.,File handling - Various modes, File operations – fopen(), fclose(),File input output functions – fputc(), fgetc(), fputs(), fgets(), getw(), putw(), getc(), putc(), fprintf(), fscanf(), getchar(), putchar(),Random accessing file – fseek(), ftell(), rewind()	Chalk and board method	Structures - Simple structures, nested structure, Various modes, File operations	Class activity on Structures and Files operations

Listof References (Book/ICT/ Weblinks):

1. TharejaReema. 2016. **Programming in C.** 2nd Edition. New Delhi:BPB.
2. KanetkarYashwanth. 2018**Let us C.** 16th edition ,New Delhi:BPB.
3. https://www.geeksforgeek.com/

Nameofthefacultymember&Signature: Sarashri Sarashri 14/11/23.

Approvedby HeadoftheDepartment: P. Bala Seshu Kumari BSK

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -III

Department: B.Sc. Computer Science and Artificial Intelligence **Class&Section:NCSAI** **Course Code:** CSAI22301

Name of the Faculty Member: ASWINI KUMAR MANDADAPU **Course Title:** DISTRIBUTED SYSTEMS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction: Goals and Types of Distributed Systems, Architectures: Architectural Styles, System Architectures, Architectures versus Middleware, and Self-Management in Distributed Systems. Processes: Threads, Virtualization, Clients, Servers, and Code Migration. Communication: Fundamentals, Remote Procedure Call, Message-Oriented Communication, Stream-Oriented Communication, and Multicast Communication.	Lecture Method using ICT Tools	To Learn about the way of representing Database	Interactive session on representing data. Techniques used to represent data.
II.	Naming: Names, Identifiers and Addresses, Flat Naming, Structured Naming, and Attribute-Based Naming. Synchronization: Clock Synchronization, Logical Clocks, Mutual Exclusion, Global Positioning of Nodes, and Election Algorithms. Consistency and Replication: Introduction, Data-Centric Consistency Models, Client-Centric Consistency Models, Replica Management, and Consistency Protocols.	Lecture Method using ICT Tools	To learn data the way managing data.	Discussion on different ways of managing data.
III.	Fault Tolerance: Introduction to Fault Tolerance, Process Resilience, Reliable Client-Server Communication, Reliable Group Communication, Distributed	Lecture Method using Black Board & ICT Tools	To learn about client server communication and models	Seminars on client-server models.

	Commit, and Recovery. Distributed Object-Based Systems: Architecture, Processes, Communication, Naming, Synchronization, Consistency and Replication, Fault Tolerance, and Security			
IV.	Distributed File Systems: Architecture, Processes, Communication, Naming, Synchronization, Consistency and Replication, Fault Tolerance, and Security. Distributed Web-Based Systems: Architecture, Processes, Communication, Naming, Synchronization, Consistency and Replication, Fault Tolerance, and Security.	Lecture Method using ICT Tools	To learn about Distributed File System	Seminars on Distributed File System
V.	Distributed Coordination-Based Systems: Introduction to Coordination Models, Architecture, Processes, Communication, Naming, Synchronization, Consistency and Replication, Fault Tolerance, and Security. Map-Reduce: Example, Scaling, programming model, Apache Hadoop, Amazon Elastic Map Reduce, Mapreduce.net, Pig and Hive.	Lecture Method using Black Board & ICT Tools	To learn about Distributed Coordination models System	Seminars on Distributed Coordination models System

List of References (Book/ICT/ We blinks):

1. Andrew S. Tanenbaum and Maarten Van Steen, Distributed Systems, PHI 2nd Edition, 2009.
2. R. Hill, L. Hirsch, P. Lake, S. Moshiri, Guide to Cloud Computing, Principles and Practicel, Springer, 2013.
3. R. Buyya, J. Borberg, A. Goscinski, Cloud Computing-Principles and Paradigms, Wiley, 2013.

Name of the faculty member &Signature: ASWINI KUMAR MANDADAPU M. Aswini

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER III

Department:CSAI **Class&Section:NCSAI** **CourseCode: CSAI22304**

Nameofthe FacultyMember:Sarashri **CourseTitle: ARTIFICIAL INTELLIGENCE**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction, History, typesand applications of AI,Intelligent Agent-types of agents, Intelligent agent, Agent Environment,Turing Test in AI **PROBLEM SOLVING THROUGH AI** Introduction, representation of AI problems,Production system, Algorithm of Problem solving,Examples of AI problems-Water Jug Problem, Magic Square,TSP,Missionaries and Cannibals problem, Towers of Hanoi, Nature of AI problems	Chalk and Board method	Introduction to AI, Algorithm of Problem solving, Nature of AI problems	Solving AI problems
II.	Search Algorithms, Uninformed Search Algorithms,Informed search algorithms-Best-first search, A*, AO* Algorithm,Constraint satisfaction, Means Ends Analysis ,Min-Max search and alpha-beta pruning	Chalk and Board method	Search Algorithms, Uninformed Search Algorithms,Informed search algorithms	Assignment on Best-first search, A*, AO* Algorithm ,Min-Max search and alpha-beta pruning
III.	Knowledge based agent, knowledge representation-types of knowledge,Knowledge representation techniques, Propositional logic,Rules of inference, Wumpus world-Knowledge base,First order logic, Inference in FOL, Unification and	Chalk and Board method, ICT tools	Knowledge based agent, knowledge representation, First order logic, Inference in FOL	Class Activity on Wumpus world, Unification and resolution in FOL

	resolution in FOL			
IV.	Forward and backward chaining, Forward vs Backward chaining,Reasoning in AI, Inductive vs Deductive reasoning ,Probabilistic reasoning in AI, Bayes theorem and Bayesian Belief network **PLANNING** Planning-components, block world planning, identifying solution, Goal stack Planning	Chalk and Board method, ICT tools	Forward and backward chaining, Forward vs Backward chaining,Reasoning in AI,Planning	Group Discussion on , Bayes theorem and Bayesian Belief network
V.	Introduction to Prolog, Basics, Relations, Prolog Syntax, data objects,Types of Prolog, Operators, Loop and Decision Making,Conjunctions and disjunctions, Lists, recursion and structures,Backtracking, Inputs and outputs, different and not, clauses and predicates	Chalk and Board method, ICT tools	Introduction to Prolog, Basics, Prolog Syntax, Types of Prolog, Operators, Loops	Practicing Prolog programs in lab

Listof References (Book/ICT/ Weblinks):

1. Kumar, Ela. 2019. **Artificial Intelligence**. 1st Edition. I.K International Publishing House Pvt. Ltd. India: New Delhi
2. RusselJ,Stuart. Norvig, Peter. 2015. **Artificial Intelligence, A Modern Approach**. 3rd Edition. Pearson Education. New Delhi: India.
3. https://www.youtube.com/@education4uofficial

Nameofthefacultymember&Signature:

Approvedby HeadoftheDepartment:

P. Bala Seshu Kumari

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER III

Department:CSAI

Class&Section: GE Inter Disciplinary

CourseCode: G22CSAI1T

Nameofthe FacultyMember:Sarashri

CourseTitle: LISP PROGRAMMING

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	LISP- Overview, Environment setup,Basic syntax, data types,Macros, variables and constants	Chalk and board method	LISP- Overview, Basic syntax	Quiz, Solving problems,Recognizing the importance of Lisp
II.	Operators (Arithmetic, comparison, logical and bitwise),Decision structures- cond, if, when and case,Loops- loop, loop for, do, dotimes and dolist	Chalk and board method	Operators, Decision structures, Loops	Assignment on Loops- loop, loop for, do, dotimes and dolist
III.	Functions in LISP,Predicates ,Number and characters	Chalk and board method,ICT tools	Functions, Number and characters	Group discussion on Function creation
IV.	Arrays and strings,sequences, lists, symbols,Vectors, set, Tree and Hash table	Chalk and board method,ICT tools	sequences, lists, symbols,Vectors,	Presentation on Arrays and strings
V.	Input/output, File I/O,Structures, packages,Error Handling and classes (CLOS)	Chalk and board method,ICT tools	File I/O,Structures, packages	Class Activity on File I/O

Listof References (Book/ICT/ Weblinks):

1. https://www.geeksforgeek/

Nameofthefacultymember&Signature:

Approvedby HeadoftheDepartment:

P. Bala Seshu kumari

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- III

Department:CSAI **Class&Section:NCSAI** **CourseCode: CSAI22303**

Nameofthe FacultyMember:Vijaya Pratapa CourseTitle: Python Programming

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	History of python,"hello world" program , Literal constants, Operators and Expressions, Decision control statements, Basic Loop structure	LectureMethodusing ICT Tools & Black Board	To learn about basics of python programming.	Interactive Session on structured and Object Oriented Programming,quiz,writing programs
II.	Functions and Modules,Lambda functions, recursive functions, modules, packages.	LectureMethodusing Black Board	To learn about divides larger problem into smaller ones using functions.	Discussion on related Applications ,Writing programs,Quiz.
III.	Strings, Built-in string methods, Ord(), chr() functions ,List, set, Tuple,Dictionaries.	LectureMethodusing ICT Tools & Black Board	To learn about apply various data structures to solve problems.	Group discussion on data structures selection based on problem.
IV.	Classes, Objects, Inheritance, polymorphism, operator overloading.	LectureMethodusing ICT Tools & Black Board	To learn about construct Python programs as a set of objects.	Seminars on OOPs concepts.Writing and executing programs . Mock test.
V.	Error and Exception handling, File Handling, reading and writing files,Threads.	LectureMethodusing ICT Tools & Black Board	To learn select an appropriate exception handling depending on application and design file operations and concurrent programming using Python standard library	Interactive session on Exceptions,Writing programs and Quiz.

Listof References (Book/ICT/ Weblinks):

1. hareja, Reema. 2017. Python Programming. 3 rd Edition. New Delhi: Oxford HED
2. Dr. R. NageshwaraRao. 2018. Core Python Programming. 2 nd Edition. DreamTech Press

Nameofthefacultymember&Signature: Vijaya.P

Approvedby HeadoftheDepartment: P. Bala Seshu Kumari

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023-2024

SEMESTER-II

Department:Environmental Science **Class:BBA -NCSAI** **CourseCode:ES23301**

NameofFacultyMember: Dr.G.Sudhakar **CourseTitle:EVS&GS**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable &Non-Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	LectureMethodusing ICT Tools and Board	UnderstandtheimportanceofEnvironmentaleducation, conservationofnaturalresources&understandtheimportance ofecosystemsandbiodiversity	Oral question and answers Tounderstandtheimportanceofecological balanceforSustainableDevelopment
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earthquakes, and Cyclones**	LectureMethodusing ICT Tools and Board	Understand thepollutionproblemsand applytheenvironmentalsciencekn owledgeonsolidwastemanagement,disastermanagement	Oral question and answers Tounderstandtheimpactsofdevelopmentalactivitiesandmitigationmeasures
III.	**Rainwater Harvesting, Water-shed Management** **Global WarmingOzone depletion, and Acid rainsEnvironmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	LectureMethodusing ICT Tools and Board	Applyenvironmentalscienceknowledgetoimprovetheresources. Evaluateandunderstandthesustainablenvironmentalconditionsandcontrolmethods	Oral question and answers Tounderstandtheenvironmentalpoliciesandregulations

IV.	**Why should we study gender issues?** **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	LectureMethodusing ICT Tools and Board	Identifytheinteractions andintersectionsofiden tities(e.g., gender,race, ethnicity, class, sexuality, and so on)	Oral question and answers Todevelopstudents'sensibilityregar dingissuesofgenderincontemporary India
V.	**Sexual harassment** **Say no eve teasing.** **Caste-basedviolence.** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act (2005)**	LectureMethodusing ICT Tools and Board	Understand gender problems and ways of addressing them, including interactionsacrosslocaltoglobals calesincommunitiesandovercom einequalitieswithlegislation.	Oral question and answers Toexposethestud entstodebateonpo liticsand economicworksa ndongenderviole nce.

Listof References (Book/ICT/ Weblinks):

1.RajagopalanR.2015.**EnvironmentalStudies-fromCrisistoCure.**ThirdEdition.Chennai:OxfordUniversityPress.

DrDKAsthanaand DrMeeraAsthana. 2014.

2.**ATextbookofEnvironmentalStudies**RevisedEdition.New Delhi:S.Chand&Company

3.Sen Amartya **More Than One Million Women Are Missing.** New York Review ofBooks 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomenin theTelangana People'sStruggle**.NewDelhi: Kali for Women.

4.Shatrughna, Veena.**Women'sWorkanditsImpact onChildHealthandNutrition.**Hyderabad: NationalInstituteofNutrition,IndianCouncilofMedicalResearch.1993

Nameofthefacultymember&Signature: Sudhakar

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER V

Department:CSAI **Class&Section:DCSAI** **CourseCode:CSAI23501A**

Nameofthe FacultyMember:
RUCHIKA MURTHY

CourseTitle:SOFTWARE ENGINEERING

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	The evolving role of software, software, changing nature of softwareLegacy Software, Software Myths Software engineering-layered technology, Process FrameworkCMMI, Process patterns, Personal and Team Process models Process Models: waterfall, incremental, evolutionary process models Agile process models	LectureMethodusing ICT Tools	ToLearnaboutsoftware, software,changing nature of softwareLegacySoftware, Software Myths Software engineering-layered technology	Group discussion on framework and process models
II.	Requirements Engineering tasks, Initiating Requirements Engineering ProcessEliciting Requirements Developing Use Cases, Building Analysis ModelNegotiating and Validating Requirements Requirements Analysis, Analysis Modeling Approaches, Data Modeling ConceptsObject Oriented Analysis, Scenario Based Modeling, Flow Oriented Modeling Class Based Modeling, Creating Behavioral Model	LectureMethodusing ICT Tools	Eliciting Requirements Developing Use Cases, Building Analysis ModelNegotiating and Validating Requirements	Interaction section on Data Modeling ConceptsObject Oriented Analysis, Scenario Based Modeling,

III.	Design Process and Quality Design Concepts and Design ModelPattern Based Software DesignSoftware architecture, Data design Architectural styles and PatternsArchitectural design, Assessing alternative architectural designManaging Data flow into Software architecture	LectureMethodusing ICT Tools	, Data design Architectural styles and PatternsArchitectural design, Assessing alternative	Assignment on Assessing alternative architectural designManaging Data flow into Software architecture
IV.	Introduction to Component, Designing Class Based ComponentsConducting Component Level Design, Object Constraint Language Design ConventionalComponents Golden Rules, User Interface Analysis and Design Interface Analysis, Interface Design Steps DesignEvaluation	Board and chalk method	Designing Class Based ComponentsConducting Component Level Design, Object Constraint Language	Quiz on , User Interface Analysis and Design Interface Analysis, Interface Design Steps DesignEvaluation
V.	A Single Approach to Software Testing Strategic Issues, Test Strategies for Conventional Software Validation Testing, System Testing, Testing Fundamentals, Black Box and White Box Testing Basis Path Testing, Control Structure Testing Software Quality Metrics for Analysis Model Metrics for Design Model, Metrics for SourceMetrics for Testing, Metrics for Maintenance	Board and chalk method	Testing Fundamentals, Black Box and White Box Testing Basis Path Testing	Class activity onBlack Box and White Box Testing

Listof References (Book/ICT/ Weblinks):

1. Pressman, Rogers S. 2019.**Software Engineering,** A practitioner's Approach.8thEdition.Mc Graw Hill Education
2. Sommerville.2007.**Software Engineering.7thEdition.**NewDelhi: Pearson Education

Nameofthefacultymember&Signature: RUCHIKA MURTHY

Approvedby HeadoftheDepartment: P. Bala Seshu Kumari

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER V

epartment:CSAI **Class&Section:DCSAI** **CourseCode: CSAI23501B**

ameofthe FacultyMember: Bhanu srec S **CourseTitle: Fuzzy Logic**

Unit	Topics to be covered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to Fuzzy logic, classical and fuzzy sets ,Membership Function, Membership Grade, Universe of Discourse, Linguistic Variables, Operation on Fuzzy sets: inetsections,unions, negations, product difference, properties of classical set and fuzzy sets, fuzzy vs probability, fuzzy arithmetic, fuzzy numbers	Ppts.flow charts, diagrams, ict tools	Identify and describe Fuzzy logic techniques in building intelligent machine	Problem solving on fuzzy operations , intersection , unions, difference, product ,negation
II.	Essential elemts of fuzzy sytems, classical inference rule, classical implications and fuzzy implications, crisp relation and fuzzy relations, composition of fuzzy relations , cylindrical extension and projection fuzzy if-then rule inference scaling and clipping method, aggregation , fuzzy rule based modl, propositions, defuzzification	Ppt ,ict tools	Apply fuzzy logic models to handle uncertainty and solve engineering problems	Assignment on fuzzy if then rules how they help solve AI problems
III.	Introduction to expert systems, architecture and role of expert systems , representation and organization of knowledge, basic characteristics and types of problems handled b expert systems	Ppt ,ict tools, Architecture of expert system, diagrams	Discuss the architecture of an expert system and its tools	Presentations on expert systems and its architecture

	Typical expert systems –Mycin , expert shells, techniques of knowledge representations in expert systems knowledge engineering ,system- building aids, support facilities. Stages in the development of expert systems	PPT, Ict tools	Understand the importance of building expert sytems	Class activity on developing an expert systems. Acknowledging the working procedure of an expert system
V.	Building an Expert system: expert system development , selection of tool acquiring knowledge , building process problem with expert system,dealing with domain expert , difficulties during development	PPT, Ict tools	Understand various problems with expert systems	Presentations , Text book reading , summarizing the importance of expert systems and fuzzy logic in AI

Listof References (Book/ICT/ Weblinks):

1. Fuzzy logic with engineering applications timothy J ross
2. https://www.youtube.com/watch?v=__0nZuG4sTw

Nameofthefacultymember&Signature: S. Bhanu Sree

Approvedby HeadoftheDepartment: P. Baba Seshu Kumari BSK

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

V SEMESTER

Department: Computer Science &Artificial Intelligence

Class & Section: DCSAI **Course Code: CSAI23506**

Name of the Faculty Member: M Ravi

Course Title: ROBOTIC PROCESS AUTOMATION

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**DIGITAL PRIMER:** Why is Digital Different? Digital Metaphors On Cloud 9 A Small Intro to Big Data Social Media Digital Marketing Artificial Intelligence Unchain the Block chain Internet of Everything(IoE) Immersive Technologies	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Various Digital Technologies used in Realtime and their objectives	Assignments, creating awareness on various online web portals
II.	**Digital For Industries:** Manufacturing Hi-tech Banking and Financial Services Insurance and Healthcare Retail-Travel & Hospitality Communications, Media Information Services-Government	Lecture Method Using ICT Tools (Projector) Black board	**Analyze** Digital Technologies usage in Various Industries	Group discussions, creating awareness on usage of digital technologies with respect to various real time industries
III.	**RPA Tools: UiPath** RPA vs BPM RPA Implementations- RPA in Industries-Tools	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** RPA Tools (UI Path) Configuring and Developing Various Bots	Seminars, Practical implementation of various bots in the lab

IV.	**AUTOMATION ANYWHERE** Automation Anywhere Architecture Exploring AA BOTS preparation using AA	Lecture Method Using ICT Tools (Projector) Black board	**Understand** Various Activities and tools of Automation Anywhere environment	Presentations, awareness on practical environment, Practical implementation of various bots in the lab using AA
V.	**Knowing the Bots and Its types** More About Task Bots Meta Bots IQ Bots	Lecture Method Using ICT Tools (Projector) Black board	**Demonstrate** Developing Various Bots using Automation Anywhere	Group activities, Practical implementation of various bots in the lab using AA

List of References (Book/ICT/ Weblinks):

1. Richard Murdoch. 2020. **Robotic Process Automation: Guide To Building Software Robots, Automate Repetitive Tasks & Become an RPA Consultant**. 1st Edition. **Packt Publishing**Kindle Store
2. Husan Mahey. 2020. **Robotic Process Automation with Automation Anywhere: Techniques to fuel business productivity and intelligent automation using RPA. 1st Edition. Packt Publishing** Kindle Store.
3. Kelly Wibbenmeyer, **The Simple Implementation Guide to Robotic Process Automation (RPA): How to Best Implement RPA in an Organization. 1st Edition. Packt Publishing.** Kindle Store.
4. Alok Mani Tripathi. 2018. Learning Robotic Process Automation: Create Software robots and automate business processes with the leading RPA tool - UiPath: Create Software robots ... with the leading RPA tool – UiPath. 1st Edition. Packt Publishing. Kindle Store.

Web sites

1. https://en.wikipedia.org/wiki/Robotic_process_automation
2. https://en.wikipedia.org/wiki/Automatix_(software)
3. https://www.automationanywhereuniversity.com/
4. https://www.automationanywhere.com/in/products/iq-bot

M. RAVI M.Ravi

Name of the faculty member & Signature:

Approved by Head of the Department: P. Bala Seshu Kumari BSK

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -V

Department: B.Sc. Computer Science and Artificial Intelligence **Class&Section:DCSAI** **CourseCode:** CSAI23502

Nameofthe FacultyMember:Vijaya Pratapa **CourseTitle:** Data Visualization Tools

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Ways of Representing Visual Data, Techniques Used for Visual Data Representation, Types of Data Visualization, Visualizing Big Data, Tools Used in Data Visualization, Tableau Products.	LectureMethodusing ICT Tools	To Learn about the way of representing visual data and its applications	Interactive session on representing visual data. Techniques used to represent data.
II.	Creating Combination of Charts, Creating a Combo Chart with Secondary Axis, Discriminating Series and Category Axis, Chart Elements and Chart Types, Data Labels, Quick Layout ,Using Pictures in Column Charts, Band Chart ,Thermometer Chart, Gantt Charts, Water fall Chart, Spark lines , Pivot Charts, Pivot Charts with Pivot Tables, Pivot Charts without Pivot Tables.	LectureMethodusing ICT Tools	To learn data visualization using combination of various charts.	Discusson on Creating different charts on sample data.
III.	Plotting and Visualization: A Brief Matplotlib API, Plotting with Pandas and Sea born, Python Visualization Tools.Basic Visualization using Python: Pie Chart, Bar Chart, Histogram ,Line Chart, Area plot ,Box Whisker Plot,Scatter Plot, Heat Maps.	LectureMethodusing Black Board & ICT Tools	To learn apply visualizing techniques using matplotlib package	Seminars and practicing programs.

IV.	Creating Your First Visualizations and Dashboards: Connecting to Data, Foundations for Building Visualizations, Visualizing Data, Creating Bar Charts, Line Charts, Geographic Visualizations.Show Me. Tableau Paradigm, Connecting to Data, Data Source Meta data, Extracts. Tableau File Types, Joins and Blends. Filtering Data.	LectureMethodusing ICT Tools	Design effective graphical analysis in Tableau	Interactive Session practice tableau
V.	Visualizing Dates and Times, Visualizing Distributions, Compare Different Measures,LOD,types of calculations,parameters,Adhoc calculations,Quick table calculations,scope and direction,custom table calculations, data Densification.	LectureMethodusing Black Board & ICT Tools	Implement Table level Calculations	Solving calculations using the application.

Listof References (Book/ICT/ Weblinks):

1. DT Editorial Services.2016. **Big Data Black Book**. Dream tech Press.
2. Wes, Mc Kinny.2018.**Python for Data Analysis.** 2nd Edition. O'Reilly Media
3. Motwani, Dr. Bharati. 2019.**Data Analytics with R.** Wiley India Pvt. Limited
4. Milligan, Joshua N.2016.**Learning Tableau**.2nd Edition. Packt Publishing Ltd.

Nameofthefacultymember&Signature: VIJAYA P- vijaya.P.

Approvedby HeadoftheDepartment: P. Bala Seshu Kumari

BSK

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - V

Class&Section: DCSAI **CourseCode:** CSAI23505

Department:CSAI **CourseTitle:** NATURAL LANGUAGE PROCESSING

Name of the Faculty Member: Harsha Sastry

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Language Processing and Python:** Computing with Language: Texts and Words, A Closer Look at Python: Texts as Lists of Words. **Computing with Language:** Simple Statistics, Back to Python: Making Decisions and Taking Control, Automatic Natural Language Understanding. **Accessing Text Corpora and Lexical Resources:** Accessing Text Corpora, Conditional Frequency Distributions, Lexical Resources, WordNet	LectureMethodusing ICT Tools	To learn Python programs to manipulate and analyze language data.	Quiz
II.	**Processing Raw Text:** Accessing Text from the Web and from Disk **Strings:** Text Processing at the Lowest Level, Text Processing with Unicode, Regular Expressions for Detecting Word Patterns, Useful Applications of Regular Expressions, Normalizing Text Regular Expressions for Tokenizing Text, Segmentation, Formatting: From Lists to Strings.	LectureMethodusing ICT Tools	To learn and Understand key concepts from NLP and linguistics to describe and analyze language	Group discussion
III.	Categorizing and Tagging Words: Using a Tagger, Tagged Corpora Mapping Words to Properties Using Python Dictionaries, Automatic Tagging, N-Gram Tagging Transformation-Based Tagging, How to Determine the Category of a Word	LectureMethodusing ICT Tools	To learn and Understand classification of text	Seminar
IV.	Learning to Classify Text: Supervised Classification, Evaluation, Naive Bayes Classifiers **Extracting Information from Text** Information Extraction, Chunking, Developing and Evaluating Chunkers, Recursion in Linguistic Structure, Named	LectureMethodusing ICT Tools	To learn Create feature based grammar	Group discussion

	Entity Recognition, Relation Extraction. Analyzing Sentence Structure Some Grammatical Dilemmas, Use of Syntax. Context-Free Grammar, Parsing with Context-Free Grammar			
V.	**Building feature-based grammars** Graphical features, processing feature, extending a feature based grammar**Analyzing the meaning of sentences** Natural language understanding, Propostional logic, first order logic Semantics of English sentences 2	LectureMethodusing ICT Tools	To learn feature based grammers.	Seminars.

Listof References (Book/ICT/ Weblinks):

1. Steven Bird, Ewan Klein, and Edward Loper. 2009. **Natural Language Processing with Python.** 1st Edition. O'Reily.
2. Natural Language Processing Recipes: Unlocking Text Data with Machine Learning and Deep Learning using Python. Akshay Kulkarni, AdarshaShivananda, Apress, 2019
3. Allen James, Natural Language Understanding, Benjamin/Cumming,1995.
4. Charniack, Eugene, Statistical Language Learning, MIT Press, 1993.

Nameofthefacultymember&Signature:Harsha Sastry Harsha Sastry

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER V

Department:CSAI **Class&Section:DCSAI** **CourseCode:** CSAI23504

Name of the Faculty Member:Sarashri **CourseTitle: BIGDATA ANALYTICS**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	What is Big Data ?,History of Data Management-Evolution of Big Data ,Structuring Big Data, Elements of Big Data,Big Data Analytics, Careers and Future of Big Data **Exploring the Use of Big Data in Business Context:** Use of Big Data in Social Networking Preventing Fraudulent Activities **Introducing Technologies for Handling Big Data:** Distributed and Parallel Computing for Big Data Introducing Hadoop, Cloud Computing and Big Data **Understanding Big Data Technology Foundations:** Exploring the Big Data Stack, Virtualization and Big Data Virtualization Approaches	Chalk and board method	What is Big Data ?,History of Data Management, **Introducing Technologies for Handling Big Data**	Solving Distributed and Parallel Computing for Big Data, Introducing Hadoop
II.	**Understanding Hadoop Ecosystem** Hadoop Ecosystem, Hadoop Distributed File System, HBase-Architecture,Regions, ***Understanding Map Reduce Fundamentals***	Chalk and board method,ICT tools	**Understanding Hadoop Ecosystem, Understanding Map Reduce Fundamentals andHBase**	Group Discussion on Hadoop Ecosystem, Hadoop Distributed File System

	The Map Reduce Frame work, Uses of Map Reduce, Role of HBase in Big Data Processing			
III.	**Processing your Data with Map Reduce** Developing Simple Map Reduce Application **Customizing Map Reduce Execution and Implementing Map Reduce program** Controlling Map Reduce Execution with Input Format, Reading Data with Custom Record Reader, Organizing Output Data with Output Format, Customizing Data with Record Writer, Optimizing Map Reduce Execution with Combiner, Controlling Reducer Execution with Partitioner	Chalk and board method,ICT tools	**Processing your Data with Map Reduce, Customizing Map Reduce Execution and Implementing Map Reduce program**	Assignment on Controlling Map Reduce Execution with Input Format, Reading Data with Custom Record Reader
IV.	**Understanding Hadoop YARN Architecture:** Background and Advantages of YARN, YARN Architecture, Working of YARN, YARN Schedulers, YARN Configurations, YARN Commands, YARN Containers **Exploring HIVE:** Introducing Hive, Getting started with Hive, Data Types and Built-in functions in Hive ,Hive DDL, Data manipulation in Hive, Data Retrieval Queries, Using Joins in Hive	Chalk and board method,ICT tools,PPT	**Understanding Hadoop YARN Architecture, Exploring HIVE**	Viva on Yarn and hive Built-in functions in Hive ,Hive DDL, Data manipulation in Hive
V.	**Analyzing Data with Pig** Introducing Pig ,Running Pig, Getting Started with Pig Latin, Working with Operators in Pig, Working with Functions in Pig, Debugging Pig, Error Handling in Pig **No SQL Data Management**	Chalk and board method,ICT tools,PPT	**Analyzing Data with Pig, No SQL Data Management**	Class Activity on Pig commands in lab

	Introduction to No SQL, Types of No SQL Data Models, Schema-Less Databases ,Materialized Views, Distribution Models ,Shading			

Listof References (Book/ICT/ Weblinks):

1. DT Editorial Services.2016. **Big Data Black Book**. Dream tech Press.
2. White, Tom.2012.**Hadoop: The Definitive Guide**.3rd Edition. O'Reilly Media.
3. https://www.youtube.com/@education4u

Nameofthefacultymember&Signature:

Approvedby HeadoftheDepartment:

(Bala Seshu Kumari)

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -IV

Department: B.Sc. Computer Science and Artificial Intelligence

Class&Section:DCSAI

Course Code: CSAI23503

Name of the Faculty Member: ASWINI KUMAR MANDADAPU

Course Title: Data Engineering and Distributed System

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Distribute Data Storage Technology: Server Centric architecture and it's limitations, Storage-centric IT architecture and its advantages .architecture of intelligent disk sub system, hard disk and internal I/O channels and JBOD.Storage virtualization using RAID ,Introduction to NAS ,SAN and DAS.	Lecture Method using ICT Tools	To Learn about the way of representing Database and storage of database.	Interactive session on representing data. Techniques used to storage of data.
II.	Distributed databases: Distributed DBMS, Architecture models for DDBS, Distributed DBMS Architecture. Distributed Database Design Issues Integration: Frame work of Distribution ,Distributed design issues, top down design processes, Fragmentation, allocation, Bottom-up Design methodology, Schema matching, Schema Integration ,Schema mapping, Data cleaning.	Lecture Method using ICT Tools	To learn data the way managing data using DBMS.	Discussion on different ways of managing data using DBMS.
III.	Data and Access Control: Database Security, Discretionary Access control,multi level access control, Distributed Access control, View mangementview's in centralized DBMS's,Views in Distributed DBMS's,maintanence of materialized	Lecture Method using Black Board & ICT Tools	To learn about Access control of Databases.	Seminars on Access control of databases.

	views.			
IV.	Parallel Database Systems: parallel database system architecture, parallel data placement, load balancing, and database cluster. Web data management: Web graph management, web search, web crawling, indexing ranking and link analysis, keyword search, web querying, semi structured approach.	Lecture Method using ICT Tools	To learn about Parallel database System.	Seminars on parallel data base system.
V.	Advance Application Development: performance tuning, performance bench marks other issues in application development, standardization. Spatial and temporal data mobility: motivation, time in database, spatial and geographic data, multimedia databases, mobility and personal databases.	Lecture Method using Black Board & ICT Tools	To learn about Application Development.	Seminars on Application Development.

List of References (Book/ICT/ We blinks):

1. M.Tamer ozsu.patrick valduriez principles of distributed system Third Edition.
2. Distributed operating systems: concepts and design by Pradeep Sinha.
3. CJ Date, A Kannan, Swami Nathan, An introduction data base system. Third edition, Pearson education 2006.

Name of the faculty member &Signature: ASWINI KUMAR MANDADAPU M. Aswini kumar

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

DepartmentENGLISH **Class&Section:**ACSIOT, AAI, ACDS,ACSC **CourseCode:**EN23101

Nameofthe FacultyMember:P. Saritha **CourseTitle:**GENERAL ENGLISH-2

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Flash Fiction- 'The Mice' by Lydia Davies (1)** Simple, Complex and Compound Sentences (3) Conversion of Sentences (3) Information Transfer (2)	LectureMethodusing ICT Tools	Tolearnaboutthefundamentals Of communication	Solving mixed grammar exercises Narrating mystic experiences Writing paragraphs on various topics
II.	**Short Story- 'The Face on the Wall'by E V Lucas (2)** • Active and Passive Voice (3) • Conjunctions (2) Essay Writing (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Narration of short stories by students. Grammar exercises Essay writing exercises
III.	**From the text*Three Days to See by* Helen Keller** • Explanation of the text (3) • Grammar- Usage of Modal Auxiliary Verbs (2) • Vocabulary – Collective Nouns, Technical Vocabulary (2) Writing Skill – Newspaper Report (2)	Lecture Method using ICT Tools	To recognize the moral element which underlies in the short story. To identify the different types of modal auxiliary verbs in a sentence composition and to learn the correct usage ofCollective Nouns, Technical Vocabulary.	Character sketch of the story characters. Grammar exercises like fill in the blanks, multiple choice and true or false. Newspaper Report writing exercises.
IV.	**Short Story from the text 'Leela's Friend'by R.K. Narayan** • Explanation of the text (3) • Grammar- Phrasal Verbs, Wh-questions (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills.	Description of the different characters of the story. Grammar exercises Exercises exercises like fill in the blanks, multiple choice and

	• Vocabulary- Noun and Verb Suffixes (2) • Writing Skill- Writing a Narrative (2)			true or false. Practice in writing a narrative
V.	**From the text 'The Last Leaf' by O. Henry** • Explanation of the text (3) • Grammar- Prepositions (2) • Vocabulary – Idioms (2) Writing Skill – Precis Writing (2)	Lecture Method using ICT Tools	To write grammatically correct sentences and usage of idioms in sentences.	Textbook exercises and worksheets Precis' writing exercises.

Listof References (Book/ICT/ Weblinks):

Epitome of Wisdom, Maruthi Publications

SUGGESTED READING:

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges.* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing.* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Nameofthefacultymember&Signature: Saritha.P. & Smita.

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- II

epartment:CSAI **Class&Section:ACSAI** **CourseCode: BS21204**

ameofthe FacultyMember:Vijaya Pratapa **CourseTitle: C++ and Data Structures**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to object-oriented programming : Features of OOP's, Keywords, data types, variables and their declaration, reference variables, Scope resolution, member dereferencing & memory management operators, manipulators, input and output objects(cin&cout) Defining classes, defining member functions, nesting of member functions, private member functions, Memory allocation for objects, static data members and static member functions	LectureMethodusing ICT Tools & Black Board	To learn about difference between object-oriented programming and procedure-oriented programming.	Interactive Session on Procedure oriented and Object Oriented Programming,quiz,writing programs
II.	Friend functions and friendclasses Constructors, default and parameterized constructors, copy constructors, Constructor overloading, constructors with default arguments, Destructors Inheritance: Defining derived classes, single inheritance, making private members Inheritable, multilevel, multiple, hierarchical and hybrid inheritances. Virtual base classes, abstract classes Pointers to objects, this pointer, virtual functions Template: Template functions and Template classes	LectureMethodusing Black Board	To learn about develop programs using object oriented programming features	Discussion on writing programs for different type of inheritance. Quiz.
III.	Introduction to data structures : Linear and non-linear data structures,Stacks-Definition, implementing stack using arrays Applications of stack: infix, prefix and postfix expressions, conversion of infix to prefix and infix to postfix,	LectureMethodusing ICT Tools & Black Board	To learn about apply various data structures to solve problems. Linear Data Structures.	Group discussion on data structures selection based on problem.

	evaluation of postfix expression Queues- Definition, , circular queue and double ended queue(definition),implementing queue using arrays Sparse Matrix-definition, representation of sparse matrix in3-tupleform			
IV.	Linked list- Definition, single linked lists, operations on single linked list (Insertion & deletion), Stack and queue using linked list. Linear search and binary search Sorting-Bubble, selection, insertion, quick and merge sort techniques	LectureMethodusing ICT Tools & Black Board	To learn about linked list data structure and Searching and sorting techniques.	Seminars on stack, queue and linked list implementation using arra and linked list. Mock test.
V.	Trees- Definition, linked representation of trees, Binary search tree, Tree Traversals (In-order, preorder and post order traversals) B-trees-insertion and deletion operations on B-trees Graphs: Definition, Array and linked list representation of graphs Graph traversals-BFS and DFS	LectureMethodusing ICT Tools & Black Board	To learn about Non-Linear Data Structures called Trees and Graphs.	Interactive session on Exceptions, Writing programs and Quiz.

Listof References (Book/ICT/ Weblinks):

1. Balaguruswamy, E. 2008. **Object Oriented Programming with C++.** 4th Edition. New Delhi: Tata McGraw-Hill publication(For units I andII)
2. KanetkarYashwant, P. 2007. Data Structures through C++. 2nd Edition. New Delhi: BPB Publications(For units III, IV andV)

Suggested Reading:

1. Ravichandran, D 2010. **Programming with C++.** 3rd Edition. New York: McGrawHill.
2. StroustrupBjarne 2013. **The C++ Programming Language.** 4th Edition. New York: Addision-WesleyProfessional.
3. TharejaReema. 2015. **Object Oriented Programming with C++,** USA: Oxford University Press.
4. SahniSartaj. 2005. **Data Structures and Algorithms in C++.** 2nd Edition. India:UniversitiesPress PrivateLimite

Nameofthefacultymember&Signature: VIJAYA.P — Vijaya.P

Approvedby HeadoftheDepartment: P. Bala Seshu kumari

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- II

Department: B. Sc, Computer Science & Artificial Intelligence

Class : ACSAI

Name of the Faculty Member:Dr.K.Musalaiah

Course Code:IC-23101

Course Title: Indian Heritage and Culture

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation

IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the constitution.	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr.K.Musalaiah

Dr.K.Musalaiah

Approved by Head of the Department:

Mrs. Bala Seshu Kumar P

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: computer science and artificial intelligence **Class & Section:ACSAI** **Course Code:CSAI21203**

Name of the Faculty Member:Ruchika murthy **Course Title: OPERATING SYSTEM**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction-Definition of operating system, mainframe system, desktop systems Multiprocessor systems, distributed systems, clustered systems . Real time systems , hand held systems Operating system structures-system components Operating system services, system calls system programs, system structures , virtual machines	Lecture Method using ICT Tools	To Learn about the Introduction to operating system and types of operating system	Quiz on types of operating system
II.	1 Process concept-process concept, process scheduling 2. Operation on processes, cooperating processes 3. Inter process communication 4. Process scheduling-basic concepts, scheduling criteria, scheduling algorithms.	Chalk and board method	Operation on processes, cooperating processes Inter process communication	Group discussion on scheduling criteria Solving problems on scheduling algorithm
III.	1. Process synchronization-critical section problem 2. Semaphores, monitors 3. Deadlocks-deadlock characterization, methods for handling deadlocks	Ppt and ict tools	Deadlocks-deadlock characterization, methods for handling deadlocks	Assignment on deadlock and methods for handling

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2023-2024

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	4. Deadlock prevention, Deadlock avoidance, Deadlock detection			
IV.	1. File system-file concept, access methods 2. Directory structure, file system mounting, file system sharing. 3. File system implementation-file system structure, file system implementation. 4. Directory implementation, allocation methods, free space management	Chalk and board method	Directory structure, file system mounting, file system sharing.	Viva on file system. file concepts, and access methods
V.	1 Memory management-swapping, contiguous memory allocation 2 Fragmentation-internal and external fragmentation 3 Paging, segmentation, segmentation with paging. 4 Virtual memory management-demand paging 5. Page replacement algorithms, Thrashing and working set model.	Ict tools	Paging, segmentation, segmentation with paging. Virtual memory management-demand paging	Class activity on fragmentation

List of References (Book / ICT / Weblinks):

1. Silberschatz Abraham, Galvin Peter,B. and Gagne Greg. 2006. Operating System Concepts. India
2. Tanenbaum Andrew, S. 2001. Modern Operating Systems. Asia: Pearson Education.

Name of the faculty member & Signature:RUCHIKA MURTHY

Approved by Head of the Department:

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

II SEMESTER

Department: B. Sc. Computer Science & Artificial Intelligence	**Class & Section:** ACSAI – (A)	**Course Code:** CSAI21201
Name of the Faculty Member: K. Ketana	**Course Title:** Probability & Statistics	

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Measures of central tendencies – mean, median and mode. Introduction to random variables – discrete and continuous with probability distribution functions. Introduction to mathematical expectations – addition and multiplication theorems. Correlation analysis – Karl Pearson's method, spearman's method. Regression analysis using regression coefficient method.	Lecture method	Employee the principles of linear regression and correlation, including least square method, predicting a particular value of Y for a given value of X and significance of the correlation coefficient	Quiz and problem-solving activity.
II.	Introduction and applications on binomial, Poisson and normal distributions.	Lecture Method	Use discrete and continuous probability distributions, including requirements, mean and variance, and making decisions	Quiz and problem-solving activity.
III.	Introduction to sampling – simple random sampling, systematic sampling, stratified random sampling. Introduction to the basic concepts of hypothesis. Large sample tests procedures for i. Test for single mean. ii. Test for difference of means.	Lecture Method	Able to perform and analyze hypotheses tests of means, proportions and variances using both one-and two-sample data sets.	Quiz and problem-solving activity.

	iii. Test for single proportion. iv. Test for difference of proportions. v. Test for difference of standard deviations.			
IV.	Tests of significance of small sample test i. t – test for single mean. ii. t – test for difference of means. iii. Paired t- test for difference of means. iv. F – test for difference of population variances. v. Chi – square test for population variance. vi. Chi – square test for goodness of fit. vii. Chi – square test for independence of attributes.	Lecture Method	Able to apply the appropriate Chi-Squared test for independence and goodness of fit. Can differentiate between the test statistics to be used for dependent and independent samples	Quiz and problem-solving activity.
V.	Statistical control basic concepts. Control charts for variables: i. Mean and range charts. ii. Mean and standard deviation chart. Control charts for attributes: i. P – chart ii. Np – chart iii. C - chart	Lecture Method	Understand the concepts of quality control, chance and assignable causes of variation, control Charts for variables.	Quiz and problem-solving activity.

List of References (Book / ICT / Weblinks):

1. Gupta, S.C. and Kapoor, V. K. Fundamentals of Mathematical Statistics. New Delhi: Sultan Chand and Sons publishers.
2. Gupta, S.C. and Kapoor, V.K. Fundamentals of Applied Statistics. New Delhi: Sultan Chand and Sons publishers.
3. Sinha H.C. and Varshony, L.S. Mathematical Statistics. Meerut: Jai Prakash Nath and Co. Publishers

Name of the faculty member & Signature

Approved by Head of the Department

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.Sc. Computer Science and Artificial Intelligence **Class & Section:ACSAI** **Course Code:CSAI12102**

Name of the Faculty Member:S.Sarashri **Course Title:Web Technologies**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Origin and Evolution of HTML and XHTML Basic text markup, Images Hypertext links, lists Tables, Forms, Frames	Whiteboard,PPT, Projector	Origin and Evolution of HTML and XHTML Basic text markup, Images	Offline Quiz
II.	CASCADING STYLE SHEETS Selector forms Font properties, list properties Background images, the and tags	PPT ICT	CSS -Font properties, list properties Color, alignment of text, the box model	Discussion
III.	JAVASCRIPT overview Control statements, Screen output and keyboard input Object creation and modification, Arrays, Functions Pattern Matching using regular expressions	Chalk board and ICT tools	JAVASCRIPT- Control statements, Arrays, Functions Pattern Matching using regular expressions	Assignment
IV.	EVENT HANDLING IN JAVA SCRIPT- Events and Event Handling, Handling Events from Body, Button, text box and password Elements, Moving Elements, Element Visibility XML Introduction, Syntax, Document Structure, DTD	Whiteboard,PPT, Projector	Events and Event Handling Moving Elements	Offline Viva
V.	Over view of PHP, PHP-Primitives, Operations and Expressions	Chalk board and ICT tools	PHP-Primitives, Operations and Expressions, Control Statements, Arrays,	Written Test

	Control Statements, Arrays, Functions Pattern Matching, Form Handling, Files, Cookies and Session tracking Database access through web: Architectures for database access MySQL Database System, Database access with PHP and MySQL		Functions	

List of References (Book / ICT / Weblinks):

1. Sebesta.Robert W, 2008 Programming the World Wide Web. 4th Edition. New Delhi Pearson Education

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: Computer Science and Artificial Intelligence **Class & Section: NCSAI** **Course Code:CSAI22404**

Name of the Faculty Member: S. Sarashri **Course Title: Cloud Computing**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Distributed Systems: Characterization of distributed systems: Introduction, Examples of Distributed Systems. Resource sharing and Web – WWW Network and Internetworking: Types of Network	ICT	Introduction to Distributed Systems Network and Internetworking	Quiz
II.	Introduction to Cloud Computing, Cloud Components, Infrastructure Services Benefits, Limitations System Models for Advanced Computing Software Systems for Advanced Computing	Chalk and Board method	Introduction to Cloud Computing Benefits, Limitations System Models for Advanced Computing Software Systems for Advanced Computing	Group Discussion
III.	Cloud Computing Architecture The Cloud Reference Model Open Challenges	ICT and PPt tools	Cloud Computing Architecture Challenges faced Types of clouds	Assignment on market basket model and a prior algorithm
IV.	Cloud Computing Technology: Hardware and Infrastructure: Clients, Mobile,Thin, Thick Local Clouds and Thin Clients: Virtualization, How to Virtualize, Concern and Security Cloud security: Data security, Access control, Auditing: internal and	ICT and PPt tools	Virtualization and Cloud Computing Cloud security	Weekly test

	External audit, Authentication and Authorization			
V.	Virtualization: Introduction and Characteristics of Virtualized Environments: Increased Security, Managed Execution, Portability Taxonomy of Virtualization Techniques: Execution Virtualization, Other Types of Virtualization	Chalk board method	Taxonomy of Virtualization Techniques Cloud Storage	Offline Quiz

List of References (Book / ICT / Weblinks):

1. CoulourisG, DollimoreJand KindbergT. Distributed systems concepts and Design. 4th Edition, Pearson Education
2. Geoffrey C Fox, Kaittwangand DongrraElsevier, Jack J, 2012. Distributed and Cloud computing. India

Name of the faculty member & Signature: Sarathi Sarathi

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: computer science and artificial intelligence **Class & Section:NCSAI** **Course Code:**CSAI22405

Name of the Faculty Member:Ruchika murthy **Course Title: Data Mining**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Data Mining 1. What is data mining 2. Statistical limits on data mining 3. Things useful to know 4. Application of Near-Neighbour search 5. Shingling of documents 6. Similarity-Preserving summaries of sets 7. Distance measures 8. Methods of high degrees of similarity	Lecture Method using ICT Tools	To Learn about the Introduction data mining Statistical limits on data mining	Quiz on introduction on data mining
II.	Mining Data Streams 1. The Stream data model 2. Sampling data in a stream 3. Filtering streams 4. Counting distinct elements in a stream 5. Estimating moments 6. Page Rank 7. Efficient computation of page rank 8. Topic-sensitive page rank	Chalk and board method	To learn about The Stream data model Sampling data in a stream	Group discussion on sampling data in a stream Solving problems on page rank algorithm
III.	Frequent Item sets 1. The Market-Basket Model 2. Market Baskets and A-Priori Algorithm 3. Counting frequent items in a stream 4. Introduction to Clustering Techniques 5. Hierarchical clustering 6. K-means and K-medoids Algorithm 7. AdaBoost algorithm	Ppt and ict tools	Market Basket model and A-Priori Algorithm Counting frequent items in a stream Introduction to Clustering techniques	Assignment on market basket model and a-prior algorithm

IV.	Recommendation Systems 1. Introduction to Recommendation system 2. Model for Recommendation system 3. Content-Based recommendation 4. K-Fold cross validation 5. Introduction Dimensionality Reduction 6. Case study – Netflix challenge, LinkedIn data , Amazon data	Chalk and board method	Model for Recommendation system Content-Based recommendation K-Fold cross validation .	Case study – Netflix challenge, LinkedIn data , Amazon data
V.	Dimensionality Reduction 1. Dimensionality reduction techniques 2. Eigen values and Eigen vectors 3. Feature selection and feature extraction 4. PCA 5. LDA 6. Random Forests and partial least squares regression	Ict tools	Feature selection and feature extraction Random Forests and partial least squares regression	Class activity on dimensionality reduction techniques

List of References (Book / ICT / Weblinks):

1.ESSENTIAL READING: Jure Leskovec Anand Rajaraman Jeffrey Dfavid Ullman Mining Of Massive Data Sets Second edition 2014
2.SUGGESTED READING: 1.Discovering Knowledge In Data:An Introduction To Data Mining,2nd Edition By Daniel T Larose And Chantal D,John Wiley

Name of the Faculty member & Signature:RUCHIKA MURTHY

Approved by Head of the Department:

LOYOLA ACADEMY

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TEACHINGPLANFORTHEACADEMICYEAR2023–2024

Name	:	M.Aswini Kumar			
Dept	:	B.Sc(Artificial Intelligence)			
Subject	:	Machine Learning	No. of Hours	:	30
Class	:	NCSAI	SEM	:	IV
Sub. Code:	:	SECCC23402	Year	:	II

S.No	Topics to be Covered	No. of Hours	Teaching Pedagogy	Learning Outcome	Skill DevelopmentActivity
UNIT-1	Machinelearning:Introduction,applications,lifecycle	01	Discussion and ICT Tools	Types of machine learning ,Supervised vs. Unsupervised learning	Group discussion on types of machine learning
	AIvsMachineLearning	01			
	Types of data sets, sources for machine learning datasets	01			
	Data Pre-processing in Machine learning	01			
	Types of machine learning ,Supervised vs. Unsupervised learning	01			
	Types of machine learning algorithms	02			
UNIT-2	Confusionmatrix,Crossvalidation,Overfitting,Underfitting	01	Discussion and ICT Tools	Bias and variance, Label Encoding and One hot Encoding	Case study on Bias and variance, Label Encoding and One hot Encoding
	Regularization-Value	01			
	Feature selection techniques	02			
	Bias and variance, Label Encoding and One hot Encoding	02			
	Gradient descent, linear algebra for machine learning	01			
	Feature engineering, Epoch ,Anomaly detection in ML	01			
UNIT-3	Regression analysis in machine learning ,types of regression	02	Discussion and ICT Tools	Simple and multiple linear regression	Assignment on Backward elimination ,polynomial regression.
	Linear regression	01			
	Simple and multiple linear regression	02			
	Backward elimination ,polynomial regression	02			

UNIT-4	Introduction to classification.	01	Discussion and ICTTools	K-NN algorithm	Project on K-NN algorithm
	Classification algorithm	01			
	Classification vs. regression	01			
	K-NN algorithm	01			
	Support vector machine algorithm	01			
	Naïve Bayes classifier	01			
	Linear discriminant analysis	01			
	Decision tree algorithm	01			
	Random Forest algorithm	01			
UNIT-5	Principal component analysis	01	Discussion and ICTTools	Apriori algorithm in machine learning	Seminars on Association Rule learning
	Clustering in machine learning	01			
	Hierarchical clustering	01			
	K-means clustering	01			
	Association Rule learning	01			
	Apriori algorithm in machine learning	01			
	Revision	01			
	Revision	01			

References/Suggested Reading Books:

1. DuttSaikat, Chandra Mouli Subramanian, DasAmitKumar. 2019. Machine Learning. 1stEdition. PearsonIndiaEducationPvtLtd. India: NewDelhi
2. Jose, Jeeva. 2020. Introduction to Machine Learning Using Python. 1stEdition. Khanna Book Publishing Co.PvtLd.India:NewDelhi

Signature of the Faculty :(**M.Aswini Kumar)**

Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- IV

Department:CSAI Class&Section:NCSAI CourseCode: CSAI22303

Nameofthe FacultyMember:Vijaya Pratapa CourseTitle: Data Engineering Through Python

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to Data Science, Data Analysis sequence, Data Acquisition Pipeline **Files and Working with Text Data** Types of Files, Creating and Reading Text Data.File Methods to Read and Write Data, Reading and Writing Binary Files. The Pickle Module, Reading and Writing CSV Files Python os and os.pathModules, JSON and XML in Python	LectureMethodusing ICT Tools & Black Board	To learn about How to read/write files and text data.	Interactive Session on structured and Object Oriented Programming,quiz,writing programs
II.	**Working with Text Data** Processing HTML Files, Processing Texts in Natural Languages **Regular Expression Operations** Using Special Characters, Regular Expression Methods, Named Groups in Python Regular Expressions, Regular Expression with glob Module	LectureMethodusing Black Board	To learn about regular expressions on strings	Discussion on regular expressions for different scenarios.
III.	**Working with Databases** Setting Up a MySQL Database, Using a MySQL Database: Command Line . Using a MySQL Database, Taming Document Stores: MongoDB **Working with Tabular Numeric Data(Numpy with Python):**	LectureMethodusing ICT Tools & Black Board	To learn about MySQL and working with NUMPY.	Group discussion on difference between "MySQL and MongoDB".

	NumPy Arrays Creation Using array() Function, Array Attributes. NumPy Arrays Creation with Initial Placeholder Content, Integer Indexing, Array Indexing. Boolean ArrayIndexing, Slicing and Iterating in Arrays.Basic Arithmetic Operations on NumPy Arrays. Mathematical Functions in NumPy, Broadcasting in Arrays. Changing the Shape of an Array, Stacking and Splitting of Arrays.			
IV.	**Working with Data Series and Frames** Pandas Data Structures, Reshaping Data, Handling Missing Data Combining Data, Ordering and Describing Data Transforming Data, Taming Pandas File I/O **Plotting** Basic Plotting with PyPlot, Getting to Know Other Plot Types Mastering Embellishments, Plotting with Pandas	LectureMethodusing ICT Tools & Black Board	To learn about plot techniques for visualizing data	Prgrams on Numpy - Writing and executing programs . Mock test.
V.	**Working with Network Data** Dissecting graphs,Network Analysis sequence, Harnessing networks-Building and fixing a network Exploring and Analysing a network, Managing attributes, Input & Output **Probability and Statistics** Probability Distributions, statistical measures, Python modules for statistics	LectureMethodusing ICT Tools & Black Board	To learn about graph theory using python modules , probability and statistics.	Writing programs on pandas datastructure, plotting and Quiz.

Listof References (Book/ICT/ Weblinks):

1. Zinoriev, Dmitry. 2016. **Data Science Essentials in Python: Collect, Organize, Explore, Predict, Value**. The Pragmatic Programmers LL USA
2. GowriShankar S, Veena A. 2019. **Introduction to Python Programming**. CRC Press, Taylor & Francis Group.

Nameofthefacultymember&Signature: VIJAYA. P — vijaya. P.

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LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER - IV

Department: B.Sc Computer Science and Artificial Intelligence | **Class & Section :NCSAI** | **Course Code: CSAI21401**

Name of the Faculty Member: D. SRAVANI | **Course Title: Operations Research**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to OR- origin, nature, applications and limitations Linear programming problem and fundamental theorem of lpp, Graphical method and simplex method.	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	To learn how to use the various decision making tools OR to solve real life problems.	Computer Based test.
II.	Artificial variables and solution to Big M method and two phase method. (procedures), degeneracy. Duality, dual simplex method , primal dual relationship.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	The reasons are that the inclusion of the big number M may cause round-off error and other computational difficulties The dual simplex method is a technique used to solve linear programming problems. It produces a sequence of dual feasible tables. It is an algorithm of an iterative process for solving linear programming problems.	Offline Quiz.
III.	Transportation problem and its applications IBFS- using north west corner rule Matrix minimum method Vogel's approximation method	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation,	ToLearnabout basic feasible solution using various methods and describe suitable method for maximizing the objective function.	Offline Quiz.

	Degeneracy Optimality test	Projector.		
IV.	Assignment problem- Hungarian method Balanced and unbalanced AP-problems Restricted AP Travelling sales man problem	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to formulate and solve the assignment problem .	Written Test.
V.	Sequencing problem, Johnson's algorithm of n-jobs on 2 machines and 3 machines.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Sequencing helps students understand and organize material they've learned as well as helps them solve problems..	Written Test.

Listof References (Book/ICT/ Weblinks):

1. Gupta, P. K., &Hira, D. (2010). Operations Research. S. Chand & Company Ltd.
2. Sharma, J. K. (2013). Operations Research (5th ed.). Mcmillan Publishers IndiaLtd.
3. Taha : An Introduction to Operations Research, PHI
4. https://youtu.be/1CnFjNOewEU
5. https://youtu.be/ILWbaWrjgU4
6. https://www.youtube.com/watch?v=z3zjieArlAE
7. https://www.youtube.com/watch?v=rrfFTdO2Z7
8. https://www.youtube.com/watch?v=WrAf6zdteX
9. https://www.youtube.com/watch?v=-Kza-8JmqHU

Name of the faculty member &Signature: D. Gowri

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: Machine Learning **Class&Section:**NCSAI **CourseCode:**BS20409

Nameofthe FacultyMember:B.Kavya **CourseTitle:**COMPUTER NETWORKS

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	1.Introduction: Data Communications, networks, Protocols and Standards 2.OSI Model, layers in the OSI model, TCP/IP Protocol suite 3.Analog and Digital, Transmission impairments 4. Transmission Media-Guided media, ConnectingDevices (hubs,repeaters,bridges,router-only definitions) 5. Digital Transmission- digital-to-digitalconversion 6. Multiplexing: Frequency-division, Wavelength and Time Division	LectureMethodusing ICT Tools	**Understand and identify** basic computer network topologies and protocols and explain Data Communication System components	Seminar,Assignment and Quiz
II.	***DATA LINK LAYER*** 1. Error detection and correction-Parity, check sum, CRC, Hamming code 2. Data Link Control: Framing, flow anderrorcontrol 3. Stop-and-wait ARQ, Go-Back-N ARQ, Selective Repeat ARQ, Piggybacking 4. HDLC, Random Access- ALOHA, CSMA,CSMA/CD,CSMA/CA	Lecture Method using ICT Tools	**Classify** different error detecting techniques.	Seminar,Assignment and Quiz

	5. WWW and HTTP- architecture, web documents, HTTP			

ESSENTIAL READING

1. Forouzan, Beharouz A. 2011. **Data Communications and Networking**. 3rd Edition. New Delhi: Tata Mc Graw Hill.(UNIT-I,II)
2. Forouzan, Beharouz A. 2010. **TCP/IP Protocol Suite**. 3rd Edition. New Delhi: Tata Mc Graw Hill.(UNIT-III-VI-V)

SUGGESTED READING

1. Tanenbaum, Andrew S. 2008. **Computer Networks**. 4th Edition. New Delhi: Pearson Education.

Nameofthefacultymember&Signature: Kavya S KA

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- VI

Department:CSAI **Class&Section:DCSAI** **CourseCode: CSAI23601A**

Nameofthe FacultyMember:Vijaya Pratapa **CourseTitle:** Software Testing

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Example Test Series–First Cycle; Second Cycle, Subsequent Cycles , Objectives and Limits of Testing, Testing in Software Development Process- Planning Process– Planning Stage, Design Stage Testing, Glass Box Code Testing, Black Box Testing,Software Errors, Reporting and Analyzing Bugs– Problem Report, Contents Characteristics,Analysis of Reproducible Bug.	LectureMethodusing ICT Tools & Black Board	To learn about importance of testing in software development process, apply glass-boxtesting,black-boxtesting,andhowtoreportand analyzebugs	Interactive Session on blackbox testing and whitebox testing and quiz.
II.	Problem Tracking Systems. Test case Design . White box and blackbox testing techniques.	LectureMethodusing Black Board	To learn about problem tracking system, different types of testing and test case design.	Discussion on software testing techniques and Writing test cases.
III.	Software testing Strategy, Methodology and Eleven steps for software testing process.	LectureMethodusing ICT Tools & Black Board	To learn about how to build testing strategy, establishing software testing methodology and software testing techniques.	Group discussion on V- model and waterfall model for different types of projects.
IV.	Metrics for process and product, metrics for software quality. Quality management and reviews.	LectureMethodusing ICT Tools & Black Board	To learn about the definition of quality, metrics for software quality and in section techniques.	Seminars on Software Quality Assurance.

	Characteristics- Principles of user inte[illegible]			
II.	[illegible] Software configuration management, SCM and reverse Engineering.	LectureMethodusing ICT Tools & Black Board	To learn software configuration management, software reengineering and software restructuring techniques.	Mock Test on testing types.

Listof References (Book/ICT/ Weblinks):

1. CemKaner, Jack Falk, Hung Quocguyen.1998.**TestingComputerSoftware.** Comdex.
2. WilliamPerry.2000.**EffectiveMethodsforSoftwareTesting**. Wiley
3. Pressman Roger S, **Software Engineering Practioner'sApproach.**6th Edition.McGrawHill International Edition

Nameofthefacultymember&Signature: VIJAYA.P – Vijaya.P

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -VI

Department: B.Sc(Artificial Intelligence) **Class&Section: DCSAI** **Course Code: CSAI23602A**

Name of the Faculty: P.Bala Seshu Kumari **Course Title: Human Computer Interaction**

Unit	Topics o be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction:** Importance of user Interface- Definition, importance of good design, Benefits of God design, A brief history of Screen design. The graphical user interface- popularity of graphics, the concept of direct manipulation, graphical system, Characteristics. Web user Interface popularity, Characteristics- Principles of user interface design.	Lecture Method Using ICT Tools, Board and chalk method.	To learn about History of Computer screen design, graphical user Interfaces and web interfaces.	Group discussion on different interfaces used by user.
II.	**Design Process-** Human interaction with computers, importance of human characteristics, Human Consideration in the design of business systems, Human interaction speeds. **Human considerations in interface and screen design:** Interface design goals, test for a good design screen and web page meaning and purpose, organizing elements clearly and meaningfully, Consistency, starting point, ordering of data and content, navigation and flow, visual pleasing composition. Window characteristics, components, presentation-styles, types of windows.	Lecture Method Using ICT Tools, Board and chalk method	To learn about Human Considerations and characteristics of interface design and screen design.	Seminars on different design Process Techniques. Group discussion on different design models for business systems.

III.	**Proper screen based controls:** Operable controls, text entry / read only controls, selection controls, combination entry/ selection controls. Other operable controls, custom controls, presentation controls. Icons, multimedia, graphics, color-RGB, HSV, Dithering, color uses.	Lecture Method Using ICT Tools, Board and chalk method	To learn about different controls and color schemes to create screens and interfaces.	Assignment on different screen based controls.
IV.	HCI in the software process, The software life cycle Usability engineering Iterative design and Prototyping, Design rationale. **Design rules:** Principles to support usability, Standards. Golden rules and heuristics, HCI patterns. **Evaluation techniques:** Goals of evaluation, Evaluation through expert analysis and user participation. Choosing an evaluation Method.	Lecture Method Using ICT Tools, Board and chalk method	To learn about the role of HCI in Software Life cycle. To learn about Different types of rules and principles, heuristics and Evaluation Techniques to design Screens and Interfaces.	Interactive session on design rules and evaluation techniques.
V.	**Communication and collaboration models:** Introduction, face-to-face communication, conversation, text based communication. **Dialog notation and design:** Dialog, Dialog design notations, diagrammatic notations, textual dialog notations. Dialog semantics, dialog analysis and design.	ICT Tools, PPT Presentations	To learn about different types of communications. To learn about Dialog notation and its design.	Computer based Test on different types communications.

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING 1.The Essential guide to User Interface design ,Wilbert O Galitz, Wiley dream tech.3rd Edition.

2. Human-Computer Interaction, Alan Dix, Janet Fincay, Gre Goryd, Pearson Education.

Name of thefaculty member&Signature: P.Bala seshu kumari

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: computer science and artificial intelligence **Class & Section:DCSAI** **Course Code:CSAI23602B**

Name of the Faculty Member:Ruchika murthy **Course Title: Data Security**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Attacks on Computers and Computer Security: Introduction: The Need for Security, Security Approaches, Principles Of Security, Types of Security Attacks Security Services, Plain Text and Cipher Text, Stream Ciphers, Block Ciphers Security Mechanisms, A Model for Network Security Cryptography: Encryption and Decryption, Substitution Ciphers, Ceaser Cipher, Mono-Alphabetic Cipher, Play-Fair Cipher, Hill Cipher, Poly-Alphabetic Cipher, Transposition Techniques, One-Time Pads Introduction to Symmetric and Asymmetric Key Cryptography and Its Applications Crypt analysis, Types of Keys, Key Range and Key Size, Possible Types of Attacks	Lecture Method using ICT Tools	To Learn about the Encryption and Decryption, Substitution Ciphers, Ceaser Cipher, Mono-Alphabetic Cipher, Play-Fair Cipher, Hill Cipher, Poly-Alphabetic Cipher, Transposition Techniques	Quiz on Substitution Ciphers
II.	Symmetric Key Cryptography: Block Cipher Principles, Symmetric Encryption Principles & Algorithm DES Algorithm, Strength of DES,Triple DES Block cipher modes of operation, Electronic Code Book Mode(ECB), Cipher Block Chaining Mode(CBC), Cipher Feedback Mode(CFB), Counters Mode(CTR)	Chalk and board method	To learn about DES Algorithm, Strength of DES,Triple DES	Group discussion on Block cipher modes of operation

	Asymmetric key Cryptography: Principles of Public Key Cryptography, RSA Algorithm Key Management and Distribution: Symmetric Key Distribution Using Symmetric & Asymmetric Encryption, Distribution of Public Keys			
III.	UNIT–III 12hrs **Intruders, Virus and Firewalls:** Introduction to Intruders, Intrusion Detection Systems Password Management, Password Protection, Password Selection Strategies Viruses, Threats, Worms, Nature of Viruses, Types of Viruses, Malicious Programs Virus Counter Measures, Anti- Virus Approaches, Generic Decryption, Digital Immune System, Behavior-Blocking Software Firewall Design Principles, Firewall Characteristics, Types of Firewalls, Firewall Configurations. Trusted Systems, Data Access Control, Concept of Trusted Systems, Trojan horse Defense	Ppt and ict tools	**Intruders, Virus and Firewalls**	Assignment on Viruses, Types of Viruses, Malicious Programs
IV.	Information Hiding: Introduction to Information Hiding, Steganography, and Water marking Importance of Digital Water marking, Importance of Steganography Applications of Water marking, Applications of Steganography Properties of Water marking Systems, Evaluating Water marking Systems Properties of Steganography and Steganalysis Systems. Evaluating and Testing Steganographic Systems Robust Water marking, Approaches, Robustness to Volumetric Distortions	Chalk and board method	Digital Water marking, Importance of Steganography Applications of Water marking	Class study on Importance of Digital Water marking, Importance of Steganography

V.	Case Studies on Cryptography and Security: Secure Inter-branch Payment Transactions Cross site Scripting Vulnerability Virtual Elections Common Criteria for Information Technology Security Evaluation Biometrics: Components,Enrollment,Authentication,Techniques,Accuracy,Applications Internet Standards, Internet Society, Internet Organizations, Internet Standard Categories, RFCs	Ict tools	Case Studies on Cryptography and Security	Case Study on Biometrics: Components,Enrollment, Authentication,Techniques, Accuracy,Applications

List of References (Book / ICT / Weblinks):

1. 1 Stallings, William. **Cryptography and Network Security**. 4th Edition. New Delhi: Pearson Education.
2. Forouzan, Behrouz A. **Cryptography and Network Security.** McGraw Hill Edition.
3. Cox, Ingemar. Miller, Matthew. Bloom, Jeffrey and Fridrich, Jessica. **Digital Watermarking and Steganography.** 2nd Edition. India: TMH.

Name of the Faculty member & Signature:RUCHIKA MURTHY

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.Sc (Artificial Intelligence) **Class & Section: DCSAI** **Course Code: 21038**

Name of the Faculty Member: B Venkataratnam **Course Title: B.Sc (Artificial Intelligence)**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	INTRODUCTION . ▪ History, Hardware, Algorithms ▪ Neural Networks, Data Representation for Neural Networks ▪ Scalars, Vectors, Matrices ▪ 3D tensors and higher dimensional tensors, Key attributes ▪ Manipulating tensors in Numpy ▪ The notion of data batches, Real world Examples of data tensors. Vector data, Time series data or sequence data, Image data, Video data. **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the DEEP LEARNING 1. History, Hardware, Algorithms 2. Neural Networks, Data Representation for Neural Networks 3. 3D tensors and higher dimensional tensors, Key attributes 4. Manipulating tensors in Numpy 5. The notion of data batches, Real world Examples of data tensors 6. Vector data, Time series data or sequence data, Image data, Video data.	Quiz
II.	TENSOR OPERATIONS ▪ Element-wise operations ▪ Broadcasting, ▪ Tensor reshaping ▪ Tensor dot, ▪ Geometric interpretation of tensor operations ▪ A geometric interpretation of deep learning	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the TENSOR OPERATIONS 1. Element-wise operations 2. Broadcasting 3. Tensor reshaping 4. Tensor dot Geometric interpretation of tensor operations 5. A geometric interpretation of	Seminar

	(12Hrs.)		deep learning	
III.	OPTIMIZATION ▪ Gradient-based optimization ▪ Derivative of a tensor operation ▪ Stochastic gradient descent. ▪Changing derivatives: the Back propagation algorithm ▪ Neural networks: Anatomy, Layers, Models, Loss Functions and optimizers **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the OPTIMIZATION 1. Gradient-based optimization 2. Derivative of a tensor operation 3. Stochastic gradient descent. 4. Changing derivatives: the Back propagation algorithm 5. Neural networks: Anatomy, Layers, Models, Loss Functions and optimizers	Group Discussion
IV.	INTRODUCTION TO KERAS ▪ Keras ▪ Tensor Flow ▪ Theno and CNTK ▪ Recurrent neural networks: A recurrent layer in Keras ▪ Understanding the LSTM and GRU Layers **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the KERAS 1. Keras 2. Tensor Flow 3. Recurrent neural networks: A recurrent layer in Keras 4. Understanding the LSTM and GRU Layers	Group Discussion
V.	AUTO ENCODERS. ▪ Types of Auto Encoders ▪ Auto Encoders Applications ▪ Generative Adversarial Networks: Generative Adversarial Network ▪ Deep Convolutional Generative Adversarial Networks. **(12Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the AUTO ENCODERS 1. Types of Auto Encoders 2. Auto Encoders Applications 3. Generative Adversarial Networks: Generative Adversarial Network 4. Deep Convolutional Generative Adversarial Networks.	Seminar

List of References (Book / ICT / Weblinks):

1. "Deep Learning" by Ian Goodfellow, Yoshua Bengio, and Aaron Courville.

2. "Neural Networks and Deep Learning: A Textbook" by Charu C. Aggarwal
3. "Deep learning for Computer Vision" by Rajalingappaa Shanmugamani
4. "Python Deep Learning" by Ivan Vasilev and Daniel Slater

Name of the faculty member & Signature: B Venkataratnam

Approved by Head of the Department: Bala Seshu Kumari

LOYOLA ACADEMY

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TEACHING PLAN FOR THE ACADEMIC YEAR 2023–2024

Name	:	M.Aswini Kumar			
Dept	:	B.Sc(Artificial Intelligence)			
Subject	:	Computer Vision			
Class	:	DCSAI	No. of Hours	:	60
Sub. Code:	:	CSAI23601B	SEM	:	VI
			Year	:	III

S.No	Topics to be Covered	No. of Hours	Teaching Pedagogy	Learning Outcome	Skill DevelopmentActivity
UNIT-1	Introduction to images	01	Discussion and ICT Tools	To learn the Introduction to images Storing images incomputers	Case study on storing images in computer.
	How images are formed	01			
	Storing images in computers	01			
	Getting started with open computer vision	03			
	Gray scaling	03			
	Histogram representation	03			
UNIT-2	Transformation-Affine and non-affine	02	Discussion and ICT Tools	To learn about Scaling of images	Quiz on arithmethic operations on images
	Image Translation	02			
	Rotations of images	02			
	Scaling of images	02			
	Image pyramids	01			
	Arithmetic Operations on images	01			
	Bitwise operations on images	01			
	Thresholding in images	01			
UNIT-3	Dilation	01	Discussion and ICT Tools	Perspective & Affine transformations	Assignment on segmentation and contours
	Erosion	01			
	Edge Detection	01			
		02			
	Perspective & Affine transformations	01			
	Segmentation &Contours	02			

	Approximating Contours	01			
	Matching contour shapes	02			
	Messy contours	01			
	Object Detection Overview	01			
	Feature Description	01			
	Finding corners	01			
UNIT-4	Ways to get image features	01	Chalk and board method and ICT Tools	Face analysis &Filtering	Project on merging faces.
	SIFT,SURF	02			
	FAST,BRIEF	02			
	HAAR Cascade classifier	01			
	Face analysis &Filtering	02			
	Merging faces	01			
	Filtering By Color	02			
	Background subtraction	02			
	Foreground subtraction	02			
UNIT-5	Mean shift for object Tracking	01	Discussion and ICT Tools	Tracking and moving objects in videos	Group discussion on tracking objects
	Cam shift for object Tracking	02			
	Tracking and moving objects in videos	02			
	Tracking objects	01			

References/Suggested Reading Books:

1. https://www.udems.com/master-computer vision with open cv python
2. Jan Erik Solem.2012 programming computer vision with python .First edition



Signature of the Faculty :(**M.Aswini Kumar)**

Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – III

Department: Computer Science and Internet of Things **Class & Section: NCSIOT** **Course Code: CSIOT23405**

Name of the Faculty Member: P. Sushma Yesu **Course Title: Python Programming**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT – I** **Basics of Python Programming:** Features of Python, History of Python, Future of writing and executing first python program, Literal constants-Numbers, strings. Variables and Identifiers, Data types, Input Operation, comments, Reserved words. Operators and Expressions in Python, Other Data types-Tuples, dictionary, list. Type conversion Decision control statements- if statement, if-else statements, Nested if ,if-elif-else Basic Loop structure- while loop, for loop, selecting an appropriate loop, Nested loops, Break statement, continue statement, pass statement, else statement used with loops.	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	**Explain** the basics of Python Programming constructs.	PPT presentation ,Seminar and assignments
II.	**UNIT-II** **Functions and modules**- Need for functions, function definition, function	Lecturing using traditional methods, Lecturing Method	**Sub divides** larger problems into smaller ones using functions	PPT presentation, Seminar and assignments

	call, variable scope and life time, Return statement, function definition using required argument, keyword argument, Default argument. Lambda functions, Recursive functions- Greatest common Divisor, finding exponents Fibonacci series. Modules—The from…import statement, Name of module, making your own module. The dir( ), the Python module, modules and Namespaces. Packages in Python, Standard Library modules, Function redefinition.	using ICT Tools		
III.	**UNIT-III** **Python String: Introduction—** concatenating, Appending, multiplying strings, Strings are Immutable, string formatting operator. Built-in String methods and functions, slice operation. Ord( ) and chr( ) functions, in and not in operators, comparing and iterating strings. The String module, Regular Expressions—match( ),search( ),sub( ), findall( ), Finditer( ) functions, flag options. Meta characters in Regular expressions. **Data Structures**: Sequence, Lists, Functional programming: filter(),map() andreduce()function, Tuple, Sets. Dictionaries—creating dictionary, adding, modifying ,sorting and deleting item in dictionary, looping and nested dictionary, built-in dictionary functions, difference	Lecturing using traditional methods, Lecturing Method using ICT Tools	**Apply** various data structures for problem solving	PPT presentation ,Seminar and assignments

	between list and dictionaries.			
IV.	**UNIT-IV** **Classes and objects** Introduction, defining classes,creating objects, data abstraction. Class method and self argument The _init_() method, class variables and object variables The _del__() method, other special methods, public and private data members, private methods Calling a class method from another class method, built-in functions to check, Get, Set and Delete Class Attribute, Built-in class attribute **Inheritance :** Introduction, inheriting classes in Python, Types of Inheritance. Composition or containership or complex objects, abstract classes and interfaces Meta class. **Operator overloading**—Introduction, Implementing operator overloading, reverse Adding.	Lecturing using traditional methods, Lecturing Method using ICT Tools	**Apply** object-oriented programming features for solving a given problem	PPT presentation ,Seminar and assignments
V.	**UNIT-V** **Error and Exception Handling-**Introduction to errors and exceptions, handling exceptions. Multiple except blocks, multiple exception in a single block, except block without exception Raising Exceptions, Instantiating exceptions, handling exceptions in invoked functions, Built-in and user defined exceptions, the finally block. **File Handling**-Introduction, File path, Types of Files-ASCII text file, Binary	Lecturing using traditional methods, Lecturing Method using ICT Tools	**Select** an appropriate exception handling depending on application and design file operations using Python standard library	PPT presentation,Seminar and assignments

	file, opening and closing files. **Reading and writing files-** write(), writelines (),append(), readline (). File positions, renaming and deleting files, Directory methods. **Threads:** single-tasking, multitasking concurrent programming and GIL, use methods, single and multitasking u threads, thread communication.			

ESSENTIAL READING

1. Thareja, Reema. 2017. **Python Programming**. 3rd Edition. New Delhi: Oxford HED Tony Gaddis. **Starting Out With Python.** 3rd Edition.

SUGGESTED READING

1. BalaGuruSwamy, E. 2017. **Problem Solving and Python Programming**. 1st Edition. McGraw Hill Education
2. Dr. R. NageshwaraRao. 2018. **Core Python Programming**. 3rd Edition. DreamTech Press

Name of the faculty member & Signature:

Approved by Head of the Department

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER III

Department: CSIOT **Class& Section: NCSIOT** **Course Code: CSIOT23303**

Name of the Faculty Member :Dr. K.Vijayalakshmi **Course Title: Discrete Mathematics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Basic Connectives and Truth Tables, Logical Equivalence: The Laws of Logic, Logical Implication, Rules of Inference, Proof Techniques: Proof by Contradiction, Proof by Contrapositive.	Chalk and talk	To understand the mathematical logic.	Constructing truth tables, verifying validity of statements.
II.	Relations and ordering, Partial order relations - Partially ordered sets, Hasse diagrams, Lattices - Properties of lattices, Types of Lattices	Chalk and talk	To understand relations and ordering	Construction of matrices for relations, Drawing Hasse Diagrams and finding Maximal and minimal elements.
III.	Definition of a graph, Degree of vertex, First theorem of graph theory Paths and connection, Isomorphism of graphs, Some special simple graphs	Chalk and talk	To Understand basic properties of graphs and their iso morphisms	Applications of graphs and problems on isomorphisms.
IV.	Trees and their properties, Spanning trees,Kruskal'sAlgorithm- Prim's Algorithm, Planar graphs, Euler's formula	Chalk and talk	To understand trees and their applications	PPT presentation, applications of Euler's formula.
V.	Euler graphs, Hamiltonian graphs-Grinberg theorem, Chromatic numbers	Lecture Method using ICT Tools	To understand Hamiltonian and Euler's graphs.	Construction of Euler's cycle and Hamiltonian cycles for the graphs.

ESSENTIAL READING

1. Tremblay Jean, P. and Manohar, R. 2007. **Discrete Mathematical Structures with Applications to Computer Science.** New Delhi: McGraw-Hill. (For Unit I)
2. Mott Joe, L. Kandel Abraham. And Baker Theodore, P. 1999. **Discrete Mathematics for Computer Scientists and Mathematicians.** 2nd Edition. New Delhi: PHI (For Units II,III, IV and V)

Name of the faculty member &Signature: Dr. K.Vijayalakshmi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-III

Department: CSIOT **Class Section: NCSIOT** **CourseCode:CSIOT23303**

Nameofthe FacultyMember: Shaik Abdul Khadar **Course Title: COMPUTERORGANIZATIONAND ARCHITECTURE**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Functional components and operations of general computer system, Interconnection of components, Computer Evolution and Performance, Representation of Instructions-Machine instructions, Operands, Addressing modes, Instruction cycles, Instruction formats, Instruction sets, Instruction set architectures - CISC and RISC architectures.	Lecture Method using ICT Tools	To design the arithmetic and logical unit	Quiz, PPT presentation.
II.	Number Systems and conversions, Integer Arithmetic operations, Fixed and Floating point representation and operations, Organization of a processor - Single and Multiple bus organization, Processing units elements, Control unit, Data path in a CPU, Organization and operations of a control unit, Hardwired and Micro programmed control unit.	Lecture Method using ICT Tools	To implement different types of control and the concept of I/O and pipelining Techniques	Quiz, Solving Problems using the basic computer instruction
III.	Classification of memory –Internal Organization of a memory chip, Cache memories–Virtual memory – Storage and Memory management requirements, Accessing I/O devices – Programmed	Lecture Method using ICT Tools	To Understand appropriate computer systems for given application domains for future design of computer architecture.	Quiz, PPT presentation

	Input/output –Interrupts – Direct Memory Access – Buses – Interface circuits– Standard I/O Interfaces (PCI, SCSI, USB).			
IV.	Basic concepts – Single-Cycle versus Pipelined Performance- Pipeline Hazards- Data hazards- forwarding vs. stalling, Control hazards–Pipeline Data path and control – Branch prediction- Performance considerations.	Lecture Method using ICT Tools	To Understandanddevelopproces sorforfuturecomputinghardwi restosolvesthe problems of high end computing applications	PPT presentation, Brainstorming.
V.	Introduction to parallel processors - Parallel computer models- multiprocessors and multi computer – Multi vector and SIMD computer- conditions of parallelism - System interconnect architectures performance- Concurrent access to memory and cachecoherency - Superscalar Processors.	Lecture Method using ICT Tools	To design new computer architecture of their own so that it could be solve the computer stakeholder problems in future.	Quiz, PPT presentation

List of References (Book/ICT/ Weblinks):

1. V.Carl, G.Z vonkoand S. G.Zaky, **"**Computer organization**"** ,McGrawHill, 1978
2. Hennessy and D. A. Patterson, **"**Computer Architecture - A Quantitative Approach**"**, Morgan Kauffman, 2011.
3. Kai Hwang, "Advanced Computer Architecture, Parallelism, Scalability, Programmability", McGraw Hill, 1993.
4. https://www.youtube.com/watch?v=g_T_mlt9yT0&t=87s

Name of the faculty member &Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023– 2024

SEMESTER - III

Department: CSIOT **Class & Section: NCSIOT** **Course Code:CSIOT23302**

Name of the Faculty Member: Dr. K. Rama **Course Title: Advanced Microprocessors**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Microprocessors, Features, Pin functions and internal architecture of 8086, Flag register, Memory segmentation, Segment Registers, Physical address – calculation with examples, Physical memory organization, Interfacing 8086 with memory and I/O devices under minimum mode (Block-diagram level), Comparison between minimum mode and maximum mode configuration.	Lecture Method using ICT Tools	To Understand the necessity, features and architecture of 8086.	Quiz, Case Study, PPT Presentation
II.	Addressing modes – with example, Role of index and pointer registers, 8086 instruction set- Data transfer, arithmetic, logical, shift and rotate, branching, loop control and string instructions, processor control instructions with simple examples.	Lecture Method using ICT Tools	Analyze the addressing modes and understand the functions of 8086 instruction.	Brainstorming, Problem Solving approach
III.	ALP program development cycle, development tools, MASM- Assembler directives, structure of assembly program, sample programs – with relevant comments – such as data transfer, code conversion, largest/smallest, sorting, searching, string palindrome and other simple programs. Comparison of procedure and macro.	Lecture Method using ICT Tools	Write simple assembly language programs.	Brainstorming, Quiz, Programming Skills.
IV.	Interrupts - concepts, classification – internal and external, maskable and non-maskable, Hardware and software, Interrupt Vector table,	Lecture Method using ICT Tools	Understand the need and handling of interrupts in 8086 and features of peripheral ICs.	Brainstorming, PPT Presentation, Physical Interpretation

	interrupt cycle, interrupt service routine, interrupt priorities, Programmable Peripheral ICs – Functional block diagram, features, various operating modes of IC 8255, features of 8253,8259,8251 & 8257.			
V.	Block diagram of Advanced Microprocessor, Memory Hierarchy, Cache memory, Virtual Memory, paging & segmentation, pipe lining, Features and comparison of 80286, 80386,80486, Pentium IV, concept of core processor, Introduction to power PC, Features and applications of Super SPARC processor.	Lecture Method using ICT Tools	Explain the architecture of generic advanced microprocessor and features of advanced microprocessors.	Brainstorming, Quiz, Case Study

List of References (Book/ICT/ Weblinks):

1. A.K. Ray, K M Bhurchandi, "Advanced Microprocessor & Peripherals", Tata McGraw Hill, 3rd Edition, 2013.
2. Douglas V Hall, "Microprocessor & Interfacing: Programming and Hardware', Tata McGraw Hill, 2nd Edition, 2006.
3. Barry B, Brey, " The Intel Microprocessors-Architecture, Programming and Interfacing", Pearson Education India, Eight Edition.
4. Badri Ram, "Advanced Microprocessors and Interfacing", MvGraw Hill, 2014.
5. Triebel, Walter, Avatar Singh, " The 8088 and 8086 Microprocessors: programming, interfacing, software, hardware, and applications : including the 80286,80386, 80486, and Pentium processors", Prentice Hall, Fourth edition, 2003.
6. Yn-cheng Liu and Gibson, G.A, " Microcomputer Systems: The 8086/8088 Family Architecture, Programming and Design", Prentice Hall of India, 2nd Edition, 2006.

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – III

Department: CSIOT **Class & Section: GE** **Course Code: G23CSIOT1T**

Name of the Faculty Member: DR. L. Radhika Rani **Course Title: INTRODUCTION TO IOT USING ARDUINO**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT 1** Resistor –definition, series and parallel. Capacitors- definition, series and parallel Inductors- definition, series and parallel Classification of materials based on energy gap, conduction and valence band's P type and n type semiconductors	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	To acquire knowledge on Basic electronic components.	PPT presentation and assignments
II.	**UNIT 2** Potentiometer-its purpose, usage, connection in circuits Program for measuring various voltages of POT Light emitting diode -types, construction, working. Program to blink an LED, Variation of intensity of LED using POT	Lecturing using traditional methods, Lecturing Method using ICT Tools	Able to understand about the construction and working of LED, LDR, POT	PPT presentation and assignments
III.	**UNIT 3** LDR- construction, working, negative coefficient of resistance, Design of	Lecturing using traditional methods, Lecturing Method using ICT Tools	Able to understand about the construction and working of LDR and is intefacing	PPT presentation and assignments

	circuit for switching on and off an LED using LDR. Variation of resistance depending on lights using LDR .Program to Switch on and off LED using LDR			
IV.	**UNIT 4** Digital number systems.pin layout of arduino, it's working and basic commands for programming. LCD- its pin layout and commands. Display a word on a 16x2 LCD.	Lecturing using traditional methods, Lecturing Method using ICT Tools	To acquire basic knowledge on sensors and its hardware.	PPT presentation and assignments
V.	**UNIT 5** Sensors - temperature sensor, write a program to measure temperature using LM 35. Ultrasonic sensor- it's working, pins and connections. Interfacing ultrasonic sensor to arduino Steps to build an autonomous robo and its interfacing with LM 35 and LCD Building an autonomous Robo	Lecturing using traditional methods, Lecturing Method using ICT Tools	Practical hands on experience on interfacing sensors and its programming	PPT presentation and assignments

List of References (Book / ICT / Weblinks):

ESSENTIAL READING:

1. **Basic Electronics** – Bernard Grob 10th Edition (TMH)
2. **Digital Electonics**: Circuits and systems – Puri V.K., 1997 1st Edition (TMH)
3. **The Internet of Things: Key Applications and Protocols**"- Olivier Hersent, David Boswarthick, and Omar Elloumi, WileyPublications.
4. Helfrick Albert D. and Cooper W. D., "**Modern Electronic Instrumentation and Measurement Techniques**", Prentice Hall India.
5. Kalsi H. S. "**Electronic Instrumentation**", Tata McGraw-Hill Education.

Name of the faculty member & Signature:

Approved by Head of the Department

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023– 2024

SEMESTER I

Department: B.Sc Computer Science and Internet of Things **Class& Section: ACSIOT** **CourseCode:VE18001**

Name of the Faculty Member: Fr. Dr. A.M. Joseph Kumar SJ **Course Title: Value Education and Personality Development**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Ethics	Lecture Method	To Learn to differentiate between accepted and Counter norms and to be able to identify the various Dimensions of Human Development	Group discussion to understand the value system in the society.
II.	Approach to Life	Lecture Method	To Learn to demonstrate Love and experience of God and to be able to identify the Basic issues of Life and the Happiness as Life's goal.	Debate on the topics covered
III.	Concern for others	Lecture Method	To Understand the importance of concern for others and critic the various problems that deter the growth of the society	Scenario discussion
IV.	Transformation of Self	Lecture Method	To be able to recognize the traits of a good personality and practice self exploration	Self reflection and discovery of one's true self.
V.	Life Enrichment Skills	Lecture Method	To learn to be able to interpret the purpose of life and goal setting and demonstrate self management.	Exploring of personal skills through peer discussions.

List of References (Book/ICT/ Web links):

1. Human Values – Development Programme – AIACHE
2. In Harmony – Value Education at College level. By a Team of Ethics Teachers (G.M. James , B.J JAYARAJ , K.CANDASSAMY, BERNARD D'SAMI , S.J.A PACKIARAJ)

Name of the faculty member &Signature:

Fr. Dr. A.M. Joseph Kumar SJ

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER I

Department: CSIOT **Class& Section: ACSIOT** **Course Code: CSIOT22102**

Name of the Faculty Member : Mr. M.V. Raj Gopal **Course Title: Mathematics Foundation For IoT**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT-I** **Differential Equations of the first order and first degree:** Variables separable Homogeneous and Non-Homogeneous equations Linear differential equations Differential Equations reducible to linear form – Bernoulli's Equation	Chalk and talk	Categorize the differential equations with respect to their order and linearity. Solve differential equations of first order using numerical and analytical methods.	Constructing truth tables, verifying validity of statements.
II.	**UNIT-II** **Exact differential equations:** Definition, Solving Exact differential equations Integrating factors (Simple problems thereon) **Applications of first order Differential Equations:** Orthogonal trajectories – Cartesian coordinates – Polar coordinates	Chalk and talk	Analyze and Solve differential equations of first order basic application problems described by first order differential equations, orthogonal trajectories	Construction of matrices for relations, Drawing Hasse Diagrams and finding Maximal and minimal elements.
III.	**UNIT-III** **Linear Differential Equations with constant coefficients:** Auxiliary equation,	Chalk and talk	Solve second order Homogeneous Equations with Constant Coefficients. Obtain exact and numerical solutions using	Applications of graphs and problems on isomorphisms.

	Complementary function Particular integral Working rule for finding P.I. when $X=e^{ax}$, Sin ax, Cosbx, $.x^m$, e^{ax} v		differential equations technology.	
IV.	**UNIT-IV** **Matrices** Rank Of a Matrix Rank-Echelon form, Normal form **Systems of Linear Equations:** Solution of Linear Systems Homogeneous and non-Homogeneous Equations	Chalk and talk	Formulate the solution set of a system of linear equation	PPT presentation, applications of Euler's formula.
V.	**UNIT-V** **Eigen values – Eigen vectors** Eigen values – Eigen vectors-Properties – Cayley – Hamilton Theorem Inverse and powers of matrix by using Caley-Hamilton theorem Quadratic forms – Rank and signature of Quadratic form – Reduction of quadratic form to canonical form	Lecture Method using ICT Tools	Solve the characteristic polynomial, eigen vectors, eigen values.	Construction of Euler's cycle and Hamiltonian cycles for the graphs.

ESSENTIAL READING

1. Zafar Ahsan **Differential Equations and their Applications –** Second edition-PHI (Units I, II, III & IV).
2. Matrices by A. R. Vasistha Krishna prakashanmandir, Meerut (Units IV & V).

Name of the faculty member &Signature: MR. M. V. RAJA GOPAL

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – I

Department: Computer Science and Internet of Things **Class & Section: ACSIOT** **Course Code: CSIOT22101**

Name of the Faculty Member: Fr. Sudhakar **Course Title: Fundamentals of Information Technology**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT-I** **Introduction to Computers** 1. Definition – Characteristics and limitations of computers 2. Block diagram of a computer, CPU 3. Primary and secondary storage 4. Input and output devices **Data Representation and Storage** 1. Data representation in computers, bits and bytes 2. Number systems (Binary, Octal and Hexadecimal) 3. Conversion from decimal to binary, octal, hexadecimal and vice versa 4. Secondary storage 5. Random Vs Sequential access, Tracks and Sectors 6. Storage characteristics 7. Increasing data storage capacity through compression (disk compression and file compression)	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	**CO1: Understand** basic computer terminology and number systems.	PPT presentation , Seminars and assignments

II.	**UNIT-II** **Operating Systems** 1. Meaning, Definition, Functions 2. Types of operating systems – Desktop OS, Server OS, Mainframe OS, Hand-held OS & Embedded OS 3. Multi Tasking and Multi threading 4. Multi User multi processor support 5. Miscellaneous tasks 6. Batch Processing systems 7. Real time systems, Time sharing systems **User Interfaces** 1. GUI, Pen based, Tough Screen & Conversational interfaces Common Operating Systems: DOS, Windows 95/98 and UNIX	Lecturing using traditional methods, Lecturing Method using ICT Tools	**CO2: Learn** about operating systems, and its types.	PPT presentation , Seminars and assignments
III.	**UNIT-III** **Applications of Information Technology** 1. Application programs 2. Horizontal Market Applications, Vertical Market Applications 3. Customs Applications, Shareware and Public domain software **Transaction Processing** 1. Centralized transaction processing 2. Client Server software, Distributed computing and Replication 3. Information tools for management control: DSS, EIS, GIS, OLAP 4. Data Warehousing and Data Mining **IT in Business and Industry** 1. Home and at play, Education and	Lecturing using traditional methods, Lecturing Method using ICT Tools	**CO3: Learn** about the applications of Information technology.	PPT presentation , Seminars and assignments

	Training, Entertainment and Arts 2. Science, Engineering and Math, Computers in hiding **IT Enabled Services** BPO, KPO & Call center			
IV.	**UNIT-IV** **Systems Development** 1. The six phases of Systems Analysis & Design **The challenges of Digital Age** 1. Security issues: Threats to Computers & Communications 2. Security: Safeguarding Computers & Communications 3. Quality of Life Issues 4. The ethics of using databases: concerns about accuracy & privacy 5. Five generations of programming languages	Lecturing using traditional methods, Lecturing Method using ICT Tools	**CO4: Importance** of system development and the phases of SDLC	PPT presentation , Seminars and assignments
V.	**UNIT-V** **Modern Communications** 1. Communications, FAX 2. Voice Mail and Information Services, Email **Group Communications** 1. News groups, Mailing lists, IRC, Networking 2. Video conferencing 3. File exchange, bandwidth 4. Modem, Network topologies 5. Network Types – LAN, MAN and WAN Dialup Access	Lecturing using traditional methods, Lecturing Method using ICT Tools	**CO5: Use** of modern means of communications, types of networks and topologies	PPT presentation , Seminars and assignments

ESSENTIAL READING

1. Curtin Dennis, P. and Foley, Kim. 2000. **Information Technology – The Breading Wave.** 7th edition, Tata McGraw Hill Publications: New Delhi.
2. Williams Brian, K. And Sawyer Stacey, C. 2007. **Using Information Technology – A Practical Introduction to Computers and Communications.** 6th edition. Tata McGrawHill Publications: New Delhi.

Name of the faculty member & Signature: Fr. Sudhakar

Approved by Head of the Department:Dr.L.Radhika Rani

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department:ENGLISH **Class&Section: AAI, ACDS, ACSCS, ACSIOT** **CourseCode: EN23101**

Nameofthe FacultyMember: P. SARITHA **CourseTitle:GENERAL ENGLISH-1**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Short Story – The Mystery Story Present Tense Past Tense Future Tense Paragraph Writing	LectureMethodusing ICT Tools	Tolearnaboutthefundamentals Of communication	Solving mixed tense exercises Narrating mystic experiences Writing paragraphs on various topics
II.	Poem – Goodbye Party for Miss Pushpa T.S. Subject- Verb Agreement Punctuations Review Writing	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Explanation of the poem by students Grammar exercises Film review writing
III.	Lesson – Wit and Humour Nouns and Articles Homophones, Homonyms, Homographs Note making	Lecture Method using ICT Tools	To identify the different types of nouns and articles in a sentence composition and to learn the correct usage and spelling of different words which spell or sound similar.	Character sketch of the story characters Grammar exercises like fill in the blanks, multiple choice and true or false.
IV.	Lesson – India's Contribution to World Unity Adverbs Adjective and adverb Suffixes Formal letters and Curriculum Vitae	Lecture Method using ICT Tools	To think critically, demonstrate an understanding of diverse cultures and historical movements. To recognize the different parts of speech	Description of the message conveyed by the author and its relevance in the day today world. Practice in Formal letter and Curriculum Vitae writing

V.	Lesson – Sachin Tendulkar Adjectives, Comparison of Adjectives Common Errors, Commonly misspelt words, Commonly Confused words	Lecture Method using ICT Tools	To write grammatically correct sentences and to identify different degrees of comparison.	Text book exercises and worksheets

Listof References (Book/ICT/ Weblinks):

1. Skills Annexe. Functional English for Success. Orient Black Swan

SUGGESTED READING:

• Balasubramaniam, M. 1985 Business Communication. New Delhi: Vani Educational Books.

• Krishna Mohan and Meera Banerjee, 1990. Developing Communication Skills. New Delhi:Macmillan India Ltd.

• Krishnaswamy.N. and Sriraman, T. 1995. Current English for Colleges. Madras: Macmillan India Ltd.

• Narayanaswamy.V.R. 1979 Strengthen Your Writing. New Delhi: Orient Longman.

• Sharma.R. and Krishna Mohan. Business Correspondence. 1978. New Delhi. Tata McGraw-HillPublishing Co

Name of the faculty member &Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – I

Department: Computer Science and Internet of Things **Class & Section: ACSIOT** **Course Code: CSIOT22104**

Name of the Faculty Member: P. Sushma Yesu **Course Title: C Programming**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT – I** Algorithms and Flow charts Introduction to C programming Structure of C program Files used in a C program Compiling and executing C program	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	**Explain** the basic introduction of computer and programming languages.	PPT presentation , Seminars and assignments
II.	**UNIT – II** C tokens, Constants, Character set in C, Keywords, Identifiers Data Types in C, Enumerated data types, typedef Variables and scope of a variables Data input and output statements in C Operators and expressions Type conversion and Typecasting	Lecturing using traditional methods, Lecturing Method using ICT Tools	**Categorize** different data types, operators and data input /output functions in 'C'.	PPT presentation , Seminars and assignments
III.	**UNIT – III** Conditional Branching Statement – if, if-else, if-else-if, switch case Iterative Statements – while loop, do-while loop, for loop Nested loops, break and continue statements, Go to statement Arrays - Single and double dimensional arrays String- string input output functions, string manipulation functions	Lecturing using traditional methods, Lecturing Method using ICT Tools	**Develop** programs using 'C' control structures, arrays and string concept.	PPT presentation , Seminars and assignments

IV.	**UNIT-IV** Function- Declaring, defining and invoking functions Categories of functions-Built-in functions Passing parameters to functions – call by value & call by reference Storage classes, Recursion Pointers -Declaration, passing pointer to functions Pointers and one dimensional arrays Dynamic memory allocations.	Lecturing using traditional methods, Lecturing Method using ICT Tools	S**ub divides** larger problems into smaller ones using 'C' functions.	PPT presentation , Seminars and assignments
V.	**UNIT – V** Structures - Simple structures, nested structure, Array of structures Unions- Differences between Structures and Unions. File handling - Various modes, File operations – fopen(), fclose() File input output functions – fputc(),fgetc(),fputs(),fgets(), getw(),putw(),getc(),putc(),fprintf(),fscanf(),getchar(), putchar() Random accessing file – fseek(),ftell(),rewind()	Lecturing using traditional methods, Lecturing Method using ICT Tools	**Create** programs using the concept of structures, union and file handling in 'C'.	PPT presentation , Seminars and assignments

ESSENTIAL READING

1. Thareja Reema. 2016. **Programming in C.** 2nd edition**.** New Delhi : OUP.
2. Kanetkar Yashwanth. 2018. **Let us C.** 16th Edition**.** New Delhi : BPB.
3. Gottfried Byron. 2010. **Programming with C (**Schaum's Outline Series**).** 3rd Edition. New Delhi: McGraw Hill Education

Name of the faculty member & Signature:

Approved by Head of the Department

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – I

Department: Computer Science and Internet of Things **Class & Section: ACSIOT** **Course Code: CSIOT22103**

Name of the Faculty Member: Dr L. Radhika Rani **Course Title: Basic Electronics & Circuits**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Definition and applications of electronics • Electric current, potential difference • Conductance and conductivity • AC, DC, Ohm's law • Electronic components (Passive only)	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Able to Understand what is electronics and terms related to it	Case Studies, PPT presentation and assignments
II.	• Electric Resistance, factors affecting the electric resistance • Resister and its colour code • Resisters in series and parallel • Capacitor, Factors affecting capacitance • Capacitors in series and parallel • Concept of voltage and current sources • Kirchhoff's current law & Kirchhoff's voltage law	Lecturing using traditional methods, Lecturing Method using ICT Tools	Understanding the passive components and their connections, sources & laws	Case Studies, PPT presentation and assignments
III.	• Types of Alternating current and voltage **Important terms of AC:** • Cycle, time period, frequency, Amplitude, Peak to Peak Value, Instantaneous Value, Root Mean square Value, Average Value, Phase, Phase Difference **Semiconductors:**	Lecturing using traditional methods, Lecturing Method using ICT Tools	Understanding the fundamentals of alternating current and terminology	Case Studies, PPT presentation and assignments

	• Intrinsic and Extrinsic Semiconductors • n-type and p-type semiconductors • Effect of temperature on semiconductors			
IV.	**Diodes:** • Semiconductor diode • Formation of depletion layer • Biasing the PN junction diode (Forward & reverse) • VI characteristics of PN Junction diode, • Diode applications • Zener diode • Reverse characteristics of Zener diode • Zener as Voltage Regulator	Lecturing using traditional methods, Lecturing Method using ICT Tools	Analyze semiconductors and understand the working of a diode and its applications	Case Studies, PPT presentation and assignments
V.	**Transistors:** • Junction transistor Structure • Working of NPN transistor • Transistor circuit configurations • Input & Output characteristics of a transistor in CE configuration • Basic CE amplifier circuit • Thermal run away • Voltage Regulator using Transistor • Block diagram of DC regulated power supply.	Lecturing using traditional methods, Lecturing Method using ICT Tools	Able to understand the construction and working of transistor, power supply	Case Studies, PPT presentation and assignments

List of References (Book / ICT / Weblinks):

1. Basic electronics & linear circuits. Bhargava, Kulshreshta & Gupta.2006New Delhi: Tata McGraw Hill.
2. Applied Electronics. R S Sedha, S Chand Publications.

Name of the faculty member & Signature:

Approved by Head of the Department

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – VI

Department: Computer Science & Internet of Things **Class & Section: CSIOT** **Course Code: CSIOT23404**

Name of the Faculty Member: Shaik Abdul Khadar **Course Title: Embedded Systems Design and Programming.**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction:** ➢ Embedded Systems and general purpose computer systems. ➢ History, classifications, applications and purpose of embedded systems. ➢ Core of Embedded System: Microprocessors and Microcontrollers ➢ RISC and CISC controllers ➢ Big endian and Little endian processors. ➢ Application specific ICs ➢ Programmable logic devices, COTS. ➢ Sensors and actuators, communication interface ➢ Embedded firmware, other system components ➢ PCB and passive components	PPT, Black Board Interactive Learning	**Understand** the Concepts about Embedded System.	PPT, Assignment
II.	**Characteristics and quality attributes of embedded systems:** ➢ Characteristics, Operational and non-operational attributes ➢ Application specific embedded system ➢ Washing machine ➢ Domain specific- automotive.	PPT, Black Board Interactive Learning	**Understand** the Concepts about Embedded System.	PPT, Assignment
III.	**Peripherals:** ➢ Control and status registers, Device Driver. ➢ Timer Driver- Watchdog Timers ➢ Embedded Operating Systems, Real-	PPT, Black Board Interactive Learning	**Analyze** the design and development of Real Time-Embedded System	PPT, Assignment

	Time Characteristics, Selection Process.			
IV.	**Design and Development:** ➢ Embedded System development environment-IDE ➢ Types of file generated on cross-compilation ➢ Disassembler/decompiler ➢ Simulator, emulator and debugging ➢ Embedded product development life-cycle ➢ Trends in embedded Industry	PPT, Black Board Interactive Learning	**Understand and Analyze,** the IDE environment and different steps of execution of emdded system	PPT, Assignment
V.	**Programming Embedded Systems:** ➢ Structure of embedded program, Infinite loop ➢ Compiling ➢ Linking and Locating ➢ Downloading and Debugging.	PPT, Black Board Interactive Learning	**Demonstrate** the structure of embedded program.	PPT, Assignment

List of References (Book / ICT / Weblinks):

1. **Programming Embedded Systems in C and C++** , First Edition January, Michael Barr, O' Reilly, Tata McGraw-Hill
2. **Introduction to embedded systems**, Shibu K V Tata McGraw-Hill.
3. **Embedded Systems,** Rajkamal, Tata McGrae- Hill.

Name of the faculty member & Signature: Shaik Abdul Khadar

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – IV

Department: Computer Science & Internet of Things **Class & Section: NCSIOT** **Course Code: CSIOT23401**

Name of the Faculty Member: Dr C. Santhi **Course Title: Smart Sensor Technologies**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction to Sensors and its characteristics • Sensing types – Scalar, Multimedia, Hybrid, Virtual • Sensing Considerations • Application Domains • Error in Sensors – Systematic and Random errors, • Error bands • Introduction to Actuators and its characteristics	Lecturing using traditional methods, Lecturing Method using ICT Tools,	Student will be able to analyze the working of various types of sensors	Case Studies, PPT presentation and assignments
II.	• Mechanical Sensors • Optical Sensors • Semiconductor Sensors • Electrochemical Sensors • Bio Sensors • Characteristics of Sensors	Lecturing using traditional methods, Lecturing Method using ICT Tools	Student will be able to identify different types of sensors and applications of sensors.	Case Studies, PPT presentation and assignments
III.	• Sensor Systems • Sensor Platforms • Microcontrollers for Smart Sensors • Interfaces for sensors Sensor • Communication- Serial communication Interfaces	Lecturing using traditional methods	Student will be able to identify sensor platforms and interfaces	Case Studies, PPT presentation and assignments

IV.	• Sensor Network Components • Sensor Network Topologies • Sensor Network Applications • Sensor Network features and Challenges • Data Literacy and the Internet of Things • Sensors and the Cloud • Big sensor data	Lecturing using traditional methods, Lecturing Method using ICT Tools	Student will be able to understand sensor networks and data handlings	Case Studies, PPT presentation and assignments
V.	• Analog sensor for Temperature, pressure, moisture, accelerometers, inclinometers, gyroscopes, flex, color, light • Principle of data acquisition • Programming ADC and sensor interface. • Digital sensor for Temperature, pressure, moisture, accelerometers, inclinometers, gyroscopes, flex, color, light • Programming Timers • Frequency counters • PWM generation and demodulation	Lecturing using traditional methods, Lecturing Method using ICT Tools	Student will be able to analyze interfacing of analog and digital sensors.	Case Studies, PPT presentation and assignments

List of References (Book / ICT / Weblinks):

1. Sensor Technologies – Michael J Mc Grath and Cliodhna Ni Scanaill –XpressOpen, 2014 2)
2. Technologies for Smart Sensors and Sensor Fusion - Kevin Yallup &Krzysztof Iniewski – CRC Press, 2017
3. Understanding Smart Sensors – Randy Frank – Artech House – SecondEdition, 2000.
4. Introduction to IoT, Sudip Misra, Cambridge University, 2021 Ed

Name of the faculty member & Signature: Dr C. Santhi

Approved by Head of the Department: Radhika Rani L

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – VI

Department: Computer Science & Internet of Things **Class & Section: CSIOT** **Course Code: CSIOT23405**

Name of the Faculty Member: Shaik Abdul Khadar **Course Title: Programming with Raspberry Pi.**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Python programming on the raspberry pi:** ➢ Setting up the raspberry pi, obtaining the raspberry pi ➢ Acquiring a raspberry pi, determining the necessary peripherals, nice additional peripherals. ➢ Deciding how to purchase peripherals, getting your raspberry pi working, troubleshooting your raspberry pi. ➢ Understanding the raspbian Linux distribution: ➢ Learning about Linux, interacting with the raspbian command line, interacting with the raspbian GUI, the LXDE graphical interface. ➢	PPT, Black Board Interactive Learning	**Understanding** Concepts of Python Programming with Raspberry Pi	PPT, Assignment
II.	**Setting up a programming environment:** ➢ Exploring python, checking your python environment, installing python environment. ➢ Installing python and tools, learning about the python interpreter, learning about the python interactive shell ➢ Learning about the python development environment, creating and running python scripts ➢ Knowing with tool to use and when.	PPT, Black Board Interactive Learning	**Understanding** Concepts of Setting up a programming environment for Raspberry Pi	PPT, Assignment

III.	**Regular expressions:** ➢ What are regular expressions, working with regular expressions in python, the match() function, search() function,the findall() and finditer() functions, ➢ Defining basic patterns, using advanced regular expression features, ➢ Working with regular expression in your python scripts. **Graphical programming:** ➢ GUI programming, programming for a GUI environment, ➢ Examining python GUI packages, using the Tkinter package, exploring the Tkinter widgets.	PPT, Black Board Interactive Learning	**Analyze** the Basic patterns and Graphical programming	PPT, Assignment
IV.	**Using databases in your programming:** ➢ Working with the MySQL database, using the postgreSQL database. ➢ Web programming: ➢ Running a web server on the pi, programming with the common gateway interface, expanding your python WebPages, processing forms.	PPT, Black Board Interactive Learning	**Understand and Analyze** database in programming	PPT, Assignment
V.	**Working with advanced pi/python programming:** ➢ Exploring the GPIO interface ➢ Using the RPI.GPIO module, controlling GPIO output ➢ Detecting GPIO input.	PPT, Black Board Interactive Learning	**Understand** advanced Pi/Python programming	PPT, Assignment

List of References (Book / ICT / Weblinks):

1. **Python programming for raspberry pi**, second edition, Richard Blum, Christine Bresnahan, 2016 by Pearson education, Inc.
2. **Programming the raspberry pi**, second edition, getting started with python, Simon Monk.

Name of the faculty member & Signature: Shaik Abdul Khadar

Approved by Head of the Department: Radhika Rani L

LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER - IV

Department: B.Sc. CSIOT **Class & Section: NCSIOT** **Course Code:** BS-23401

Name of the Faculty Member: R. Sinivasa rao **Course Title : probability and Statistics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Measures of central tendency ,mean median ,mode ,SD. Probability concepts, and Bayes theorem problems	Discussion and Lecture method using ICT tools.	Analyzing different types of series cental tendency and measures of dispersion	Written Test.
II.	THEORETICAL DISTRIBUTIONS DISCRETE DISTRIBUTIONS: Bernoulli distribution. (1) Binomial distribution, Poisson distribution (as the limiting case of a binomial distribution) - Derivation of only mean, variance and m.g.f of these distributions – Fitting of binomial and Poisson distributions – Simple problems there on. (6) NORMAL DISTRIBUTION : Chief characteristics of normal distribution Random Variabules and Expectations	Discussion and Lecture method using ICT tools	Identify the characteristics of different discrete and continuous distributions like binomial, Poisson and Normal distributions	Got the know ot the Knowledge about the Concepts of discrete and continuous distributions
III.	Correlation and its types, measures of correlation, regression and its properties. Regression equations and its coefficients. Coefficient of correlation.	Discussion and Lecture method using ICT tools	Describe how correlation is used to identify relationships between variables. Describe how regression analysis is used to predict outcomes	Applications based on qualitative data and quantitative data. And their relationships

IV.	SAMPLING AND LARGE SAMPLE TESTS : Types of sampling (Purposive sampling, random sampling, simple sampling and stratified sampling) ….. (2) Null hypothesis- Type I and Type II errors – Critical region – Level of significance& large sample tests	Discussion and Lecture method using ICT tools	. Analyze hypothesis tests of means, proportions and variances using both one-and twosample data sets	Group discussion based on large sample and small sample procedures
V.	CHI-SQUARE TEST, t-TEST AND F-TEST Chi – square test: Chi – square test for goodness of fit (3) Chi-square for independence of attributes (2) (i) t-test: t-test for single mean (1) t-test for difference of means – paired t- test (only tests without proof)- simple problems thereon. (5) (iii) F-test: F-test (without proof)	Discussion and Lecture method using ICT tools	Differentiate between the test statistics to be used for dependentand independent samples.	Group discussion

List of References (Book/ICT/):

1. Fundamentals of Mathematical Statistics – By S. C. Gupta and V. K. Kapoor: Sultan Chand & Sons Publishers)
2. Statistical Quality Control – By R. C. GUPTA (Khanna Publications) REFERENCE BOOKS :
3. S. C. Gupta and V. K. Kapoor, Fundamentals Mathematical Statistics, Sultan Chand & Sons Publishers.
4. H. C. Sinha and L. S. Varshoy, Mathematical Statistical, Jaiprakash Nath and Co. Publishers, Meerut.
5. Statistical Quality Control – By R. C. Gupta (Khanna Publications)

Name of the faculty member& Signature: (R. Srinivasa rao)

Approved by Head of the Department: Radhika Rani L

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – IV

Department: Computer Science & Internet of Things **Class & Section: NCSIOT** **Course Code: CSIOT23403**

Name of the Faculty Member: Dr. L. Radhika Rani **Course Title: Fundamentals of IoT and Robotics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT- I** **Introduction to IoT:** 1.Definition and Characteristics of IoT 2.IoT Enabling Technologies 3.IoT Levels and Deployment Templates 4.IoT Use cases: Home, Government and Cities 5.Environment and Energy System 6.Agriculture, Health and Lifestyle	PPT, Black Board Interactive Learning	Students will be **Understand** fundamentals of IoT.	PPT, Assignment
II.	**UNIT II** **Implementation of IoT module:** 1.Introduction to M2M, Differences between IoT and M2M 2.Physical Design of IoT 3.Generic Block diagram (Logical Design) of IoT 4.Raspberry Pi (pin description only 5.Raspberry Pi Interfaces, Linux on Raspberry Pi 6.Other IoT devices	PPT, Black Board Interactive Learning	Students will be able to **classify** and familiarized with broad range of topics in robotics with emphasis on basics of manipulators, coordinate transformation and kinematics.	PPT, Assignment
III.	**UNIT III** **Actuators** 1.Characteristics of Actuating Systems Actuating Devices and Control 2.Use of Reduction Gears 3.Comparison of Hydraulic, Electric Actuators	PPT, Black Board Interactive Learning	Students will be able **understand** the concepts of actuators and their implementation.	PPT, Assignment

	4.Pneumatic Actuators 5.Hydraulic Actuators			
IV.	**UNIT IV** **Introduction to Robotics:** 1.Classification, Component 2.Characteristics, Applications 3.Robotics Kinematics, Position Analysis 4.Robots as Mechanisms 5.Matrix Representation 6.Transformation Matrices 7.Forward and Inverse Kinematics	PPT, Black Board Interactive Learning	Students will be able to learn types of sensors and they can **apply** in real-time.	PPT, Assignment
V.	**UNIT V** **Robot Controls:** 1.Point to Point Control, Continuous Path Control 2.Intelligent Robot 3.Control System for Robot Joint 4.Control Actions 5.Feedback Devices	PPT, Black Board Interactive Learning	Students will be able to **demonstrate** with trajectory planning and Robotic control techniques.	PPT, Assignment

List of References (Book / ICT / Weblinks):

1. 1 Vijay Madisetti and Arshdeep Bahga, Internet of Things - A Hands-on Approach, First Edition, University Press, 2015.
2. Saeed B. Niku, Introduction to Robotics Analysis, Controls,Application, Willey, 2019,Third Edition.

Name of the faculty member & Signature: Dr. L. Radhika Rani

Approved by Head of the Department: Dr. Radhika Rani L

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – IV

Department: CSIOT **Class & Section: NCSIOT** **Course Code: CSIOT23402**

Name of the Faculty Member: K.Sitarama Sastry **Course Title: AMC Based Systems**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Architecture & Pin diagram of 8051uc, Register organization, memory map of 8051, interrupts	PPT	Understand the block diagram of 8051, memory organization, counters & Interrupt structure in 8051	Seminar presentation
II.	Instruction set and addressing modes of 8051.	Black board & PPT	Understanding Instruction set & Addressing modes of 8051	Learning by practice.
III.	Assembly Language programming, timer and counter programming	Black board & PPT	Develop the assembly language programming of 8051uc.	Lab experiments
IV.	Serial communication types and protocols. RS232 standards	PPT	Understand serial communication techniques.	Group discussion and presentations.
V.	Architecture diagram of PIC18uc, Register organization, memory map of PIC18 uc.	PPT	Understand the block diagram ofPIC18, memory organization	Seminar presentation & Test conducting.

List of References (Book / ICT / Weblinks):

1. The 8051uc &Embedded Systems by Ali-Mazidi
2. The PIC uc & Embedded Systems by Ali-Mazidi

Name of the faculty member & Signature: K.Sitarama Sastry

Approved by Head of the Department: Dr.Radhika Rani L

LOYOLA ACADEMY
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Teaching Plan for the AcademicYear2023–2024
SEMESTER- 11

Department: CSIOT **Class & Section: ACSIOT** **Course Code:CSIOT22202**

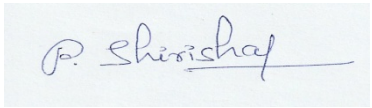
Name of the Faculty Member: Pathri Shirisha **Course Title: Vector Calculus and Laplace Transforms**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1.Partial Differentiation,Variable Treated as Constant, Partial Differentiation Composite fractions ,Eulers Theorem Simple Problems(1) 2.Vector Differentiation and the necessary and sufficient condition for vector function to have constant magnitude and constant direction.(3) 3.Vector Continuity-Differentiability- Vector Integration (4) 4. Gradient – Directional derivative of a scalar function- Equation of the Tangent and normal to a surface(4)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector	Categorize the vectorvalued functions of a real variable and their curves, Gradient vector fields and constructing potentials	Oral Test,quiz
II.	1.Divergence and Curl Operators (4) 2. Formulae involving these operators(4) 3.Vector Identities-Simple Problems there on(4)	Discussion and Demonstration, Practical activity, whiteboard, Marker,	Analyze the differential ideas of divergence, curl, and the Laplacian along with their physical interpretations	Written Test, Case Study

		PPT Presentation, Projector		
III.	1.Line Integrals-Surface integrals-Volume integrals (4) 2. Green‘s theorem ,Gauss theorem, Stoke‘s Theorem (Without proofs) (4) 3 .Problems on Green‘s theorem ,Gauss theorem, Stoke‘s Theorems (4)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector	Use the applications of Green‘s theorem in the plane, Gauss divergence theorem and Stoke‘s theorem.	Group Discussion
IV.	1.Laplace Transforms of Standard Functions(4) 2. Shifting Theorems (4) 3.Transforms of derivatives and Integrals(4)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector	Solve the Laplace transform of Standard functions from the definitions	Oral Test
V.	1. Inverse Laplace transforms(1) 2. Convolution Theorem (without proof) and Problems(3) 3.Applications of Laplace Transforms (4) 4.Solutions of Ordinary Differential equations laplace transforms(4)	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector	Combine the necessary Laplace Transform Techniques to solve the second –order Ordinary Differential equations	Online quiz, Case Study

List of References (Book/ICT/ Weblinks):

1. Vasistha, A.R and Dr. Agarwal, D.C. 2015. Vector Calculus. 9 th Edition. Meerut: Krishna Publications. (For UNITS-I,II and
2. A.R. Vashista Integral Transforms By Krisna Prasanth Mandir (UNITS- IV and V)
3. Iyengar T.K.V.B. Krishna Gandhi, Ranganatam,Prasad M.V. S.S.N.Engineering Mathematics Vol III S.Chand & co New Delhi



Name of the faculty member &Signature: PATHRI SHIRISHA

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – II

Department: Computer Science and Internet of Things **Class & Section: ACSIOT** **Course Code: CSIOT22203**

Name of the Faculty Member: Dr L. Radhika Rani **Course Title: Logic and Digital Circuits**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	UNIT-I Number system and Logic gates: Conversions of Binary, octal, Decimal & hexadecimal number systems Complements(1's and 2's complement methods), Binary addition and subtraction (1's and 2's complement methods). Binary Codes-decimalCodes, Error detection codes, ReflectedCode Logic gates- OR, AND, NOT, XOR, NAND, NOR gates and their Truth tables Design of basic gates using the Universal gates- NAND and NOR gates. Multilevel NAND circuits (implementation of a function only) • Exclusive –OR and equivalence functions(parity generation & checkers))	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Convert different type of codes and number systems which are used in digital communication and computer systems	Case Studies, PPT presentation and assignments
II.	UNIT-II Logic families and Boolean algebra: Transistor-Transistor Logic: TTL totem pole output, open collector	Lecturing using traditional methods, Lecturing Method	Employ the codes and number systems converting circuits and Compare different types of logic families which are the	Case Studies, PPT presentation and assignments

	output Tri-state gate CMOS (Complementary metal oxide semi-conductor) – NAND, NOR gate Boolean algebra- Laws and identities, DeMorgan's Theorems. Simplification of Boolean expressions using Boolean identities Reduction of Boolean expressions using Karnaugh Maps – Sum of Products (SOP) representation (up to four variables) including don't care conditions.	using ICT Tools	basic unit of different types of logic gates in the domain of economy, performance and efficiency.	
III.	Combinational Circuits: Introduction, Design procedure Half adder, Full adder and parallel adder logic circuits Sub tractors Code conversion(BCD to Excess-3 Code) Multiplexer De-Multiplexer Decoder (3 to 8) Encoder (8 to 3)	Lecturing using traditional methods, Lecturing Method using ICT Tools	Analyze different types of digital electronic circuit using various mapping and logical tools and know the techniques to prepare the most simplified circuit using various mapping and mathematical methods.	Case Studies, PPT presentation and assignments
IV.	UNIT-IV Sequential Circuits: Introduction, Difference between Combinational and sequential Flip-flops – SR, D, JK, T and Master-Slave JK Flip flop excitation tables Shift Registers : Types of Shift Registers (SISO, SIPO, PISO, PIPO) 4-bit bidirectional universal shift register Analysis of clocked sequential circuits	Lecturing using traditional methods, Lecturing Method using ICT Tools	Design different types of with memory element digital electronic circuits for particular operation, within the realm of economic, performance, efficiency, user friendly and environmental constraints.	Case Studies, PPT presentation and assignments

V.	UNIT -V Counters: Design of counters 4-bit Asynchronous (Ripple) counter Modulo-N counter Synchronous counter. Memory: ROM, PROM, EPROM, EEPROM,SRAM &DRAM	Lecturing using traditional methods, Lecturing Method using ICT Tools	Assess the nomenclature and technology in the area of memory devices and apply the memory devices in different types of digital circuits for real world application.	Case Studies, PPT presentation and assignments

List of References (Book / ICT / Weblinks):

1. Digital Electronics G. K. Kharate 2013 Oxford University Press.
2. Mano Morris M. 2008. Digital logic and Computer design. 3rd edition. New Delhi. rentice Hall
3. Puri V.K.1997.DigitalElectronics:CircuitsandSystems.1st edition. New Delhi: Tata McGraw Hill.
4. Jain R.P. 2009. Modern digital electronics. 4th edition New Delhi: McGraw Hill Education.
5. Malvino & Leech. 1993. Digital principles and Applications. 8th edition. New Delhi: Tata Mc Graw Hill Education.

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Dr L. Radhika Rani
Name of the faculty member & Signature:

Approved by Head of the Department

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year: 2023– 2024

SEMESTER- II

Department: CSIOT **Class & Section: ACSIOT** **Course Code: IC23101**

Name of the Faculty Member: K . Musalliah **Course Title: IHC**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture- Mauryas and Guptas, Ashoka the great and Harshavardana,Satavahavas, Pallavas, &Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation
IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions	Quiz and group presentation.

	democracy.		evolution of the constitution.	
V.	Fundamental Rights,Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

Listof References (Book/ICT/ Weblinks):

1. MorrisMano Computer Architecture3rdPublication---------- example
2. KaiHwang, FayeABriggs .Computer Architectureand Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member &Signature: Dr.K.Musalaiah

Approved by Head of the Department: Dr. L. Radhika Rani

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: ENGLISH **Class & Section:** ACSIOT, AAI, ACDS,ACSC **CourseCode:**EN23201

Name of the Faculty Member P. Saritha **Course Title:** GENERAL ENGLISH-2

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Flash Fiction- 'The Mice' by Lydia Davies (1)** Simple, Complex and Compound Sentences (3) Conversion of Sentences (3) Information Transfer (2)	Lecture Method using ICT Tools	To learn about the fundamentals Of communication	Solving mixed grammar exercises Narrating mystic experiences Writing paragraphs on various topics
II.	**Short Story- 'The Face on the Wall'by E V Lucas (2)** • Active and Passive Voice (3) • Conjunctions (2) Essay Writing (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	Narration of short stories by students. Grammar exercises Essay writing exercises
III.	**From the text *Three Days to See by* Helen Keller** • Explanation of the text (3) • Grammar- Usage of Modal Auxiliary Verbs (2) • Vocabulary – Collective Nouns, Technical Vocabulary (2) Writing Skill – Newspaper Report (2)	Lecture Method using ICT Tools	To recognize the moral element which underlies in the short story. To identify the different types of modal auxiliary verbs in a sentence composition and to learn the correct usage of Collective Nouns, Technical Vocabulary.	Character sketch of the story characters. Grammar exercises like fill in the blanks, multiple choice and true or false. Newspaper Report writing exercises.

IV.	**Short Story from the text 'Leela's Friend'by R.K. Narayan** • Explanation of the text (3) • Grammar- Phrasal Verbs, **Wh-** questions (2) • Vocabulary- Noun and Verb Suffixes (2) • Writing Skill- Writing a Narrative (2)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills.	Description of the different characters of the story. Grammar exercises Exercises exercises like fill in the blanks, multiple choice and true or false. Practice in writing a narrative
V.	**From the text 'The Last Leaf'by O. Henry** • Explanation of the text (3) • Grammar- Prepositions (2) • Vocabulary – Idioms (2) Writing Skill – Precis Writing (2)	Lecture Method using ICT Tools	To write grammatically correct sentences and usage of idioms in sentences.	Textbook exercises and worksheets Precis' writing exercises.

List of References (Book/ICT/ Weblinks):

Epitome of Wisdom, Maruthi Publications

SUGGESTED READING:

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges.* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing.* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Name of the faculty member &Signature: P. Saritha

Approved by Head of the Department: Dr. Radhika Rani L

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – II

Department: BSc(Computer Science & Internet of Things) **Class & Section: ACSIOT** **Course Code:** CSIOT22204

Name of the Faculty Member: Paduchuri Sushma **Course Title: C++ and Data Structures**

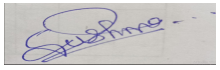
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT – I** 1. Introduction to object-oriented programming : Features of OOP's, applications of OOP's 2. Keywords, data types, variables and their declaration, reference variables, Scope resolution, 3. Member dereferencing & memory management operators, manipulators, input and output, Objects(cin&cout) 4. Functions : Definition, Function components, call by value, reference & address, Inline functions, functions with default arguments, function overloading 5. Defining classes, defining member functions, nesting of member functions, private member functions, Memory allocation for objects, static data members and member functions, friend class 6. Objects and Returning objects	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Differentiate between object-oriented programming and procedure-oriented programming.	PPT presentation , Seminars and assignments

II.	**UNIT – II** 1. Constructors, default and parameterized constructors, copy constructors, Constructor overloading, constructors with default arguments, Destructors 2. Inheritance: Defining derived classes, single inheritance, making private members Inheritable 3. Multilevel, multiple, hierarchical and hybrid inheritances. 4. Virtual base classes, constructors in derived classes, abstract classes 5. Pointers to objects, this pointer, pointers to derived classes, virtual functions, Pure virtual functions 6. Operator overloading using member functions and Template functions and Template classes	Lecturing using traditional methods, Lecturing Method using ICT Tools	Develop programs using object oriented programming features.	PPT presentation , Seminars and assignments
III.	**UNIT – III** 1. Introduction to data structures : Linear and non-linear data structures, Stacks-Definition, 2. implementing stack using arrays 3. Applications of stack: infix, prefix and postfix expressions, conversion of infix to prefix 4. and infix to postfix. 5. evaluation of postfix expression 6. Queues- Definition, implementing queue using arrays, circular queue and double ended queue 7. Sparse Matrix-definition, representation of sparse matrix in3-tupleform	Lecturing using traditional methods, Lecturing Method using ICT Tools	Organize the data using sorting and various linear data structures and determine the time complexity	PPT presentation , Seminars and assignments
IV.	**UNIT-IV** 1. Linked list- Definition, single linked lists, operations on single linked list (Insertion &	Lecturing using traditional methods, Lecturing Method using ICT Tools	Illustrate non-linear data structures like trees, graph	PPT presentation , Seminars and assignments

	deletion), Stack and queue using linked list. 2. Trees- Definition, linked representation of trees, Binary search tree, Tree Traversals (in order, pre order and post order traversals. 3. Linear search and binary search. 4. Sorting-Bubble, selection, insertion, quick and merge sort techniques			
V.	**UNIT – V** 1. Btrees-insertion and deletion operations on Btrees. 2. Graphs: Definition, Array and linked list representation of graphs. 3. Graph traversals-BFS and DFS. 4. Spanning tree and Krushkals algorithm	Lecturing using traditional methods, Lecturing Method using ICT Tools	Choose appropriate data structures to represent data items in real world problems	PPT presentation , Seminars and assignments

ESSENTIAL READING

1. Object Oriented Programming With C++ by Reema Thareja, Oxford University Press, 2015.
2. Balaguru swamy, E. 2004. Object Oriented Programming with C++. 8th Edition. New Delhi: Tata McGraw-Hill publication(For units I and II)
3. Kanetkar Yashwant, P. 2007. Data Structures through C++. 3nd Edition. New Delhi: BPB Publications(For units III, IV and V)



Name of the faculty member & Signature: Paduchuri Sushma

Approved by Head of the Department: Dr. Radhika Rani L

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER II

Department: CSIOT **Class& Section:** ACSIOT **CourseCode:**CSIOT22201

Name of the Faculty Member: B.Kavya **Course Title:** COMPUTER NETWORKS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	1.Introduction: Data Communications, networks, Protocols and Standards 2.OSI Model, layers in the OSI model, TCP/IP Protocol suite 3.Analog and Digital, Transmission impairments 4. Transmission Media-Guided media, Connecting Devices 5. Digital Transmission- digital-to-digital conversion 6. Multiplexing: Frequency-division, Wavelength and Time Division	Lecture Method using ICT Tools	**Identify** basic computer network topologies and protocols and explain Data Communication System components	Seminar, Assignment and Quiz
II.	**DATA LINK LAYER** 1. Error detection and correction-Parity, check sum, CRC, Hamming code 2. Data Link Control: Framing, flow and error control 3. Stop-and-wait ARQ, Go-Back-N ARQ, Selective Repeat ARQ, Piggybacking 4. HDLC, Random Access- ALOHA,	Lecture Method using ICT Tools	**Classify** different error detecting techniques.	Seminar, Assignment and Quiz

	CSMA,CSMA/CD,CSMA/CA 5.WiredLANs-Ethernet			
III.	**NETWORK LAYER** 1. IP address space- Introduction 2. Class full and Classless addressing, subnetting and supernetting 3. IPv4- datagram, Fragmentation, checksum, options 4. Internet Control Protocols- ICMP, IGMP, ARP and RARP 5. Delivery, Forwarding, Unicast routing protocols- RIP, OSPF, BGP	Lecture Method using ICT Tools	C**onstruct** sub-netting and routing mechanisms.	Seminar, Assignment and Quiz
IV.	**TRANSPORT LAYER** 1. Process-to-Process Delivery, UDP-well known ports, user datagram, checksum 2. UDP Operation, use of UDP 3. TCP- process to process communication, Numbering bytes, TCP services 4. Flow control- silly window syndrome, Error Control 5. TCP connection, State transition diagram, Congestion control, Timers, Options	Lecture Method using ICT Tools	**Sketch** the routing protocols and analyze how to assign the IP addresses for the given network.	Seminar, Assignment and Quiz
V.	**APPLICATION LAYER** 1. DNS- Namespace, domain name space, distribution of name space 2. DNS in internet, resolution, DNS messages, types of records 3. TELNET, E-mail- architecture, message transfer agent: SMTP	Lecture Method using ICT Tools	**Develop** network design and implementation	Seminar, Assignment and Quiz

	4. Message Access Agent: POP, FTP 5. WWW and HTTP- architecture, web documents, HTTP			

ESSENTIAL READING

1. Forouzan, Beharouz A. 2011. **Data Communications and Networking**. 3rd Edition. New Delhi: Tata Mc Graw Hill.(UNIT-I,II)
2. Forouzan, Beharouz A. 2005. **TCP/IP Protocol Suite**. 3rd Edition. New Delhi: Tata Mc Graw Hill.(UNIT-III,IV,V)

SUGGESTED READING

1. Tanenbaum, Andrew S. 2008. **Computer Networks**. 4th Edition., New Delhi: Pearson Education.

B.Kavya
Name of the faculty member &Signature: B.Kavya

Approved by Head of the Department: Dr. Radhika Rani L

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – V

Department: Electronics & Communication Technology **Class & Section: DECT** **Course Code: ET21501**

Name of the Faculty Member: Dr C. Santhi **Course Title: Electronic Communication Systems**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to the communication systems:** • Information, Transmitter • Channel Noise, Receiver • Frequency spectrum of non-sinusoidal waves **Noise: (Definitions only)** • External noise and Internal noise • Temperature noise and Noise Figure **Amplitude Modulation:** • Need for modulation, Representative of A.M • Power relations in A.M .wave **Generation of A.M:** • Basic requirements, Comparison of levels • Modulated Transistor Amplifier	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving,	Understand concepts of information transmission and reception of analogue signals using AM communication systems.	Case Studies, PPT presentation and assignments
II.	**Single Side Band Techniques:** • Evolution and description of SSB • Suppression of carrier • Suppression of unwanted side bands • Extension of SSB Receivers **A.M. Receivers:** • RF section and characteristics • Intermediate frequencies and IF amplifiers • Detection and AGC	Lecturing using traditional methods, Lecturing Method using ICT Tools,	Apply concepts of evolution of sidebands and reception of AM signals.	Case Studies, PPT presentation and assignments

III.	**Frequency Modulation:** • Theory of frequency and phase modulation • Noise and frequency modulation • Generation of frequency modulation (Only Direct Method) • Narrow Band FM and Wide Band FM. **F.M. Receivers:** **Basic FM demodulator:** • Balanced slope detector	Lecturing using traditional methods, Lecturing Method using ICT Tools,	Understand the concepts of frequency modulation and demodulation techniques.	Case Studies, PPT presentation and assignments
IV.	• Phase discriminator • Ratio detector • Pre-emphasis and de-emphasis **Pulse Modulation:** • Pulse Amplitude Modulation(PAM) • Pulse Width Modulation(PWM) • Pulse position Modulation(PPM) • Pulse Code Modulation(PCM)	Lecturing using traditional methods, Lecturing Method using ICT Tools,	Apply the concepts of pulse modulation and demodulation.	Case Studies, PPT presentation and assignments
V.	**Digital Modulation Techniques:** • Amplitude Shift Key(ASK) • Frequency Shift Key(FSK) • Phase Shift Key(PSK) • Frequency Division Multiplexing and De multiplexing • Time Division Multiplexing and De multiplexing **CDMA Technology:** • Multi access technology	Lecturing using traditional methods, Lecturing Method using ICT Tools,	Understand the concepts digital communication techniques	Case Studies, PPT presentation and assignments

List of References (Book / ICT / Weblinks):

1. Kennedy George and David Barnard. 2008. Electronic Communication Systems. New Delhi: (Unit- I to Unit-III)
2. Forouzan Behrouz A. 2007. Data Communications and Networking. 4 th edition. New Delhi: McGraw hill (Unit-IV)
3. Pratt Mothy T., Bostian Charles & Wse Allnut Jeremy. 2003. Satillite Communications. 2 edition. Willey Publications. (Unit-V)

Name of the faculty member & Signature:

Approved by Head of the Department

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - V

Department: Electronics & Communication Technology

Class & Section: DECT Sem V

Course Code: ET21502

Name of the Faculty Member: Dr. Shakira Sultana

Course Title: Group Theory and Differential Calculus

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Group – Definition – Examples and elementary properties(Cancellation law, identity element and the inverse of an element of group are unique)- If (G,o) is a group and a, b □ G, then the equations a o x = b and y o a = b have unique solution in G. • $(a \circ b)^{-1}=b^{-1} \circ a^{-1}$ for all a, b □ G. • Addition and multiplication Modulo system -examples. • Composition table and examples, Order of a group, some problems there on **Subgroup:** • Definition and examples of a subgroup • Theorems: A non– empty subset H of a group G is a subgroup of G iff a, b Ɛ H implies that ab □ H and a□ □H implies that a^{-1}□H. • A finite subset H of a group G is a subgroup of G if a, b □ H implies that ab^{-1}□ H. • The intersection of two subgroups of a group G is a subgroup of G.	Lecture Method using Chalk and board and PPT	**Apply** concepts in abstract algebra such as definition of a group, order of a finite group and order of an element.	Seminar: Constructing their own examples of groups and subgroups,

II.	Definition and examples of a Coset, Cyclic group, Order of an element of a group. **Theorems:** If H is a subgroup of a group G, then any two left (right) cosets of H are either disjoint or identical If H is a subgroup G, then there exists a one to one correspondence between the set of left cosets of H in G to the set of right cosets of H in G. **Lagrange's Theorem:** The order of a subgroup of a finite group divides the order of the group. Every group of prime order is cyclic. **Permutations Groups:** Definition, Multiplication of permutations, inverse of Permutation, Cyclic permutations, transposition-even and odd permutations, Simple problems there on.	Lecture Method: using Chalk and board method.	**Categorize** types of subgroups such as normal sub groups, cyclic subgroups and understand the structure and characteristics of these subgroups.	Quiz and rapid review questions
III.	Definition of Normal subgroup and examples **Theorems:** H is a normal subgroup of a group G iff $gHg^{-1}=H$ for all g□G. The subgroup H of a group G is a normal subgroup of G iff every left coset of H in G is a right coset of H in G. A subgroup H of a group G is a normal subgroup of G iff the product of two right cosets of H in G is again a right coset of H in G. The intersection of two normal subgroups of a group G is a normal subgroup of G. **Homomorphism:** Definition of homomorphism- Examples Theorem: If f: G □ G^1 is a homomorphism and e and e^1 are the identity elements of G and G^1 respectively then a) $f(e) = e^1$ **b)** $f(a^{-1})=[f(a)]^{-1}$ where a□G. Definitions of isomorphism and automorphism, examples. **Cayley's Theorem:** Every finite group G is isomorphic to a permutation group.	Lecture Method: using Chalk and Board method	**Understand** the definitions of Homomorphism – Cayley's theorem.	Seminar and assignment.
IV.	**Differential Calculus:** Rolle's Theorem Lagrange's Mean Value theorem	Lecture Method: using Chalk and Board method and	**Analyze** the consequences of Rolle's theorem	Cyclic test

	Cauchy's Mean Value theorem Taylor's expansion and Maclaurin's expansion of a function with Lagrange's and Cauchy's forms of remainders Expansions of only e^x, Sin x, Cos x, $(1 + x)^m$ and log (1 + x) as power series.	PPT	and the Mean Value theorem for differentiable functions.	
V.	**Tests of convergence of a series:** Only statements of p-test, Comparison test, Ratio test and Cauchy's root test (proof of these tests are not required) Simple problems there on for tests of convergence of a series. Definitions of absolute convergence and conditional convergence of a series of alternately positive and negative terms.	Lecture Method: using Chalk and Board method and ICT tools	**Apply** divergence test to determine divergence of an infinite series.	Group discussion

List of References (Book / ICT / Weblinks):

1. V. Venkanteswara Rao, Sharma B.V.S. and Sastry Anjaneya.S. 2009. **A Text Book of B.Sc. Mathematics (Vol. II),** New Delhi: S. Chand & Co. Ltd. (Units I, II and III).
2. Dr. Kulbhushan Prakash, 2009, **Topics in Real Analysis**, 1st edition. New Delhi: Lakshmi Publication (Unit V).
3. A.K. Vasishtha & A.R. Vasishtha. 2015. **Modern Algebra**. 68th edition. Krishna Publication.

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

ODD SEMESTER

Department: BSC Electronics And Communications **Class & Section: DECT** **Course Code: ET21503**

Name of the Faculty Member: Ch. SRIYA **Course Title:** Python Programming

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Python Basics- Origin, Features, Statements and Syntax, Variable Assignment, Identifiers, Memory Management • Python Objects- Type Object, Null Object, Object Identity Comparison, Type()and isInstance (), Categorizing the Standard Types, • Conditionals Statements- if, if-else, else-if Statement	Interactive Learning Problem-Solving, Coding Challenges, lecture based teaching using ICT tools, Lecturing using traditional methods	To acquire programming skills in core Python In these topics, you will gain a foundational understanding of Python. You'll explore Python's origin, its key features, and its syntax, including variable assignment and memory management.	Quiz, PPT presentation for students and small assignments
II.	• Loops- while, for Statement, range() Built-in Function, break, continue, pass, • Iterators and iter() Function, List Comprehensions. • Numbers- Introduction, Integers, Double Precision Floating Point Numbers, Complex Numbers, Operators, Built-in and Factory Functions, Other Numeric Types	Interactive Learning Problem-Solving, Coding Challenges, Lecturing using traditional methods	To understand looping and control statements in Python. Using loops (while and for) and control statements like break, continue, and pass, enhancing your ability to manage program flow. You'll also master iterators, iter() function, and list comprehensions, enabling efficient data manipulation.	Regular Assessments group discussion on programming and debate
III.	• Strings - Sequences, Strings, Strings and Operators, String-Only Operators, Built-in Functions, String Built-in Methods, Special Features of Strings	Code Reviews and Feedback, Online Resources,, Lecturing using traditional methods	To understand data structures in Python. Gain a comprehensive understanding of Python strings, including their operations, functions, and unique features, as well as learn about lists, their	Regular Assessments, self-coding techniques and gaining ideas to develop the code

	• Lists- Introduction, Operators, Built-in Functions, List Type Built-in methods.		operators, and built-in functions in Python.	
IV.	• Functions- Introduction, Calling Functions, Creating Functions, Passing Functions, Formal Arguments, Variable Length Arguments, Functional Programming, Variable Scope, Recursion, Generators • Modules- Modules, Namespaces, Importing Modules, Features of Module Import, Built-in Functions, Packages	Online Resources Collaborative Learning: Promote group work and collaborative coding sessions	Explain basic functions of Python programming language By studying functions and modules in Python, you'll gain expertise in creating and using functions, understanding variable scope, and working with modules, namespaces, and packages."	Regular Assessments, PPT presentation and active learning in coding.
V.	• Files and Input/Output- File Objects, File BIF and Methods, Built-in Attributes, Standard Files, Command Line Arguments. • Exception- Exceptions in Python, Detecting and Handling Exceptions, raise Statement, Assertions-assert statement, Standard Exceptions, Creating Exceptions.	Interactive Learning Problem-Solving Projects ,Online Resources	Able to gain knowledge in developing GUI applications related to object oriented concepts using Python. Gain proficiency in working with files, exceptions, and input/output in Python, covering topics like file handling, exception detection and handling, using the raise statement, assertions, and understanding standard exceptions and how to create custom exceptions.	Regular Assessments, seminars and developing new simple projects

List of References (Book / ICT / Weblinks):

4. Dr.R.Nageshwara Rao. Core python programming ,2nd edition, Dream tech press
5. Chun Wesley J. Core Python Programming. 2nd Edition. USA: Pearson Education.

Name of the faculty member & Signature:

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – V

Department: ECT **Class & Section:DECT** **Course Code: ET21504A**

Name of the Faculty Member: K. Sitarama Sastry **Course Title: Internet Of Things**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to IOT, definition and characteristics, physical and logical design of iot, iot enabling technologies, iot levels and deployment templates and domain specific iots.	Lecture Method using ICT Tools	The importance of iot and its applications.	Quiz and Brainstroming.
II.	Iot and M2M, Iot system management with NETCONF-YANG Iot design methodology	Lecture Method using ICT Tools	Differentiate between IOT &M2M, SDN &NFV	Group discussion and ppt presentation.
III.	Design methodology: IOT level 1,2,3 IOT level 4,5,6 IOT level 7,8,9,10 Weather monitoring system case study	Lecture Method using ICT Tools	Apply IOT design methodology	Doing small projects on raspberry-pi board or on iot board.
IV.	Building blocks of IoT device, Raspberry Pi, About the Board, Linux on Raspberry Pi, Raspberry Pi Interfaces,Programming Raspberry Pi with Python,Other IoT devices	Lecture Method using ICT Tools	Understand building of IOT devices and Raspberry PI.	Developing small applications using python code on iot board.
V.	Introduction to Cloud Storage models and Communication API, WAMP-AutoBahn for IoT, Xively Cloud for IoT, Python web application framework-Django, Case study on IOT applications	Lecture Method using ICT Tools	Understand applications and analytics for iot.	Ppt presentations and case-study.

List of References (Book / ICT / Web links):

1. Bahga, Arshdeep and Madisetti, Vijay. 2015. **Internet of Things - A Hands-on Approach.** Universities Press ISBN: 9788173719547
2. Richardson, Matt and Wallace, Shawn. 2014. **Getting Started with Raspberry Pi.** O'Reilly (SPD).ISBN: 9789350239759
3. https://www.youtube.com/@ajaykumarbadhan7149

Name of the faculty member & Signature: K. Sitarama Sastry

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER - V

Department: ECT **Class & Section: DECT** **Course Code:ET21504B**

Name of the Faculty Member: Shaik Abdul Khadar **Course Title: VHDL Programming**

Unit	Topics to be Covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Fundamental Concepts : Modeling Digital systems, Domains and levels of modeling, Modeling Languages, VHDL Modeling concepts, Learning a New Language: Lexical elements and syntax, Scalar Data types and operations: Constants and variables, Scalar Types, type classification, Attributes of scalar types, Expressions and operators	Lecture Method using ICT Tools	Able to understand the fundamental concepts of VHDL, Data types & Operators.	Quiz, PPT presentation, Brainstorming
II.	Sequential statements: IF statements, Case statements, Null Statements, Loop Statements, Assertion and report statements, Composite data types and operations: Arrays, Constrained array types, Array operations and records.	Lecture Method using ICT Tools	Able to learn the programming structures and composite data types & Operations.	PPT presentation, Quiz
III.	Basic Modeling constructs: Entity declarations, Architecture bodies, Behavioral descriptions, Structural Descriptions, Design processing, Sub programs: Procedures, Procedure parameters, Concurrent procedure call statements.	Lecture Method using ICT Tools	Able to learn basic modeling structures and subprograms.	Logical skills, Quiz

IV.	Packages and use clauses: Package declarations, Package bodies, Use-clauses, The predefined package standard, Generic constants: Parameterizing behaviour, Parameterizing structure.	Lecture Method using ICT Tools	Able to learn the programming structures like package declarations, clauses, Predefined package standard.	PPT presentation
V.	Xilinx-Designing with VHDL, Structural design elements , Dataflow design elements, Behavioural design elements, simulation, test benches, VHDL features for sequential logic design, Synthesis.	Lecture Method using ICT Tools	Able to learn Xilinx tool and implementation of it in digital designing.	Logical Skills, PPT presentation.

List of References (Book/ICT/ Web links):

1. The Designer's Guide to VHDL – By Peter J. Anderson 2nd Ed. 1st Indian Reprint Harcourt India Pvt. Ltd. 2001.
2. VHDL Programming by example - by Douglas L. Perry 4th Ed. TMH 2002.
3. A VHDL Primer - By J. Bhaskar. Pearson Education Aisa 11th Indial Reprint 2004.
4. Digital System Design Using VHDL by Charles H. Roth Jr. PWS Pub. 1998.
5. Introductory VHDL: From simulation to synthesis- by Sudhakar Yalamanchili. Pearson Education Asia 2001.
6. https://www.youtube.com/watch?v=zm-RA6BsYmc

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER - V

Department: ECT **Class & Section: DECT** **Course Code: ET21505A**

Name of the Faculty Member: Shaik Abdul Khadar **Course Title: ROBOTICS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Integrated Development Environment for Microcontroller (IDE), Free Arduino IDE, Installation of Arduino IDE, Configuring for robot programming, In system programming (ISP), Free IDE AVR studio, WIN AVR, Installation of AVR studio and WIN AVR, Configuring for robot programming	Lecture Method using ICT Tools	To Learn about the IDE environment, Installation of Arduino, AVR Studio and WIN AVR	Quiz
II.	DC motors construction and working, Gearing and efficiency, Servo motors construction and working, Stepper motor construction and working.	Lecture Method using ICT Tools	To Learn about the various types of motors construction and working	Brainstorming, Quiz
III.	White line sensor, IR range sensor of different range, Analog IR sensor proximity sensor, Optical light intensity sensor (Photo resistor, diode and transistor), Position encoders, Ultrasonic sensors and interfacing with Arduino Uno, Interfacing IR module with Arduino Uno	Lecture Method using ICT Tools	To Learn about different types of sensors and their interface with Arduino Uno	Brainstorming, Quiz
IV.	Ultrasound scanner, Gyroscope, Accelerometer, Magnetometer, Interfacing temperature and	Lecture Method using ICT Tools	To Learn about different types of sensors and their interface with Arduino Uno	Brainstorming, Quiz

	humidity sensor DHT 11/12 with Arduino Uno, Interfacing LED and Buzzer with Arduino, Interfacing 2X16 characteristics of LCD with Arduino Uno, Interfacing relay with Arduino Uno.			
V.	PWM generator using timer 555, DC motor speed control using PWM, Simplex infrared communication using IR sensor to robot, Bluetooth HC05, Wired RS 232 (Serial Communication), Wi-Fi communication, Wireless Zigbee communication	Lecture Method using ICT Tools	To Learn about various wireless communication devices and generate PWM pulses to control motor speed	Brainstorming, Quiz

List of References (Book/ICT/ Web links):

1. Saha S.K, 2014. Introduction to Robotics, 2nd edition, Tata Mcgraw-Hill edition: New Delhi
2. R.K. Mittal, I.J. Nagarath, 2005. "Robotics and Control", Tata Mcgraw-Hill edition: New Delhi
3. U.A. Bakshi and V.U. Bakshi, 2007 Electrical Technoligy, 1st edition, Technical Publication, Pune.
4. https://www.youtube.com/watch?v=fJWR7dBuc18

Name of the faculty member & Signature:

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – V

Department: Electronics & Communication Technology **Class & Section: DECT** **Course Code: ET21505B**

Name of the Faculty Member: Dr L.Radhika Rani **Course Title: INDUSTRIAL ELECTRONICS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Power Electronics:** Introduction, Thyristor Characteristics. 1 Two Transistor Model of Thyristor, Thristor Turn on di /dt Protection, dv/dt Protection. Thyrist on Turn off, Thyristor Firing & Circuits Ujt, Thyristor Commutation Techniques-Natural Commutation, Forced commutation. Theory and construction of TRIAC, DIAC and applications. Protection of circuits & devices – Cooling & Heat sinks, Snubber circuits.	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Deals with fundamentals of thyristor family devices.	PPT presentation and assignments
II.	**Induction Heating:** Principle, Theory, Merits and Application of Induction heating **Dielectric Heating:** Principle, Theory & Applications.	Lecturing using traditional methods, Lecturing Method using ICT Tools	It deals with induction heating and dielectric heating methods	PPT presentation and assignments

III.	**Inverters:** Parallel Inverter Voltage control of single phase inverters. Pulse width modulation. Multiple pulse width modulation. Sinusoidal pulse with modulation modified sinusoidal pulse width modulation. Voltage control of 3 phases inverters.	Lecturing using traditional methods, Lecturing Method using ICT Tools	It deals with inverters and modulation techniques.	PPT presentation and assignments
IV.	**AC Voltage Converters:** Principle of ON-OFF control, Principle of Phase Control, phase transformer tap changer. **Cyclo Converters:** phase cyclo converter, 3 phase cyclo converter reduction of harmonics.	Lecturing using traditional methods, Lecturing Method using ICT Tools	It deals with AC voltage converters and Cyclo converters	PPT presentation and assignments
V.	Four quadrant operation on using SCR's. **Static Switches:** 1Phase AC switches, 3 phase AC switches, reversing switches. AC switches for bus transfer, Solid state relays	Lecturing using traditional methods, Lecturing Method using ICT Tools	It is also deals with the Static switches.	PPT presentation and assignments

List of References (Book / ICT / Weblinks):

1. Bhimra P. S.. **Power Electronics**. 4 edition. Khanna Publication.
2. Mithal G.K., Gupta Dr.Manisha. **Inductrial & Power Electronics** KhannaPublishers, 2007
3. Rashid Mohammed H. **Power Electronics Circuits Devices and Applications**. 3 edition Pearson publication.
4. Joseph Vithayathil. **Power Electronics Principles and Applications**. 1 edition Tata McGraw Hill.

Name of the faculty member & Signature:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-VI

Department: DECT **Class & Section: DECT** **Course Code : ET21601**

Name of the Faculty Member: Mrs.Dr.J.Supriya **Course Title: Management of Modern Organization (MMO)**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Management,** definition, meaning and nature; Universality of management, importance of management; Principles of management tasks; Functions & responsibilities of a manager; Integrated approach to management; Schools of management thought in brief; Scientific management, meaning, phases, objectives and criticisms.	Lecture Method using ICT Tools: Chalk and Board; Power Point Presentation using Projector, Chart Making.	CO1: **Understanding** key management concepts and their impact on the organization.	Quiz,SolvingProblems, Chart Preparation, PPT Presentations, Group Discussions and Tasks, Assignments.
II.	**Organization & organizational theories**; Nature & importance of organization; Types of organizations; Formal and informal organization; Organizational theory; Traditional theory — Neo — classical theory; Human relations approach; Behavioral science approach; Modern theory.	Lecture Method using ICT Tools: Chalk and Board; Power Point Presentation using Projector, Chart Making.	CO2: Demonstrate external and internal environment analyses of the organization.	Quiz,SolvingProblems, Chart Preparation, PPT Presentations, Group Discussions and Tasks, Assignments.
III.	**Directing-motivation**-definition work & motivation; Theories of motivation-Maslow-McClelland and Herzberg; Importance of motivation-motivational techniques; **Leadership**; Trait theory-behavioral theory-situational theory; Managerial	Lecture Method using ICT Tools: Chalk and Board; Power Point Presentation using Projector, Chart Making.	CO3: **Understand** management technologies development analyses.	Quiz,SolvingProblems, Chart Preparation, PPT Presentations, Group Discussions and Tasks, Assignments.

	grid-communication-significance-nature-process-types-barriers; Building of high morale.			
IV.	**Organizational structure** — steps in organizing; Determining the kind of structure; Creation of hierarchy of authority; Span of control; Delegation; Decentralization — Departmentation; Forms of organization structure — line organization — line & staff organization functionalOrganization; Conflict between line & staff; Remedial measures.	Lecture Method using ICT Tools: Chalk and Board; Power Point Presentation using Projector, Chart Making.	CO4: Use decision-making technologies analysis of the competitive environment sector.	Quiz,SolvingProblems, Chart Preparation, PPT Presentations, Group Discussions and Tasks, Assignments.
V.	**Board of directors**; Role; Powers; Duties; Liabilities; committees in management; Characteristics & Importance.	Lecture Method using ICT Tools: Chalk and Board; Power Point Presentation using Projector, Chart Making.	CO5: **Understanding** internal communication- Creation of hierarchy of authority.	Quiz,SolvingProblems, Chart Preparation,PPT Presentations, Group Discussions and Tasks, Assignments.

Listof References (Book/ICT/ Weblinks):

1. Singh B.P. & Chhabra T N., **Organization** theory **and behavior.**
2. L.M.Prasad, Organizational behavior.
3. Sharma and Gupta Sashi, **Business organization and management.**
4. Koontz and Donnel Organization, Essential of management.
5. Terry and Franklin, Principles of management.

Name of the faculty member & Signature: Dr J. Supriya

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - V

Department: Electronics & Communication Technology **Class & Section: DECT Sem VI** **Course Code: ET21602**

Name of the Faculty Member: Dr. Shakira Sultana **Course Title: Numerical Analysis**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	The Calculus of finite differences **:** Finite differences – difference formulae The difference table – to express any value of the function in terms of Leading terms and the leading difference of a difference table The Operator E Factorial notation Method of representing any polynomial in factorial notation Differences of zero – examples	Lecture Method using Chalk and board and PPT	**Identify** the theoretical and practical aspects of the use of numerical methods.	Seminar: Constructing their own examples of groups and subgroups,
II.	Interpolation**:** Interpolation with equal intervals – Newton – Gregory Forward & Backward interpolation formulae Interpolation with unequal intervals – divided differences(only definition) Newton's formula for unequal intervals (Newton's divided difference Interpolation formula Lagrange's interpolation formula for unequal intervals. Central difference interpolation formulae – Gauss interpolation formula Stirling's formula Bessel's formula	Lecture Method: using Chalk and board method.	**Demonstrate** understanding of common numerical methods and how they are used to obtain approximate solutions to otherwise intractable mathematical problems. .	Quiz and rapid review questions

III.	Numerical differentiation and integration**:** Determination of the first, second & third derivatives of the tabulated Function using Newton's forward & backward formulae – differentiation Using Central difference formulae Numerical integration using trapezoidal rule Simpson's1/3rdrule Simpson's 3/8th rule.(proof of these rules are not required)	Lecture Method: using Chalk and Board method	**Apply** numerical methods to obtain approximate solutions to mathematical problems..	Seminar and assignment.
IV.	**The solution of ordinary differential equations:** • isection method • egular – Falsi method • ewton – Raphson method • ewton's iterative formulae for finding the inverse • quare root • th root.	Lecture Method: using Chalk and Board method and PPT	**Develop** numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.	Cyclic test
V.	.**Numerical solution of ordinary differential equations:** Euler's method Modified Euler's method and Euler's improved method Range – Kutta II Method Range – Kutta IV methods.(Proof of these methods is not required) Simple Problems thereon.	Lecture Method: using Chalk and Board method and ICT tools	**Analyse** and evaluate the numerical solution of ordinary differential equations.	Group discussion

List of References (Book / ICT / Weblinks):

1. Dr. P.P. Gupta & G.S. Mallic. 2004. **Calculus of finite difference and numerical analysis.** 32nd edition. New Delhi: S Chand & Co.
2. Dr. B.S. Goel and Dr. S.K. Mit. 2013.**NumericalAnalysis.** 22nd edition. Meerut : Pragathi Prakashan.

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – VI

Department: Electronics & Communication Technology **Class & Section: DECT** **Course Code: ET21603**

Name of the Faculty Member: Shaik Abdul Khadar **Course Title: Linear Control Systems**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction:** ➢ Basic concepts Symbols, definition of closed loop and open loop system. ➢ Servo mechanisms. ➢ Concepts about linear systems. ➢ Transfer function and Block diagrams ➢ Discussion of transfer function and simple examples ➢ Block diagram reduction techniques ➢ Signal flow graphs.	Black Board, Solving Problems, Interactive Learning	**Understand** Concepts about linear systems.	Problem Solving, Assignment
II.	**Servo Components:** ➢ Introduction,. ➢ Linear approximation of non – linear systems. ➢ D.C and A.C servomotors. ➢ Tachometer. ➢ Amplidyne. ➢ Synchros.	Black Board, Solving Problems, PPT, Interactive Learning	**Understand** the mechanism of servo components.	PPT, Problem Solving, Assignment
III.	**Time Response Analysis:** ➢ Introduction, Standard test signals ➢ Time response of the first order systems to step and ramp input ➢ Time response of the second order systems to step input ➢ Steady state errors and error constants	Black Board, Solving Problems, Interactive Learning	**Analyze** the response of Standard signals.	Problem Solving, Assignment

	➢ Effect of adding a zero two a system.			
IV.	**Concepts of Stability & Algebraic criteria:** ➢ The concept of stability, necessary conditions for stability ➢ Hurwitz stability criterion ➢ Routh's stability criteria and application to linear feedback systems.	Black Board, Solving Problems, Interactive Learning	**Demonstrate** the stability of an Electrical, mechanical and other physical systems.	Problem Solving, Assignment
V.	**Frequency Response Analysis:** ➢ Correlation between time and frequency response of a second order systems ➢ Polar plots (Nyquistplots) ➢ Bode Plot	Black Board, Solving Problems, Interactive Learning	**Understand and analyze** Frequency response Analysis.	Problem Solving, Assignment

List of References (Book / ICT / Weblinks):

6. Kuo Banjamin C. Linear Control systems,7e, PHI. NewDelhi.
7. Jairath A. K., Problems and solutions of liner control system 3e, CBS publishers and distributors, New Delhi

Name of the faculty member & Signature: Shaik Abdul Khadar

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – VI

Department: Electronics & Communication Technology **Class & Section: DECT** **Course Code: ET21604**

Name of the Faculty Member: Dr Santhi Chebiyyam **Course Title: Image Processing**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**FUNDAMENTALS OF IMAGE PROCESSING** ➢ Introduction - Steps in image processing systems ➢ Image acquisition ➢ Sampling and Quantization ➢ Pixel relationships ➢ Color fundamentals and models - File Formats ➢ Image operations: Arithmetic, Geometric and Morphological.	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving,	**Understand** fundamentals of image processing, steps, Basic operations and color fundamentals.	Case Studies, PPT presentation and assignments
II.	**IMAGE ENHANCEMENT** ➢ Spatial Domain ➢ Gray level transformations ➢ Histogram processing ➢ Spatial filtering ➢ Smoothing and sharpening ➢ Frequency domain: Filtering in frequency domain - DFT, FFT, DCT ➢ Smoothing and sharpening filters, Homomorphic filtering	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving,	**Analyze** various image enhancements techniques both in spatial and frequency domain.	Case Studies, PPT presentation and assignments
III.	**IMAGE SEGMENTATION AND FEATURE ANALYSIS** ➢ Detection of discontinuities	Lecturing using traditional methods, Lecturing Method	**Perform** segmentation and feature extraction and analyze the concepts with examples.	Case Studies, PPT presentation and assignments

	➢ Edge operators ➢ Edge linking and boundary Detection — Thresholding ➢ Region based segmentation ➢ Morphological Watersheds - Motion segmentation ➢ Feature analysis and extraction	using ICT Tools, Interactive Learning Problem-Solving,		
IV.	**APPLICATIONS OF IMAGE PROCESSING** ➢ Image classification ➢ Image recognition ➢ Image understanding - Video motion analysis ➢ Image fusion ➢ Steganography ➢ Digital compositing ➢ Mosaics ➢ Color image processing	Lecturing Method using ICT Tools,	**Understand** the applications of image processing by classification, recognition and learn the basics of video motion.	Case Studies, PPT presentation and assignments
V.	**INTRODUCTION TO MATLAB** ➢ MATLAB Characteristics, features ➢ Need of MATLAB ➢ 5 Major parts of MATLAB ➢ MATLAB compiler ➢ Advantages & Disadvantages of MATLAB ➢ Basic MATLAB commands ➢ Vector matrix operations ➢ small programs, plotting — types	Lecturing Method using ICT Tools,	**Understand** the vector operated tool MATLAB and its basics, how image processing will be done using MATLAB operations.	Case Studies, PPT presentation and assignments

List of References (Book / ICT / Weblinks):

8. Rafael C.Gonzalez and Richard E.Woods, "Digital Image Processing", Third Edition, Pearson Education, 2009.
9. S.Sridhar, "Digital Image Processing", Oxford University Press, 2011.
10. Digital Image Processing with MATLAB and Lab VIEW, Elsevier, Vipula Singh, 2013
11. A.K.Jain," Fundamentals of Digital Image Processing", PHI, 1995

Name of the faculty member & Signature: Dr Santhi Chebiyyam

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER-VI

Department: Electronics & communication technology **Class & Section: DECT** **Course Code:ET21605A**

Name of the Faculty Member: Sandeep Reddy G **Course Title: IT &HARDWARE NETWORKING**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Motherboard characteristics, Choosing a Right Motherboard, Installation of new Motherboard, Study of CMOS ROM BIOS Upgrading PC BIOS. Introduction to Multi-core processors, Expansion Bus slots PCI-Express, SCSI, NIC, USB, FIREWARE (IEEE 1394).	Lecture Method using ICT Tools	Understand Motherboard infrastructure	Group discussion on use of real time hardware
II	**KEYBOARDS:** Keyboards switch types, Choosing a Key Board **Configuring MOUSE:** Different types of mouse, Construction of mouse, Working principle, Working principle of DMP, Inkjet and Laser Printers.	Lecture Method using ICT Tools	Know the key principles model of printers	Students analyzed Roles of printers in data presentation
III	**HDD:** Different capacities of HDD, working principle, Interfaces, Cables **DVD:** working principles, Disk layout, Introduction to Blue ray discs.	Lecture Method using ICT Tools	Understand the disk drive mechanism	Made a practical real time approach using real time assembling and disassembly.

IV.	**Flash memory devices:** Types, comparison, flash card readers, Trouble shooting of Optical Drives **Study of SMPS** – Block diagram, components and Working Principle, Power connectors and color coding of cables **Backup power supplies:** Types, Characteristics and Factors considered in Choosing UPS, Study of Memory modules, SDRAM, DDR-I, II & III RAM.	Lecture Method using ICT Tools	Know about hardware components	Students gave presentations on hardware components
V.	**Local Area Networking** – defining a network, types of network, **HUB:** types, working principle **SWITCH:** types, working principle and configuration **MODEM:** types, Characteristics, working principle and configuration. **ROUTERS:** types and classification of Routers.	Lecture Method using ICT Tools	Understand the working of interconnecting hardware	Created a small real physical network

List of References (Book/ICT/ Web links):

SUGGESTED READING

1. _Meyers Mike. 2012. **Managing and Troubleshooting PCs.** 4thEdition. New Delhi: McGraw Hill

ESSENTIAL READING

1. Mueller Scott, M. 2015. **Upgrading and Repairing PCs**. 22nd Edition. USA: Pearson Education
2. Thompson Robert and Thompson Fritch man, Bruce. 2009. **PC Hardware in a Nutshell.** 4th Edition. O'Reilly Media.
3. https://www.nsnam.org/docs/tutorial/html/building-topologies.html

Name of the faculty member & Signature: Mr Sandeep Reddy .G

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

EVEN SEMESTER

Department: BSC Electronics and Communication Technology **Class & Section: DECT** **Course Code:**ET21605B

Name of the Faculty Member: K.Padma **Course Title:** Data Communications and Network Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction to Computer Communications and Networking, • Introduction to Computer Network, Types of Computer Networks, • Network Addressing, Routing, Reliability, • Interoperability and Security, • Network Standards, The Telephone System and Data Communications.	Interactive Learning Lecturing using traditional methods .	Knowledge about various Networking types. Computing Network addressing. Routing types.	Interactive Quiz, PPT presentation for students and small assignments and solving.
II.	• Computer Applications and application protocols, • Computer Communications and Networking models, • Communication Service Methods and data transmission modes, • Analog and Digital Communications, Speed and capacity of a Communication Channel. • 5. Multiplexing and switching	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools	Knowledge about various application protocols such as FTP,POP,SMTP,DNS etc and Networking models. Gain proficiency various techniques of Multiplexing and Switching.	Regular Assessments group discussions and PPT presentations.

III.	• Network architecture and the OSI reference model. • Representing data as analog signals, representing data as digital signals. • Data rate and bandwidth reduction. • Digital Carrier Systems	Lecture based teaching using ICT tools, Lecturing using traditional methods. Interactive Classroom discussions.	Gain knowledge in Various layers of OSI model. Knowledge about Analog and Digital signals and problem solving for data rates and bandwidth.	Regular Assessments, Group discussions and assignments.
IV.	• The Physical and Electrical Characteristics of wire, • Copper media, fiber optic media, • Wireless Communications. • Introduction to data link Layer, • The logical link control and medium access control sub-layers.	Lecture-Based traditional Teaching. Lecture based teaching using ICT tools.	Students will gain knowledge about various types of cables, wires used in data transmissions. Knowledge about wireless communications including types of Satellites. Gain knowledge in MAC addressing.	Regular Assessments, PPT presentation and active learning through discussions. Learning through Seminars.
V.	• Introduction to Connectors • Trans receivers and media Convertors. • Trans receivers and media convertors, repeaters, network interference cards • PC cards, bridges • Switches, switches Vs Routers.	Lecture Method using ICT Tools Lecture-Based Teaching	Students will gain a deep understanding of concepts of Connectors, transreceivers and convertors and their usage. Detailed analysis about different Switches and Routers and their usage in Networks.	Regular Assessments, seminars and Group discussions on topics of choice.

List of References (Book / ICT / Weblinks):

1. Computer Communications and Networking Technologies, Michel A. Gallo and William H. Hancock, Thomson Brooks/Cole.
2. Data Communications and Networking - Behrouz A. Forouzan, Fourth Edition MC GRAW HILL EDUCATION, 2006.
3. Principles of Computer Networks and Communications, M. Barry Dumas, Morris Schwartz, Pearson.

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–

2024SEMESTER-IV

Department :MDS **Class &Section: AMDS** **Course Code: MDS20101**

Name of the Faculty Member: Mr.SUJEETH SUJAY

Course Title: COMMUNICATIVE COMPETENCE

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Features of Indian English • Correction of sentences, Structures • Tenses, ambiguity – idiomatic distortions • Informal conversation Vs Formal expression • Verbal and non-verbal communication • Barriers to effective communication - kinesics	Projector	• Student can apply the knowledge of communicative competence to express the ideas clearly	Viva Assignment
II.	• Oral, aural, Writing and reading • Word-Power - Vocabulary- Jargon- • Rate of speech, pitch, tone- Clarity of voice • Technical presentations • Types of presentation, video conferencing • Participation in meetings - chairing sessions	Projector White Board	• Student can apply the knowledge of communicative competence to express the ideas clearly	Group Disscusion
III.	• Formal and informal interviews • Ambiance and polemics • Interviewing in different settings and for different purposes • e.g., eliciting and giving information • Recruiting, performance appraisal • Group discussions, curriculum vitae	Projector White Board	• Student can apply the knowledge of communicative competence to express the ideas clearly	Survey

IV.	• Written communication • Differences between spoken and written communication • Features of effective writing such "as clarity, brevity • Appropriate tone clarity, balance etc.	Projector	• Student can apply the knowledge of communicative competence to express the ideas clearly	Seminars
V.	• Letter-writing business letters – • pro forma culture - format - style - effectiveness, promptness • Analysis of sample letters collected from industry -email, fax. • Technical Report writing-Business and Technical Reports • Types of reports - progress reports, routine reports, annual reports - format - • Analysis of sample reports from industry -Synopsis and thesis writing	Projector	• Student can apply the knowledge of communicative competence to express the ideas clearly	Assignment

List of References (Book/ICT/ Weblinks):

1. Rajendra Pal, J S KorlahaHi, Essentials of Business Communication, Sultan Chand & Sons, New Delhi.
2. Andrea J. Rutherford, Basic Communication Skills for Technology, Pearson Education Asia, Patparganj, New Delhi-92.
3. V. Prasad, Advanced Communication Skills, Atma Ram Publications, New Delhi.

Name of the faculty member &Signature: Mr. Sujeeth

Approved by Head of the Department: N R Rashmi Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-I

Department:M.Sc. Data Science **Class&Section: AMDS** **CourseCode:** MDS22104

Nameofthe FacultyMember: D.Banu Kranthi **CourseTitle:Artificial Intelligence**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction: • AI problems, Intelligent agents: Agents and Environments, • Concept of rationality, the nature of environments, • Structure of agents, Problem solving agents, • Problem formulation.	Projector	Defines Artificial Intelligence, Agents and Problem-Solving Agents	Viva Assignment
II.	Knowledge Representation & Reasons: • Knowledge - Based Agents, the Wumpus world. • Propositional Logic: Reasoning patterns in propositional logic - Resolution, • Forward & Backward Chaining. Inference in First order logic: • Propositional vs. first order inference.	projector	Explains about Knowledge Representation, Forward and Backward Chaining	Viva Assignment
III.	Searching: • Searching for solutions, uniformed search strategies - Depth limited search, • bi-direction search, Comparing uninformed search strategies. • Search with partial information (Heuristic search), TSP problem • best first search, A• search, Hill climbing, Simulated annealing search.	Projector	Differentiate between various Searching Techniques	Viva Assignment seminars

IV.	Constrain satisfaction problems: • Backtracking search for CSPs local search for constraint satisfaction problems. • Game Playing: Games, Min - Max algorithm, • Optimal decisions in multiplayer games, • Alpha-Beta pruning.	Projector	Apply various game playing Techniques	Viva Assignment seminars
V.	Planning: • Classical planning problem, Language of planning problem, • planning with state - space search, • forward state spare search, backward state space search, • Heuristics for state space search, 'Partial order planning Graphs, Expert Systems • Architecture of Expert Systems, Role of Expert System • Knowledge Acquisition, Heuristics	Projector	Explain about Heuristic, Forward and Backward state space search	Viva Assignment seminars

Listof References (Book/ICT/ Weblinks):

1. Stuart Russel, Peter Norvig, (2009), Artificial Intelligence - A Modem Approach,3rd Edition, Pearson Education.
2. Saroj Kaushik, Artificial Intelligence, Cengage Leaming India, First Edition, 2011.

Nameof the faculty member & Signature: D.Banu Kranthi

Approved by Head of the Department: N R Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023-2024

SEMESTER-I

Department: MDS **Class & Section: AMDS** **Course Code: MDS20103**

Name of the Faculty Member: DR. SHAKIRA SULTANA

Course Title: MATHEMATICS FOR DATA SCIENCE

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Vector Spaces: • General properties of Vector Space • Vector Subspaces - Algebra of subspaces • Linear Span-Linear sum of two subspaces • Linear Dependence and Linear Independence of vectors • Basis of a Vector Space - Finite Dimensional Vector Space	White Board	Construct mathematical arguments that relate to the study of introductory linear algebra.	Viva Assignment
II.	Linear Transformations: • Linear Transformations - Linear Operators Range and Null Spaces of a Linear Transformation • Rank and Nullity of Linear Transformation • Matrix of a Linear Transformation • The Rank of a Matrix and Matrix Inverses • Echelon form and normal form of matrix	White Board	Analyze finite and infinite dimensional vector spaces and subspaces over a field and their properties, including the basis structure of vector spaces.	Viva Assignment
III.	• Systems of Linear Equations - Consistency and in Consistency of Equations. (Only Problems.) • Eigen values and Eigenvectors • Cayley -Hamilton Theorem -Problems • Symmetric Matrices- Diagonalization of Symmetric Matrices • Quadratic Forms • Constrained Optimization • The Singular value decomposition	White Board	Use the definition and properties of linear transformations and matrices of linear transformations and change of basis, including kernel, range and isomorphism.	Assignment
IV.	Inner Product Spaces: • Euclidean and Unitary spaces Norm or length of a vector-Triangle inequality • Schwarz's inequality Orthogonality - Orthonormal set- Complete Orthonormal set	Ms teams White Board	Explain orthogonality on vector spaces and compute inner products and, including GramSchmidt orthogonalization.	Assignment

	• The Gram-Schmidt Orthogonalization Process			
V.	Elements of Number Theory: • Divisibility- Division algorithm- Euclid' algorithm • Properties of G.C. D • Primes - Fundamental theorem of Arithmetic. • Congruences - Properties • Linear Congruences - Solutions of Congruences • Fermat's theorem and its applications • Wilson's theorem and its applications Chinese remainder Theorem- Applications	White Board	Demonstrate knowledge and understanding of topics including, divisibility, prime numbers, congruence, Diophantine equations.	Viva Assignment

List of References (Book/ICT/ Web links):

1. Richard Bellman Introduction to Matrix Analysis Classics in Applied mathematics published by SIAM Society for Industrial and Applied Mathematics.
2. John B. Farleigh 2005 A First Course in Abstract Algebra by, published by Narosa Publishing House New Delhi. (For Units I & II)
3. N. Jacobson, 1980 Basic Algebra, Vols. I & II W.H. Freeman, (also published by Hindustan Publishing Company).
4. Shantinarayan & P.K.Mittal 2007 A Text Book of Modem Abstract Algebra, S. Chand & Co. New Delhi.
5. An Introduction to Theory of Numbers by Ivan Niven, Herbert S. Zuckennan - Wiley Eastern Limited (For Units IV & V)
6. Elementary Number theory and Applications by Thomas Koshy, 2nd edition, Academic Pres

Name of the faculty member & Signature: Dr. Shakira Sultana



Approved by Head of the Department: N R Rashmi



LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-I

Department: M.Sc. data science **Class & Section:AMDS** **Course Code: MDS20105**

Name of the Faculty Member: Ketana **Course Title: Statistics and Probability**

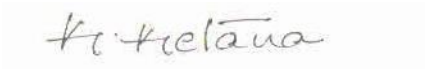
Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Concept on moments • Measures of skewness and Kurtosis. • Theorems on probability, conditional probability, and independent events. • Boole's inequality (only theorems) • Laws of total probability(theorem), Bayes' theorem and its applications.	White board	To examine different concepts of probability and apply them in real life applications.	Viva Assignment
II.	Random variables: • Random variables: Random variables and distribution functions • probability mass :function and probability density functions. • Moment inequalities - Holder, Jenson Inequalities. • Convergence of a sequence of random variables: convergence in distribution • convergence in probability almost sure convergence. (statements only)	White board	To make use of different concepts of random variables in understanding scope of different distributions.	Viva Assignment
III.	Mathematical 12Hrs Expectations: • Definition of expectations. Addition and multiplication theorems on expectations. • Variance of random variable using expectations. • Inequalities on Expectations: tchin's weak law of large numbers, • Kolmogorov strong law of large numbers, Central Limit Theorem.	White board	To utilize different concepts of expectations in understanding the characteristics of distributions.	Viva Assignment seminars

IV.	Discrete Probability distribution functions: • Bernoulli, Binomial, Poisson (Mean and variance, • properties and applications). • Negative Binomial, Geometric (Mean and variance, properties, and applications)	White board	To understand the relationships between different discrete distributions.	Viva Assignment seminars
V.	Continuous Probability distribution functions: • Rectangular, nonnal, log normal, exponential, Cauchy, Laplace, • Weibull, logarithmic and beta (two kinds), • gamma Pareto curves • (Mean and variance, properties, and applications without derivations).	White board	To explain the different characteristics of continuous distributions and understand which one to use for different cases.	Viva Assignment Practicals

Listof References (Book/ICT/ Weblinks):

1. Rohatgi V .Kand Saleh E, An Introduction to Probability and Statistics, 3rd edition, John Wiley & Sons Inc., New Jersey, 2015. ·
2. Mukhopadhyay P, Mathematical Statistics, Books and Allied (P) Ltd, Kolkata, 2015. SUGGESTED READING
3. Montgomery D.C and Runger G.C, Applied Statistics and Probability for Engineers, Wiley India, New Delhi, 2013.
4. Mood A.M, Graybill F.A and Boes D.C, Introduction to the Theory of Statistics, McGraw Hill, New Delhi, 2008.
5. Walpole R.E, Myers R.H, and Myers S.L, Probability and Statistics for Engineers and Scientists, Pearson, New Delhi, 2017.

Name of the faculty member & Signature: Ketana



Approved by Head of the Department: N R Rashmi



LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: M.Sc. DATA SCIENCE **Class & Section: AMDS** **Course Code: MDS22106**

Name of the Faculty Member: Ms. N R Rashmi **Course Title: PYTHON FOR DAT A SCIENCE**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Python Basics: Origin, Features, Statements and Syntax, Variable Assignment, Identifiers, Basic Style Guidelines, Memory Management. • Python Objects: Python Objects, Type Object, Null Object, Object Identity Comparison, type () and isinstance (). • Conditionals and Loops: if, else, elif statement, Conditional Expressions, while, for statement, range() BIF, break, continue, pass. • Numbers: Introduction, Integers, Double Precision Floating Point Numbers, Complex Numbers, Operators, BIFF, Other Numeric Types.	Projector Jupyter	Apply the concept of objects, variables, control structures, and numbers.	Seminars Assignment Viva Practicals
II.	• Sequences: Strings, Lists and Tuples- Sequences, Strings and Operators, Built-in Functions, String BIM. • Lists: Introduction, Operators, Built-in Functions, List Type BIM. Tuples- Introduction, Tuple Operators and BIF. • Dictionaries: Introduction, Mapping Type Operators, Mapping Type BIF, Mapping Type BIM, Dictionary Keys. • Set Types: Introduction, Set Type Operators, BIF and Methods	Projector Jupyter	Apply the concept of data structures for python	Viva Assignment Seminars Practicals
III.	Functions: Introduction, Calling Functions, Creating Functions, Return values, parameters, local and global scope, Function composition, recursion. • Modules: Modules, Namespaces,	Projector Jupyter	Explain Functions, Modules, and Packages.	Viva Assignment Seminars

	Importing Modules, Features of Module Import, BIF • Packages: NumPy, Pandas, Matplotlib			Practicals
IV.	• Files: Text files, reading and writing files, Command line arguments, errors and exceptions, Modules. • Exception: Introduction, Exceptions in Python, Detecting and Handling Exceptions, with, raise Statement • Object Oriented Programming: Classes and Objects, Functions, Methods, Working with instances, Sub-classing and Derivation, Inheritance, Multiple Inheritance, BIF for Classes, Instances and Other Objects.	Projector Jupyter	Explain Files, Exceptions and OOPs concepts	Viva Assignment Seminars Practicals
V.	• GUI Programming: Tkinter and Python programming, Tkinter examples- Label, Button, Checkbutton, Entry, Canvas, Listbox, Message, Radio button, Scale. • GUI Programming: Menu, Menubutton, Scrollbar, Spinbox, Slider, Dialogs, Text, tkMessageBox, PanedWindow, TopLevel, Frame.	Projector Jupyter	Apply the concepts of GUI programming	Viva Assignment Practicals Seminars

List of References (Book / ICT / Weblinks):

1. Chun, Wesley J. Core Python Programming. 2nd Edition. USA: Pearson Education (Unit I, II, III, IV)
2. Chun, Wesley J. Core Python Applications Programming. 3rd Edition. USA: Pearson Education (Unit V)
3. Allen B. Downey Think Python: How to Think like a Computer Scientist. 2nd edition, Updated for Python 3, Shroff/O 'Reilly Publishers, 2016.

Name of the faculty member & Signature: Ms. N R Rashmi Rashmi

Approved by Head of the Department: N R Rashmi Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: M.Sc.Data Science **Class & Section: AMDS** **Course Code: MDS20107**

Name of the Faculty Member: N ASHFAQ **Course Title:** ADVANCED DATABASES

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction to Relational Database Model: Structure of Relational Database, Database Schema, Keys, Schema Diagrams, Relational Query Languages, Relational Operations. • Database design and the E-R Model: Overview of the Design Process, the Entity-Relationship model, Constraints, Removing Redundant Attributes in Entity sets, Entity-Relationship Diagrams, Reduction to relational schemas, Entity-Relationship design issues, Extended E-R features - Specialization and generalization.	Projector SQL	Design a data base for a system using E-R data model and Relational Data model.	Viva Assignment
II.	• Relational Database Design: Features of Good Relational Designs, Atomic Domains and First Normal Fonn, Decomposition using Functional Dependencies, Functional-Dependency Theory, Decomposition using Multi-valued Dependencies, More Normal Forms, Database-Design Process and Modeling Temporal Data • Indexing and Hashing: Basic concepts, Ordered Indices, B+ tree index files, B+ tree extensions, Multiple-key access, Static Hashing, Dynamic Hashing,	Projector SQL	Design logical database with all integrity constraints over relations.	Viva Assignment

	Comparison of ordered Indexing and Hashing, Bitmap indices, Index definition.			
III.	• Transactions: Transaction Concept, a Simple Transaction Model, Storage Structure, Transaction Atomicity and Durability, Transaction Isolation, Serializability, Transaction Isolation Levels, Implementation of Isolation Levels, • Dntnbnsc System Architecture: Centralized and Client - Server Architectures, Server System Architectures, Parallel Systems, Distributed Systems, Network Types,	Projector SQL	Apply normalization steps in database design and removal of data anomalies.	Viva Assignment seminars
IV.	• Parallel Database: Introduction, 1/0 Parallelism, Inter query Parallelism, Intra query Parallelism, · Intra Operation Parallelism, Interoperation Parallelism, Query Optimization; Design of Parallel Systems, Parallelism on Multi Core Processor. • Distributed Databases: Homogeneous and Heterogeneous Databases, Distributed Data Storage, Distributed Transactions, Commit Protocols. • NOSQL: Value of Relational Databases, impedance mismatch, Application, and Integration Databases, Attack of the clusters, Emergence ofNoSQL . • Aggregate Data Models: Aggregates, Key-Value and Document Data Models, Column Family Stores.	Projector SQL	Extend the characteristics of database transactions.	Viva Assignment seminars
V.	• More Details on Data Models: Relationships, Graph Databases, Schema less Databases, Materialized Views, Modeling for Data Access. • Distributed Models: Single Server, Sharding, Master-Slave Replication, and Peer to Peer Replication. • Consistency: Update Consistency, Read Consistency,	Projector SQL	Distinguish the different types of NoSQL databases	Viva Assignment Practicals

	Relaxing Consistency, Relaxing Durability. • Key-Value Databases: Introduction to Key Value Store, Features, Structure of Data, Scaling • Document Database: Introduction, Features. Column Family Stores-Introduction, feature. • Graph Databases: Introduction, Features.			

List of References (Book / ICT / Weblinks):

1. Database System Concepts by Abraham Silberschatz, Henry F.korth, S.Sudarshan, McGrawHill, Sixth Edition, 2011. (Units I -III, IV).
2. NoSQL Distilled by Pramod J Sadalage, Martin Fowler, Addison-Wesley Professional; I st edition, 2012. (Unit- IV, V)

Name of the faculty member & Signature: N ASHFAQ

N. Ashfaq

Approved by Head of the Department: N R Rashmi

Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-II

Department:MSC Data Science **Class&Section: AMDS** **CourseCode: MDS20201**

Nameof FacultyMember: Ms.Farheen **CourseTitle:HUMAN VALVES & PROFESSIONAL ETHICS**

Unit	Topicsto becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Ethics • Reasons to have Ethics for Life • Accepted Norms and Counter Values • Happiness as life Goal • Human Context-self and another	Projector	The student will learn about the human values and professional ethics.	Viva Assignment
II.	Towards a new society • What is true society • Moral problem of the society • Social desire, social fear, social science, social indifference • Values revealed and live-in various religions-practicing religious harmony • Eradication of social evil-towards a new society	projector	The student will learn about the human values and professional ethics.	Viva Assignment
III.	Gender sensitization • Why we study it • Socialization-making women andmen • Being together as equals-through the lens of gender • Knowledge through the lens of gender • Gender spectrum-beyond the binary • Just relationship-being together as equals	White board	The student will learn about the human values and professional ethics.	Viva Assignment seminars
IV.	Professional ethics • Ethics, Professional Ethics, Environmental Ethics • Ethical Situation, Current Ethical	Projector	The student will learn about the human values and professional ethics.	Viva Assignment seminars

	Issues • Values, Policies and Organization Culture • Moral Situation, Rights and Duties, Codes of Ethics, Their Limitation			
V.	Ethics in science • Professional Research in Academia and Industry, Scientific fraud • Plagiarism, Conflict oflnterest • Student-Advisor relationship, Intellectual property and Patents • Accountability and Institutional Practices	White board	The student will learn about the human values and professional ethics.	Viva Assignment Practicals

Listof References (Book/ICT/ Weblinks):

1. Human Values - Development Programme – AIACHE
2. Emotional Intelligence by Daniel Goleman •
3. S.S. Dara and D.D. Mishra 2010.Environmental Chemistry and Pollution Control New Delhi: S. Chand Publisher.
4. Jeffery Kovac, Ethics in Science, Accountability in Research 22, 312, 2015.
5. A.Suneetha, B.Uma, D. Vasanta, M. Rama, N. Vasundha, A. Raheed, G, Shamala, D. Sreenivas and S. Tharu 201. Towards a World of Equals: A Bilingual Text on Gender. Hyderabad: Telugu Akademi

Name of the faculty member & Signature: Ms.Farheen

Approved by Head of the Department: N R Rashmi Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: MSC DATA SCIENCE **Class & Section: AMDS** **Course Code: MDS20205**

Name of the Faculty Member:P ANJUSREE

Course Title: Regression Analysis And Statistical Inference

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Theory of estimation**:** ● Population, sample, statistic, parameter, sampling distribution, standard error. ● Criteria for good estimators. Maximum likelihood function and sufficiency conditions. ●Statistical hypothesis, null and alternative hypothesis, ●test of significance, types of errors, level of significance, power of the test.	White Board	To explain the concepts of estimation and testing of hypothesis which used for drawing the statistical inference	Viva Assignment
II.	**Large Sample Test:** ●Test of significance for single proportion and difference of proportions.. difference of standard deviations. difference of correlation coefficients. **Small Sample Test Procedures:** ● t-test for single mean, difference of means (for independent samples). ●F- test for testing the significance of two population variances. ●ANOV A introduction and one -way classification of data with equal and unequal number of observations. ANOV A two - way classification of data. ●Chi - square test for goodness of fit and independence of attributes.	R studio Excel projector	To apply the idea of sampling distributions of different statistics in testing of hypothesis.	Viva Assignment
III.	**Simple Linear Regression:** ●Introduction to regression analysis: Modelling a response, ●overview and applications of regression analysis, ●major steps in regression analysis. **Simple linear regression (Two variables):**	White Board	To develop a deeper understanding of simple linear regression and test for the quality of its fit.	Viva Assignment seminars

	● Assumptions, estimation, and properties of regression coefficients, ● measuring the quality of the fit.			
IV.	**Multiple Linear Regression:** ● Multiple linear regression model: assumptions, ● Ordinary least square estimation of regression coefficients, ● Interpretation and properties of regression coefficient, significance, ● Confidence intervals of regression coefficients. **Criteria for Model Selection:** ● Mean Square error criteria, R2 and R_7 '2 criteria for model selection.	White Board	Interpret multiple linear regression model parameters and to understand the model selection.	Viva Assignment seminars
V.	**Residual Analysis:** ●Residual analysis, Departures from underlying assumptions. ● Diagnostics and remedies. **Non - Linear Regression:** ● Introduction to nonlinear regression, Least squares in the nonlinear case and estimation of parameters ● Prediction and residual analysis.	R studio	To estimate the effect of outliers and to understand the concepts of non - linear regression.	Viva Assignment Practicals

List of References (Book / ICT / Weblinks):

1. D.C Montgomery, E. A. Peck and G. G Vining, Introduction to Linear Regression Analysis, John Wiley and Sons, Inc. NY, 2003.
2. Norman R Draper and Harry Smith, Applied Regression Analysis, 3rd Ed., John Wiley and Sons, Inc. 1998.

Name of the faculty member & Signature: P Anju Sree

Approved by Head of the Department: N R Rashmi Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-II

Department:MSC DATA SCIENCE **Class&Section: AMDS** **CourseCode: MDS22203**

Nameofthe FacultyMember: Ms.K KETHANA **CourseTitle: MULTIVARIATE ANALYSIS & STOCHASTIC PROCESS**

Unit	Topicsto becovered	Teaching Pedagogy	Learning Outcome	Skill DevelopmentActivity
I.	Introduction: Bivariate normal distribution its probability density function, • properties, Marginal and conditional probability density function. • Basic concepts on multivariate variable. • Multivariate normal distribution, Marginal, joint, and Conditional distribution. • Expectation and V ariance-Cov~ance matrix. Independence of random vectors.	White board MS Teams	Understand the basic concepts of multivariate distributions.	Viva Assignment
II.	• Multinomial distribution. Sample mean vector and its distribution. • Independence of sub vectors and sphericity test. Likelihood ratio tests. • Multivariate analysis of variance (MAN OVA) of one and two- way • classified data. • Hotelling's T2 and Mahalanobis D2 statistics. • Rao's U statistics and its distribution.	White board MS Teams	Summarize and interpret MANOV A techniques.	Viva Assignment
III.	• Probabilities of misclassification and their estimation. • Multidimensional Scaling - matrix and non - matrix data • Canonical variables and canonical correlations definition, estimation, • computations. • Multivariate data techniques, Multidimensional Discriminant Analysis,	White board MS Teams	Understand the · principles and characteristics of the multivariate data analysis techniques.	Viva Assignment quiz

	• PATH analysis			
IV.	• Markov chain - different classifications of states and chains • Chapman - Kolmogorov's Equations. • Classification of States, Recurrent and Transient States - Transient Markov Chain, Random Walk and Gambler's Ruin Problem. • Continuous Time Markov Process. • Poisson Processes, Birth and Death Processes, Kolmogorov's Differential Equations, Applications.	White board MS Teams	Describe a Markov chain and its transition matrix	Viva Assignment quiz
V.	Discrete Parameter Stochastic Process. • Auto-covariance and Auto-correlation functions and their properties. • Moving Average, Autoregressive, Autoregressive Moving Average. • Autoregressive Integrated Moving Average Processes. • Basic ideas of residual analysis, diagnostic checking, forecasting.	White board MS Teams	Determine the stationary distributions of a Markov chain	Viva Assignment

Listof References (Book/ICT/ Weblinks): 1. Anderson, T.W. 2009. An Introduction to Multivariate Statistical Analysis, 3rd Edition, John Wiley.
2. Everitt B, Hothom T, 2011. An Introduction to Applied Multivariate Analysis with R, Springer.
3. Barry J. Babin, Hair, Rolph E Anderson, and William C. Blac, 2013, Multivariate Data Analysis, Pearson New International Edition,
4. Stochastic Processes, R.G Gallager, Cambridge University Press, 2013.

Name of the faculty member & Signature: Ms K ketana

Approved by Head of the Department: N R Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-II

Department:MSC Data Science **Class&Section:AMDS** **CourseCode: MDS22207**

Name of FacultyMember: Dr.G.Anitha Mary **CourseTitle:MACHINE LEARNING**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Data and Data Pre-processing . • Data, Basic Data Types - Nominal, Ordinal, interval, Ratio scaled •Data Cleaning - Missing Values, Noisy Data, Outlier Detection, Correction and Removal, • Data Cleaning as a Process, Data Imputation Techniques • Data Integration, Data Transformation, •Data Reduction - Attribute Subset Selection, Numerosity Reduction. •Association Rule Learning - Apriori, Eclat	Projector Jupyter notebook	Define data and preprocessing problem.	Viva Weekly test
II.	Introduction to Machine Leaming • Overview-Working, Features, Need for Machine Leaming, History • Artificial Intelligence verses Machine Leaming • Applications of Machine Learning • Machine Leaming Lifecycle • Design of a Leaming System • Types of Machine Leaming • Issues in Machine Leaming	Projector Jupyter notebook	Describe machine learning concepts	Viva Assignment
III.	Supenriled Learning - I • Simple Linear Regression • Multiple Linear Regression, Polynomial Regression • Ridge Regression • Lasso Regression • Evaluating Regression Models, Model Selection • Bagging, Boosting, Ensemble Methods	Projector Jupyter notebook	illustrate regression tasks	Viva Assignment seminars
IV.	Supervised Learning – II • Classification, Classification verses Regression • Logistic Regression • K-Nearest Neighbor (K.NN) • Support Vector Machine Regression and Classification • Decision Tree Regression.and Classification .	Projector Jupyter notebook	illustrate classification tasks	Viva Assignment seminars

	• Random Forest Regression and Classification • Narve Bayes Classifier • Evaluating Classification Models			
V.	Unsupen-ised Learning • Clustering • K-Means Clustering • Expect-ation-Maxi-mization Algorithm • Hierarchical Clustering Methods • Density-Based Clustering • Dimensionality Reduction-PCA • Collaborative Filtering-Recommendation systems	Projector Jupyter notebook	Explain unsupervised learning concepts	Viva Assignment Practicals

Listof References (Book/ICT/ Weblinks):

1. Jiawei Han, Micheline Kamber, Jian Pei (2012), Data Mining: Concepts and Techniques, 3rd Edition, Elsevier, United States of America. India
2. Christopher Bishop, "Pattern Reoognition and Machine Leaming" Springer, 2007.
3. Kevin P. Murphy, "Machine Learning: A Probabilistic Perspective", MIT Press, 2012.
4. Ethem Alpaydin, "Introduction to Machine Learning", MIT Press, Third Edition 2014.
5. Tom Mitchell, "Machine Learning", McGraw-Hill, 1997.

Name of the faculty member & Signature: Dr.G.Anitha Mary

Approved by Head of the Department: N R Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-II

Department: MSC DATASCIENCE **Class&Section: AMDS** **CourseCode: MDS22206**

Nameofthe FacultyMember: N R RASHMI **CourseTitle : BIG DATA ANALYTICS THROUGH HADOOP**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	History of Data Management-Evolution of Big Data • Structuring Big Data, Elements of Big Data • Big Data Analytics, Careers and Future of Big Data • Importance and Scope of Big Data Jobs, Opportunities • Skill assessment, Roles and Responsibilities in Big Data Jobs • Basic Educational and Technological Requirements for Big Data Jobs • Tools supporting Big Data	Projector Hadoop	Able to understand the Big Data concepts in real time scenario.	Viva Assignment seminars
II.	Undentanding Hadoop Ecosystem: • Introducing Hadoop • Hadoop Ecosystem • Difference Between Client Server and Distributed OS • Hadoop Distributed File System • MapReduce, Hadoop Ya~ futroducing HBase • Combining HBase and HDFS • Hive, Pig and Pig Latin, Sqoop, Zookeeper, Flume and Oozie Undentanding MapReduce Fundamentals and HBase: • 'The MapReduce Framework • Techniques to Optimiz.e MapReduce Jobs • Uses of MapR.educe • Characteristics of HBase	Projector Hadoop	Understand the architecture ofHadoop and apply map reduce concepts.	Viva Assignment seminars
III.	Under, trading Hadoop YARN Architecture: • Background and Advantages of YARN • YARN Architecture • Working of YARN, YARN Schedulers	Projector Hadoop	Understanding Hadoop YARN Architecture	Viva Assignment seminars

	• YARN Configurations • YARN Commands • YARN Containers			
IV.	Exploring HIVE: • Introducing Hive • Getting started with Hive • Data Types and Built-in functions in Hive • HiveDDL • Data manipulation in Hive • Data Retrieval Queries • Using Joins in Hive	Projector Hadoop	Understand and exploring IDVE.	Viva Assignment seminars
V.	Analyzing Data with Pig • Introducing Pig, Running Pig • Getting Started with Pig Latin • Working with Operators in Pig • Working with Functions in Pig · • Debugging Pig, Error Handling in Pig _	Projector Hadoop	Analyzing Data with PIG.	Viva Assignment Practicals

Listof References (Book/ICT/ Weblinks):

1. Chuck Lam, Hadoop in Action MANNING Publication.
2. Dirk deRoos, Paul C.Zikopoulos, Roman B._Melnyk,Bruce Brown, Rafael Coss,Hadoop forDummies

Nameof the faculty member & Signature: **N R Rashmi** Rashmi

Approved by Head of the Department: **N R Rashmi** Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: MSC DATA SCIENCE **Class & Section: AMDS** **Course Code: MDS22204B**

Name of the Faculty Member: N ASHFAQ **Course Title: Social Media Analytics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Social Media and Its Importance • Various Social Media Platforms • Social Media Mining • Challenges for Social Media Mining • Social Media Mining Techniques	Projector	Identify various platforms in social media.	JAM
II.	• Types of Social media Networks • Generic process of social media mining • Preprocessing and cleaning in R • Data Modeling Steps • Sentiment Analysis • Steps in sentiment analysis • Business Case	Projector	Understand processing of social media.	Viva Assignment
III.	Twitter: • Twitter and its importance • Understanding Twitters APIs • Collecting Twitter user features from APIs • Twitter vocabulary • Twitter sentiment analysis: Business Case	Projector	Compare differences between twitter and other social media networks.	Viva Assignment seminars
IV.	Facebook: • Social network analysis and visualization • Getting face book page data • Trend analysis • Spam detection • Business Case Insta gram: • Access Data from	Projector	Analyze Facebook information and write business cases.	Group Discussion

	• Building a dataset • Popular personalities • Finding most popular destination • Clustering the pictures • Recommendations to the users,Business case			
V.	More Social Media Websites: • Searching on Social Media, Accessing • Product Reviews From Sites 3 • Retrieving Data From Wikipedia, • Accessing Data From Quora 3 • Mapping Solutions From Google Maps 2 • Professional Network Data From Linkedln 2 • Getting Blogger data	Projector	Differentiate social media networks Instagram (i.e.,usage of instagram and data processing techniques also they will get idea)	Viva Assignment Practicals

List of References (Book / ICT / Weblinks):

1. Ravindran, Sharan Kumar. Garg, Vikram. 2015. Mastering Social Media Mining with R.
2. Social Media Data Mining and Analytics, Gabor Szabo, Gungor Polatkan, P. Oscar Boykin · 2018 Wiley publishers

Name of the faculty member & Signature: N ASHFAQ



Approved by Head of the Department: N R Rashmi



LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the AcademicYear2023–2024

SEMESTER-II

Department: MSC DATA SCIENCE **Class&Section: AMDS** **Course Code: MDS22204A**

Name of the Faculty Member: BANU KRANTHI **Course Title: Cloud Computing**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Cloud Computing • Cloud Computing in a Nutshell • System Models for Distributed and Cloud Computing • Roots of Cloud Computing • Grid and Cloud • Layers and Types of Clouds • Desired Features of a Cloud • Basic Principles of Cloud Computing, Challenges and Risks • Service Models	Projector	Illustrate the main concepts, features, challenges, and risks in cloud computing.	Viva Assignment
II.	• Virtual Machines and Virtualization of Clusters and Data Centers • Virtualization of CPU, Memory, and I/O Devices • Virtual Clusters and Resource Management, Virtualization • Data-Centre Automation • VMware - VMware products-VMware Features • Microsoft Virtual Server Features of Microsoft Virtual Server	R studio Excel projector	Describe virtualization of clusters and Data centers, virtual clusters, and resource management.	Group Discussion
III.	Cloud computing architectures over Virtualized Data Centres • Data-Centre design and Interconnection networks • Architectural Design of Compute and Storage Clouds • Public Cloud Platforms, GAE, A WS, Azure • Inter-cloud Resource Management	Projector	Identify the architectures over virtualized data centers.	Assignment Seminars

IV.	Cloud Security and Trust Management, Data Security in the cloud • An Introduction to the Idea of Data Security • The Current State of Data Security in the Cloud • Homo Sapiens and Digital Information • The Cloud, Digital Identity, and Data Security • Content Level Security-Pros and Cons	Projector	Explain the core issues of cloud computing such as cloud security and trust management.	Seminars
V.	• Cloud Programming and Software Environments: • Features of Cloud and Grid Platforms Parallel and distributed Programming Paradigms • Programming Support of Google App Engine • Programming on Amazon A WS and Microsoft Azure • Emerging Cloud Software Environments	R studio	Compare various cloud programming and software environments.	Viva Assignment

List of References (Book/ICT/ Weblinks):

1. Raluca Ada Popa, Catherine M.S. Redfield, NickolaiZeldovich, and HariBalakrishnan. CryptDB: Protecting Confidentiality with encrypted Query Processing. 23rd ACM
2. Symposium on Operating Systems Principles (SOSP 2011), Cascais, Portugal. Craig Gentry. September A Fully Homomorhic Encryption Scheme.2009.

Name of the faculty member & Signature: Banu Kranti D. Banu

Approved by Head of the Department: N R Rashmi Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-III

Department: M.Sc. data science **Class & Section: NMDS** **Course Code: MDS21301**

Name of the Faculty Member: Ms. Farheen **Course Title: Soft Skills**

Unit	Topics To be covered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Goal Setting • Meaning of goal and goal setting short. • Medium and long term goal setting • Importance of goal setting-Choices/Selection of setting goals-Steps for goal • setting-SMART goals	projector	The student will be able to develop effective communication skills, presentation skills, inter- personal skills, team management skills, and leadership skills.	Viva Assignment
II.	Time Management • What and why of time management • Necessity and benefits of time management-tools of time management • How to manage time wisely	projector	The student will be able to develop effective communication skills, presentation skills, inter- personal skills, team management skills, and leadership skills.	Viva Assignment
III.	Etiquettes • Get the first impression well. • Greet others & introduce yourself. • Body language- speak well • Dressing sense- appeals to others	projector	The student will be able to develop effective communication skills, presentation skills, inter- personal skills, team management skills, and leadership skills.	Viva Assignment seminars
IV.	Group Discussion Skills • Leadership Skills, Interpersonal Skills. • Persuasive Skills, Problem Solving Skills. • Conceptualization Skills. • Initiating the discussion, listening to others point of view.	projector	The student will be able to develop effective communication skills, presentation skills, inter- personal skills, team management skills, and leadership skills.	Viva Assignment seminars

V.	Interview Skills • Creating first impression in an interview, walk up to interview room, • How to approach the interview members, sitting posture in the interview room, • body language	projector	The student will be able to develop effective communication skills, presentation skills, inter- personal skills, team management skills, and leadership skills.	Viva Assignment

List Of References (Book/ICT/ Weblinks):

ESSENTIAL READING

1. Atkinson Frank.2011. Get More Out of Your Day.India: Vik as Books Pri ✓ ate .. Limited. (Unit I in Pg 17-29, Unit II in Pg 5-16 and Pg 73 -118)
2. 3. Butterfield Jeff. Soft Skills for Everyone. India:Cengage Learning. (Unit III in Pg 177-204 and Pg 336 -339, Unit IV in Pg 357-373)
3. Philips R. Hunsaker. Training in Interpersonal Skills. New Delhi:McGraw Hill. (Unit Vin Pg 176-214)

Name of the faculty member & Signature: Ms. Farheen

Approved by Head of the Department: Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-III

Department : MSc DATA SCIENCE **Class & Section: NMDS** **CourseCode: MDS23303**

Name of the Faculty Member: Ms.K.ketana **CourseTitle: TIME SERIES ANALYSIS AND FORECASTING TECHNIQUES**

Unit	Topics to becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Growth Models: • Modified Exponential curve, Gompertz curve, Logistic curve, and their fitting. Measurement of cyclic Variations: • Harmonic analysis, Auto - regression series - Markoff and Yule's series .• Periodogram and correlogram analysis.	White board	Identifying linear, quadratic, Gompertz and Logistic models where appropriate and describe models for seasonal variation. Also explains the methods used to study cyclic components.	Viva Assignment
II.	Measurement of irregular Component: • Variant difference method. 2 Exponential Smoothing Methods: • Trend adjusted exponential smoothing. Double and triple exponential smoothing. • Wm ten's method. Brown's one parameter adaptive method. • Box -Jenkin's three parameter smoothing, • Harrison's Harmonic smoothing methods and Tracking signal.	White board	Estimate seasonal effects of time-series data by using Winten's method, Brown's, Box - Jenkins three-parameter exponential smoothing method.	Viva Assignment
III.	• Box - Jenkins Time Series Methods: Moving average, Autoregressive (AR). • ARMA and AR integrated MA (ARIMA) models. • Estimation of ARIMA model parameters forecasting with ARIMA models.	White board	To utilize AR, ARIMA models for time series data and to forecast the data using these models.	Viva Assignment seminars

IV.	• SARIMA (Seasonal Autoregressive Integrated Moving Average method) • Akaike~s Information Criterion (AIC) • Bayesian Information Criterion (BIC) • Root Mean Square Error (RMSE) • Diagnostic checking of models. • Analysis of residuals.	White board MS Teams	To interpret SARIMA model and criterion used to study them.	Weekly Test
V.	• Stationary time series. Autocovariance and autocorrelation functions. • Regression models for general time series data. • Detecting autocorrelation - Durbin - Watson test. • Estimating the parameters in time series regression models. • ARCH and GARCH modeling of non - linear time series data.	White board	To explain and verify mathematical considerations for analyzing time series, including concepts of stationarity, autocovariance, autocorrelation.	Viva Assignment

List Of References (Book/ICT/ Weblinks):

1.Box, G.E.P and Jenkins, GM: Time Series Analysis Forecasting and Control~ Holden Day, San Francisco.

2. Anderson, T.W.: The Statistical Analysis of Time series, John wiley, New York.

3. Thomopoulos, N.T.: Applied Forecasting methods. EngleWood cliffs, N.J, Prentice Hall.

Name of the faculty member & Signature: Ms.K.ketana

Approved by Head of the Department: Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-III

Department:M.Sc. Data Science **Class & Section: AMDS** **Course Code:** MDS23306

Nameofthe FacultyMember: N. Ashfaq **CourseTitle: Deep Learning**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction: • Historical context and motivation for deep learning • Supervised Learning Algorithms • Unsupervised Learning Algorithms • Optimizing logistic classifier using gradient descent • Stochastic gradient descent, momentum, and adaptive subgradient method.	Projector	Learn the fundamental principles of deep learning.	Viva Assignment
II.	Neural Networks • Feed forward neural networks • Deep Networks • Architecture Design • Regularizing a Deep network • Model exploration and hyper parameter tuning.	projector	Identify the deep learning algorithms for various types of learning tasks in various domains.	Viva Assignment
III.	Convolution Neural Networks: • ·Introduction to convolution neural networks • M~tivation,Pooling • Convolution and Pooling as an Infinitely strong prior Variants of the basic Convolution function • Structured outputs, Efficient ConvolutionAlgorithms	Projector	To explore Deep learning techniques and various feature extraction strategies.	Viva Assignment seminars

IV.	Sequence Modeling : Recurrent Nets and Recursive Nets: • Unfolding computational graphs, recurrent neural networks(RNNs) • Bidirectional RNNs • Encoder-Decoder sequence to sequence architectures • Deep Recurrent networks • Recursive Networks	Projector	To mathematically understand the deep learning approaches and paradigms.	Viva Assignment seminars
V.	Auto encoders: • Under complete auto encoders • Regularized auto encoders, sparse autoencoders, denoising auto encoders • Representational power, layer, size, and depth of auto encoders • Stochastic encoders and decoders • Application of auto encoders	Projector	Implement deep learning algorithms and solve real-world problems.	Viva Assignment seminars

List of References (Book/ICT/ Weblinks):

1. Deep Learning by Ian Goodfellow, YoshuaBengio. Aaron Courville. The MIT Press, 2016

Name of the faculty member & Signature: N.Ashfaq

Approved by Head of the Department Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-III

Department : MSc DATA SCIENCE **Class & Section: NMDS** **CourseCode: MDS23303**

Name of the Faculty Member: Dr. Santhi **Course Title: INTERNET OF THINGS**

Unit	Topics to becovered	Teaching Pedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction and Concepts • Introduction to Internet of Things - Definition and Characteristics of loT • Physical Design ofloT, Logical Design ofloT • IoT Enabling Technologies • IoT Levels and Deployment Templates, Domain Specific lo Ts - Home Automation Cities, Environment, Agriculture, Industry, health, and Lifestyle.	White board, Projector	Identify the importance of IOT and its applications..	Viva Assignment
II.	loT and M2M • loT and M2M- Introduction to M2M, Difference between loT and M2M • SDN and NFV for loT IoT System Management with Netconf'..Yang • Need for IoT Systems Management, SNMP • Network Operator requirements, NETCONF,YANG • IoT Systems Management with NETCONF-YANG	White board, Projector	Differentiate between JOT and M2M, SDN and NFV	Viva Assignment
III.	foT Design Methodology • o.design methodology • 10Tle vel 1,2,3 parameters forecasting with ARIMA models. • · l0T level 4,5,6	White board	Apply IOT design methodology	Viva Assignment seminars

	• I0T level 7,8,9, • Weather monitoring system case study			
IV.	loT Physical Devices and Endpoints • Building blocks of IoT device • Raspberry Pi, About the .Board, Linux on Raspberry Pi, RaspberryPi Interfaces • Programming RaspberryPi with Python • Other loT devices	White board, Projector	Understand building of lOT devices and Raspberry Pl	Weekly Test
V.	loT Physical Servers and Cloud Offerings • Introduction to Cloud Storage models andCommunication API • WAMP-AutoBahn for IoT, Xively CloudforloT • Python web application framework-Django • Case study on IOT applications	Projector	Explain working of application of JOT.	Viva Assignment, Practicals

List of References (Book/ICT/ Weblinks):

I. Bahga, Arshdeep and Madisetti, Vijay. 2015. Internet of Things - A Hands-on Approach. Universities Press ISBN:9788173719547

2. Richardson, Matt and Wallace, Shawn. 2014. Getting Started with RaspberryPi. O'Reilly (SPD). ISBN: 9789350239759

3. Internet of Things Projects with Esp32: Build exciting and powerful IoT projects, 1st Edition, by AgusKurniawan

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Name of the faculty member & Signature: Dr. Santhi

Approved by Head of the Department: Rathmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-III

Department:MSC DATA SCIENCE **Class & Section: NMDS** **CourseCode: MDS21307**

Nameofthe FacultyMember: Dr G Anitha Mary **CourseTitle:NATURAL LANGUAGE PROCESSING**

Unit	Topics To be covered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I	• Introduction to NLP, Background,and overview, • NLP Applications -NLP hard Ambiguity- Algorithms And Models • KnowledgeBottlenecksinNLP-ln production NLTK,Case study	Projector	Understand various approaches on syntax and semantics in NLP.	Viva Assignment
II.	Parsing and Syntax •WordLevelAnalysis:RegularExpressions, TextNonnalization, • Edit Distance, Parsing and Syntax-Spelling, Error Detection, and correctionWordsandWordclasses-Part-ofSpeechTagging. • Naive Bayes and Sentiment Classification:Case Study	projector	Apply various methods to discourse, generation, dialogue and summarization . using NLP	Viva Assignment
III.	Smoothed Estimation and Language Modelling • N-gram LanguageModels: N-Grams, • EvaluatingLanguageModels-The Language Modelling Problem Semantic Analysis and Discourse Processing • Semantic Analysis: Meaning Representation,LexicalSemantics • ambiguity,WordSenseDisambiguation.	Projector	Analyze various methodologies used in Machine Translation, machine leamingtechniquesusedinNLPincludingunsupervisedmodelsandtoanalyze real time applications	Viva Assignment seminars
IV.	Natural language Generation and Machine Translation Natural Language Generation: Architecture of NLG Systerns,	Projector	Analyze various methodologies used in Machine Translation, machine leamingtechniquesusedinNLPinclud	Viva Assignment

	Applications Machine Translation: Problems in Machine Translation- Machine Translation Approaches- Evaluation of MachineTranslationsystems. Case study: Characteristics of Indian Languages		ingunsupervisedmodelsandtoanalyze real time applications	seminars
V.	Information Retrieval and Lexical Resources Information Retrieval: Design features of InformationRetrievalSystems Classical, Non- classical, Alternative Models of Information Retrieval, valuation Lexical Resources: Word Embeddings -Word2vec-Glove. Recommended Systems, Long short-term memory (LSTM), 3 • Linear Discriminant Analysis(LDA)	Projector	Apply various methods to discourse, generation, dialogue and summarization . using NLP	Viva Assignment Practicals

List Of References (Book/ICT/ Weblinks):

1. SpeechandLanguageProcessing,Danie!JurafskyandJamesH.,
2. 2ndEdition,Martin PrenticeHall,2013. 2. Foundations of Statistical Natural Language Processing. Cambridge, MA: MIT Press, 1999.

Name of the faculty member Signature: Dr G Anitha Mary

Approved By HeadoftheDepartment: Rathmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-III

Department: MSc Data Science **Class & Section: NMDS** **Course Code: MDS23304C**

Name of the Faculty Member: N R Rashmi **Course Title**: **SCALABLE ARCHITECTURES FOR ML APPLICATIONS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Scalable Machine Learning, Some Machine Learning Background Algorithms for Large scale Leaming, Overview of Hadoop and Current Big Data Systems	Projector White Board	Understand the basic concepts of Scalable Machine Learning	Viva Assignment
II.	How Programming for Data Flow Differs, Basic Spark, Working with Vectors and Matrices in Spark, Brief tour of Spark ML, beyond parallelization, Practical Big Data	Projector White Board	To become a data scientist work in some development environment tailored for statistics and Machine Learning	Viva Assignment Seminar
III.	Anatomy of Fast Data Applications, SMACK Stack - Functional Decomposition, Message Backbone- Understanding messaging requirements, Data ingestion, Fast data& low latency, Message Delivery Semantics, Distributing Messages	Projector White Board	Obtain expertise to tum actionable insights and Fast Data Applications into innovative methods to solve real-world problems	Viva Assignment Seminar
IV.	Compute Engines. Micro Batch Processing, On~ time Processing, Choice of processing engine, Storage as the Fast Data Borders, The message backbone as Transition Point	Projector White Board	Demonstrate the graph algorithms and live streaming data in Spark	Seminar Assignment

V.	Sharing stateful streaming state, Data Driven Microservices, State and Microservices. Deployment environments for Fast Data Applications, Application containerization, resource scheduling, Apache Mesos, Kubemetes, Cloud Deployments.·	White Board	To impart knowledge on Kubernetes and batch processing.	Viva Assignment

List of References (Book/ICT/ Web links):

1. Designing Fast Data Application Architectures by Gerard Maas, Stavros Kontopoulos, Sean Glover, Publisher: O'Reilly Media, Inc., June 2018
2. Spark- The definitive Guide by Bill Chambers & Matei Zaharia, O'Reilly Media, Inc., June 2019

Name of the faculty member & Signature: N R Rashmi

Approved by Head of the Department: Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER-III

Department:MSc DATA SCIENCE **Class & Section: NMDS** **CourseCode: MDS23304B**

Nameofthe FacultyMember: D. Banu Kranthi **CourseTitle:Reinforcement Learning**

Unit	Topics To becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Monte-Carlo Methods Monte-Carlo methods: policy evaluation, Rollouts, on policy and off-policy learning, Importance sampling	Projector	Understand basics of Monte-Carlo Method.	Viva Weekly Test
II.	Temporal Difference Learning Temporal Difference learning: TD prediction, Optimality of TD (0), SARSA, Q-learning, Games and after states, Maximization Bias and Double Learning	Whiteboard projector	Understand RL model free methods.	Viva Assignment
III.	Eligibility Traces Eligibility traces: n-step TD prediction, TD (lambda), forward and backward views, Q(lambda), SARSA(lambda), Replacing traces and accumulating trace	Projector	Understand mathematical trick that improves the performance of Temporal Difference	Viva Assignment seminars
IV.	Function Approximation Function Approximation: Value prediction, » Gradient descent methods, linear function approximation, Control algorithms Iterative Methods, Deep Q-learning.	Projector	Demonstrate the graph algorithms and live streaming data in Spark	Viva Assignment seminars
V	Policy Gradient methods: non-associative learning - REINFORCE algorithm, Exact gradient methods, estimating gradients, approximate policy gradient algorithms, actor-critic methods, Asynchronous Advantage Actor-Critic.	Projector	Analyze meaningful information from digital images, videos and other visual inputs.	Viva Assignment seminars

	Hierarchical RL: MAXQ framework, Options framework, HAM framework, Option discovery algorithms. Case studies: Elevator dispatching, Samuel's checker player, TD- gammon, Acrobot, Helicopter piloting, Alpha Go			

List Of References (Book/ICT/ Weblinks):

1. **R. S. Sutton and A. G. Barto. Reinforcement Learning - An Introduction. MIT Press. 2nd Edition. 2018**
2. **Video Lectures by Prof. David Silver**
3. **Video Lectures by Prof. B.Ravindran**

Name of the faculty member Signature: **D. Banu Kranthi**

Approved By Head of the Department: Rashmi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: B.Sc. Food Technology & Management

Class & Section: AFT

Course Code: FT22103

Name of the Faculty Member: M.Anusha

Course Title:Microbiology of Food and Water

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Micro organisms associated with foods: Bacteria (Gram negative aerobic Rods, Gram negative facultative anaerobic Rods) Gram Negative anaerobic rods, Endospore formers Irregular non-sporing gram positive rods Yeasts & molds their role in food spoilage Factors affecting growth of bacteria, mold and Yeast: (Nutrition,Temperature,pH conditions, Carbon and Nitrogen Sources Redox potential, antimicrobial barriers and constituents	Lecture Method : Using ICT Tools	Identify different microorganisms associated with food	Presentations
II.	Sources of microorganisms – Soil, water, plants and of animal origin Usefulmicroorganisms–Bacteria, Yeast, mold and fungi Estimating number of microorganisms, sampling, sample size Aseptic collection of samples, total cell counts and viable cell counts, platcounters.	Lecture Method: Chalk and board	Evaluate the microbial estimation in food	Quiz

	Indicator organisms ,Alternative and Rapid methods for detection of specific microbes and toxins Dye-reduction tests, Electrical methods, ATP determination – Pure cultures-preparation, maintenance and preservation – Microbiological quality control and HACCP			
III.	Microbiology of Food commodities Contamination, preservation and spoilage & beneficial role of microorganisms in Cereals, Pulses Nuts and Oilseeds, Fruits and Fruit products ,Vegetables and Vegetable products Meat,dairy and their products Microbiology of water- Contamination and microbial standards	Lecture Method : Using ICT Tools	Analyze microorganisms associated with various food groups	Group Discussions
IV.	Heat processing: Pasteurization and appertization Determination of D and z value Heat sensitivity of micro-organisms & Spoilage of canned foods Aseptic packaging, Irradiation Brief account of microwave UV and ionizing radiation Brief account of High pressure processing Low temperature storage – Chilling and freezing Effect of chemical and natural preservatives on microbes in food	Lecture Method : Using Chalk and board	Evaluate the various food preservation techniques	Group Discussions
V.	Food borne pathogens Food poisoning Food borne infections Food borne Intoxication	Lecture Method Using ICT Tools	Explain various food borne illnesses	Group Presentations

	cereus, Brucella, Camphylobacter, Clostridium botulinum, Clostridiumperfringenes, Escherichiacoli, Salmonella, Staphylococcus aureus, vibrio, versininia, Listeria) Hepatitis A and B Gastroenteritis viruses Spongiformencephalopathy - occurrence, symptoms, Preventive and control measures			

List of References (Book / ICT / Weblinks):

1. Frazier W.C. 1995 **Food Microbiology** IV edition, New York: McGraw Hill Book Company.
2. James M jay 1996 **Modern food microbiology** IV edition, New Delhi: CBS publishers.
3. M.R. Adams and M.O. Moss, 2004 **Food Microbiology**, Second Edition, New Delhi: Panima Publishing corporation.

Name of the faculty member & Signature:

M.ANUSHA

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-V

Department: B.Sc Food Technology and Management **Class & Section: DFT** **Course Code:**: FT21504A

Name of the Faculty Member: M.ANUSHA

Course Title: Food Biotechnology

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Biotechnology-Introduction and Definition and importance Applications of genetics to food production Impact of biotechnology in food industry Impact of biotechnology on Food and Nutrition Impact of biotechnology on the nutritional quality of foods	Lecture Method: Chalk and board	Apply various biotechnology methods in food industry	Quiz,
II.	Methods of fermentation application of fermentation Analytical methods for evaluating fermentation products Fermentation systems- introduction Fermentation systems – microbial growth kinetics Media for fermentation Working principles of fermentor Bio products estimation, assay and recovery	Lecture Method : Using ICT Tools	Analyze and evaluate various fermented food products	Group Discussions

	Suspension cultures Media and propagation of cell lines Immobilization of microbial and cultured cells Single cell protein- production- modification- utilization	Chalk and board	methods	Quiz
IV.	Functional proteins from yeasts - uses in foods Application of bacterial starter cultures in food industry Corn sweeteners Plant tissue culture for lipid production Enzyme technology and its application Microbial lipases Organic acids- citric acid, acetic acid, lactic acid – production methods	Lecture Method : Using ICT Tools	Apply different bacterial starter culture for the production of fermented foods	Group Discussions
V.	Regulatory aspects for biotechnological methods GMO/ GEO role in Food industries Social appraisal of biotechnology in foods	Lecture Method: Chalk and board	Understand regulatory aspects and social appraisal of biotechnology in foods	Presentations

List of References (Book / ICT / Weblinks):

- Dietrich Knorr, Marcel Decker. **Food biotechnology**. New York: CRC Press.
- Bailey and Ollis. **Biochemical Engineering Fundamentals**. New York: Mc GrawHill.
- Shule and Kargi. 2002. **Bio process engineering basic concepts**. India: Prentice Hall.
- Vedpal malik and Padma Sreedhar. 1992. **Industrial biotechnology**. New Delhi:Oxford & IBH

Name of the faculty member & Signature: M.ANUSHA

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-V

Department: B.Sc Food Technology and Management

Class & Section:DFT

Course Code: FT21503A

Name of the Faculty Member: M.Anusha

Course Title: Technology of Fermented Foods And Beverages

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Fermented Foods: Introduction to fermentation Lactic acid fermentation of cabbage, cucumber, olives Production of sauerkraut Preparation of pickles Fermentation of dill pickles	Lecture Method : Using Chalk and board	Prepare various kinds of pickles	Quiz
II.	Oriental fermented foods: Soy sauce, Masco ,Tempe, Ontjons, Hamanatto Tofu, Natto Traditional fermented foods – Idli, Dosa Fermented meat and milk Products	Lecture Method : Using ICT Tools	Prepare different oriental and traditional fermented foods	Group Discussions
III.	Beverages: Introduction, classification beverage industry in India Ingredients for beverages: Water - sources and purification types of water Purification systems Fruit pulps, juices, concentrates, and other additives Sweeteners - sugars, artificial sweeteners	Lecture Method : Using Chalk and board	Differentiate natural & artificial sugars, colours, flavours and preservatives	Group Discussions

	Colours, flavours, preservatives			
IV.	Fruit based beverages: Nectar, cordial, squash, syrup, juice concentrates, fruit flavored powders Barley water Carbonated beverages, synthetic, low calorie beverages, dry mix formulation Tea, coffee, cocoa processing	Lecture Method : Using ICT Tools	Classify fruit based, carbonated, synthetic beverages	Group Presentations
V.	Alcoholic Beverages: Alcoholic fermentation of grape juice Brief study of yeast in fermenting 'Must' Wine Types, Technology of wine making - Aroma of wines Types and Production of beer Elements of brewing process Distilled Beverages Types and production Technology of whisky, brandy Quality control in beverage industry	Lecture Method : Using ICT Tools	Explain process of various alcoholic beverages	Group Presentations

List of References (Book / ICT / Weblinks):

1.Lea, A.G.H. and Piggot, J. R. 1995. **Fermented beverage Production**. London:Blackie Academic and Professional.

2.Ravinder, A. Srinivas Maloo, and Dr. Emmanuel S. S.J. 2013. **Hand Book of Fermented foods and Beverages**. 1st Edition. India: Himalaya Books PublishingHouse

Name of the faculty member & Signature:M.Anusha

Approved by Head of the Department:M.Anusha

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - III

Department: B.Sc. Food Technology & Management | **Class & Section: NFT** | **Course Code:** FT20304

Name of the Faculty Member: A Esther Sandhya | **Course Title:** Technology Of Fruits & Vegetables

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Prospects and Scenario of Fruit and Vegetable Industry in India and World. • Classification of Fruits & Vegetables • Composition and ripening changes of Fruit and Vegetables • Role of Fruit and Vegetable in Human Diet • Desirable characteristics of Fruit and Vegetable necessary for processing • Effect of processing methods on quality of Fruit and Vegetables.	Using ICT Tools	Explain processing methods and role of Fruits &Vegetables in human diet	Quiz
II.	• Harvesting factors affecting quality- pre harvest factors, maturity at harvest, harvesting methods • Postharvest Physiology	Using ICT Tools	Tell about Post harvest handling methods and treatments of Fruits &Vegetables	Group Discussions

	• Post-harvest handling of Fruits & Vegetables : Post-harvest factors affecting quality: - Environmental atmosphere, post-harvest handling method • Post-harvest treatments: - Physical and Chemical treatments. • Post-harvest Handling techniques- cleaning, cooling, aeration, water treatments, conveying. • Packaging & Storage of Fruits & Vegetables			
III.	• Process of Canning and Bottling of Fruit and Vegetable • Quality of raw materials, preparation of raw materials (Cleaning, Sorting, Peeling, Trimming, etc.) • Blanching:- Blanching methods, Importance of blanching and its effects, bottle filling, bottle capping and bottle sealing • Preparation of syrup and brine. Exhausting methods, Importance, Machinery used and factors effecting vacuum. • Retorting:-Retort methods, Machineries used and Importance of retorting and its effects.	Using ICT Tools	Explain process of canning, machinery and storage in foods	Group Discussions

	• Cooling and Post -canning operations/Storage of Canned and bottled Fruit and Vegetable.			
IV.	• Fruit and Vegetable Processing : Chutney and sauces- Definition, method of preservation • steps in preparation of chutney and sauces- tomato sauce and tomato ketchup • Pickles- definition, classification, method of preservation • Aseptic processing: Equipments, Methods and Packaging. • steps of preparation of vinegar pickles, evaluation. • Dehydration of fruits and vegetables	Using ICT Tools	Prepare various products of Fruits &Vegetables	Group Presentations
V.	• Fruit beverages- Definition and classification • method of preservation (with special emphasis on pasteurization, use of chemical preservatives, sugar), role of various ingredients • Jam, Jelly and Marmalade- definition, role of pectin and theory of gel formation • method of preservation, steps of preparation, evaluation.	Using ICT Tools	Classify fruit beverages and methods of preservation	Group Presentations

	• Preserves- definition, method of preservation, steps of preservation, evaluation • candied, crystallized and glazed fruits				

List of References (Book / ICT / Weblinks):

1. Siddhapa GS, Lal G and Tandon. Preservation of fruits and vegetables. Indian Council of Agriculture Research, New Delhi, 1998.
2. R.P.Srivastava, Sanjeev Kumar. Fruit and Vegetable Preservation- Principles and Practices. CBS Publishers, 2002.
3. Subbalakshmi G, Udipi SA. Food Processing and Preservation. New Age International Publishers, Delhi 2007.
4. Ramaswamy H and Marcott M. Food Processing Principles and Applications. CRC Press, 2005.

Name of the faculty member & Signature: A. Esther Sandhya

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - V

Department: B.Sc. Food Technology & Management **Class & Section: DFT** **Course Code:** FT21501

Name of the Faculty Member: A Esther Sandhya **Course Title:** Food Storage And Infestation Control

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Post harvest handling of Fruits and vegetables • Principles of grain storage – Physical, Chemical and Biological • Storage structures: Traditional, improved and modern storage structures • Merits and demerits of bag and bulk storage • Design of ware houses and sanitation	Using ICT Tools	Understand the storage principles and storage structures.	Quiz
II.	• Causes of losses in stored foods: Weight, Food, Quality, Monetary and others • Properties of food grains: Respiration, moisture, conductivity, flow, pressure • Scientific and socio economic factors affecting food storage: Temperature and	Using ICT Tools	Create knowledge on losses in stored foods and factors affecting food storage.	Group Discussions

	Moisture • Methods of processing for efficient storage practices			
III.	• Biological agents affecting the storage: Insects • Moulds: Fungi associated with food grains • Rodents – Types, behavior • Methods of estimation of micro flora on grains	Using ICT Tools	Identify different biological agents associated with food grains.	Group Discussions
IV.	• Classification of pesticides • Types of Insecticides: Organochlorines, organophosphorous compounds & carbamates, pyrethrins and pyrethroids • Rodenticides: Acute & Chronic rodenticides • Insecticide formulations • Equipments and appliances used	Using ICT Tools	Create knowledge on various pesticides and their formulations.	Group Presentations
V.	• Fumigation: Definition, requirements of fumigant • Mode of action of Fumigant • Characteristics or Properties of Fumigants • Equipments and appliances used • Control measures for pests • Principle and application of durofume process	Using ICT Tools	Understand the characteristics of fumigants and pest control methods.	Group Presentations

List of References (Book / ICT / Weblinks):

1) Postharvest Technology of cereal, pulses & oilseeds: - A.Chakraborthy
2) Handling and storage of food grains. -S.V.Pingale
3) Drying & Storage of Cereal grains. -K.Bala
4) Handling and Storage of Food Grains inTropical and Subtropical areas : D.W.Hall,1980, Oxford and IBH – Delhi
5) Handbook of Food Preservation : M. Shafiur Rahman, Third Edition, CRC Press.

Name of the faculty member & Signature: A. Esther Sandhya

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - V

Department: B.Sc. Food Technology & Management

Class & Section: DFT

Course Code: FT21504B

Name of the Faculty Member: A Esther Sandhya

Course Title: Sugar Confectionery

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Status of confectionery industries in India. • Types of sugar: Granulated, Caster, Icing, Liquid sugars, Brown Sugars, Molasses, and microcrystalline sugars. • Composition of sugars • Properties of sugar and sugar solutions • Glucose syrups and refined glucose syrups in sugar confectionery manufacture.	Using ICT Tools	Compare the different types of sugars and their properties.	Quiz
II.	• Oils and Fats – uses in confectionery items. • Milk and related products • Composition of milk and functional properties of its major components. • Application of milk and milk	Using ICT Tools	Apply the uses of oils & fats, milk products, colors and flavors in confectionery items.	Group Discussions

	based ingredients. • Colors – Factors influencing choice – natural and Synthetics colors. • Flavoring - Natural and Artificial • Flavor Strength, factors effecting stability of flavoring compounds. • General technical aspects of industrial sugar confectionery Manufacture. • Compositional effects, change of state, evaporation, sweetness and taste.			
III.	• Manufacture of hard-boiled sweets: ingredients • Prevention of recrystallization and stickiness • Manufacturing methods for high-boiled sweets • Product types • Caramel, toffee and fudge: Ingredients, Structure of toffee, formulation, processing, toffee stability. • Cocoa Processing: Cocoa liquor, cocoa butter, cocoa powder • Manufacture of Cocoa chocolate: Ingredients, mixing, refining, conching, tempering of chocolates. • Cocoa chocolate and related products • Recipes: Dark chocolate, Milk	Using ICT Tools	To develop hard boiled sweets, toffee, caramel, fudge and cocoa chocolate.	Group Discussions

	chocolate			
IV.	• Gums and Jellies: Technology and Chemistry of hydrocolloids • Hydrocolloid pretreatment process • Liquor preparation, shaping, drying, finishing treatment, re-work, common faults, causes and cures. • Liquorices paste: Ingredients and manufacture of liquorices paste. • Cream paste: Ingredients, manufacture and extrusion of cream paste. • Liquorices allsorts • Aerated confectionery: Methods of aeration • Manufacture of Marshmallow and Nougat.	Using ICT Tools	To produce gums & jellies, cream paste, liquorice paste & aerated confectionery.	Group Presentations
V.	• Tablets: Tableting, granulation, ingredients, compression, problems • Lozenges: Composition and Processing • Sugar panning: Hard panning, soft panning, polishing. • Additional panning techniques. • Chewing gums technology: Gum base, sugar, flavors, humectants • Fruit acids, sugar-free chewing gum ingredients, formulation	Using ICT Tools	To produce tablets, lozenges, panned sweets, gums and cereal bars.	Group Presentations

	• Chewing gum mixing • Countlines and Cereal bars: Count line components, Manufacturing process			

List of References (Book / ICT / Weblinks):

1. Beckette, S.T. 2009. **Industrial Cocolate Manufacture**. Oxford: Blackwell Publishing Ltd.
2. Jackson, E.B. 1995. **Sugar Confectionery Manufacture**. 2nd Edition. Glasgow: Blackie Academic and Professional.

Name of the faculty member & Signature: A. Esther Sandhya

Approved by Head of the Department: M.Anusha

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – I

Department: B.sc Food Technology and Management

Class & Section: AFT

Course Code: FT19104

Name of the Faculty Member: Yaram Sunanda

Course Title: Technology of Food Preservation

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Food Microbiology** • Principles of Food Preservation • Microorganisms associated with foods- bacteria, yeast and mold. • Importance of bacteria, yeast and molds in foods. • Classification of microorganisms based on temperature, pH, water activity, nutrient and oxygen requirements • Typical growth curve of micro-organisms. • Classification of food based on pH • Food infection, food intoxication • Definition of shelf life, perishable foods, semi perishable foods, shelf stable foods.	Board and Chalk	Classify different microorganisms based on various factors	Quiz
II.	**Food Preservation by Low temperature** • Freezing and Refrigeration: **Introduction** to refrigeration • Cool storage and freezing-	Board and Chalk	Categorize the changes occurring during low temperature preservation	Quiz

	• Principle of freezing, freezing curve, changes occurring during freezing. • Types of freezing -slow freezing, quick freezing. • Introduction to thawing, changes during thawing and its effect on food.			
III.	**Food Preservation by high temperature** • Commercial Canning Operations • Thermal Processing- Commercial heat preservation methods. • Sterilization, Commercial Pasteurization. • Blanching, UHT • Minimal processing of foods- Applications • Hurdle technology- role and applications/ uses	Board and Chalk	Categorize the changes occurring during high temperature preservation	Quiz
IV.	**Food Preservation by Moisture control** • Drying and Dehydration – Definition. • Drying as a means of preservation. • Differences between sun drying and dehydration (i.e. mechanical drying). • Heat and mass transfer. • Factors affecting rate of drying, normal drying curve, names of types of driers used in the food industry. • Evaporation – Definition, factors affecting evaporation. • Names of evaporators used in food industry.	Board and Chalk	Explain the various factors affecting preservation by drying method	Quiz

V.	**UNIT- V** **Food Preservation by Irradiation** • Introduction • Units of radiation. • Kinds of ionizing radiations used in food irradiation. • Mechanism of action. • Uses of radiation processing in food industry. • Concept of cold sterilization. • Recent technologies in food preservation	Board and Chalk	Apply various methods of food preservation using recent technologies	Quiz

List of References (Book / ICT / Weblinks):

1. Srilakshmi B, 2002 **Food science**, New Delhi: New Age Publishers.
2. Meyer, 2004 **Food Chemistry**, New Delhi: New Age Publishers.
3. Bawa. A.S, O.P Chauhanetal. 2013 **Food Science**. New Delhi: New India Publishing agency.
4. Frazier W.C and Westhoff D.C, 2004 **Food Microbiology**, New Delhi: TMH Publication.

Name of the faculty member & Signature:
Yaram Sunanda Sunanda

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LOYOLA ACADEMY

(SECRET & PG COLLEGE)

Teaching Plan for the Academic Year 2023 - 2024

SEMESTER - II

Department: Bio Food Technology and Management | Class & Section: SFT | Course Code: FT2030

Name of the Faculty Member: Varun Samanda | Course Title: Dairy Technology

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
1	**Processing of Milk** • Milk Industries in India – Role of operation flood program • Definition of milk – Source of food composition and nutritive value • Physical and Chemical Properties of milk • Processing of milk: Receiving of milk, Platform tests, Filtration and Clarification, Standardization, Pasteurization, Sterilization methods, Homogenization, Packaging and distribution of milk • Definition – Standardized milk, Single toned, Double toned milk • Manufacture and shelf life of Sterilized bottle milk and flavored milk	Board and chalk	To study the composition, properties and processing of milk	Quiz

	• Cream – cream separation, cream separator • Methods of cream separation • Factors governing richness of cream, factors governing fat percentage. • Butter-introduction composition process involved, cream neutralization, addition of starter cultures, cream ripening, churning, packing of butter • Packing- factors influencing churning, over-run in butter, • Butter defects- their causes and prevention.	Board and chalk	To study the composition and manufacture of dairy products	Quiz
III.	**Cheese** • Cheese- introduction, history, definition • Classification, composition, nutritive value, legal standards. • Manufacturing of cheddar cheese, their defects and control • Manufacture of processed cheese their defects and control • Manufacture of Swiss cheese and their defects and control • Manufacture of cottage cheese, their defects and	Board and chalk	To study the composition and manufacture of dairy products	Quiz

	control.			
IV.	**Concentrated & Dehydrated Milk Products** • Condensed milk- history, composition, and types • Methods of manufacture, vacuum pan condensing, and defects in condensed milk. • Dried milk (Milk Powder)- history, types, composition of dried milk- • Methods of manufacture- drum drying, spray drying, freeze-drying, Packaging of milk powder • Properties of dry milk- bulk density, solubility, solubility index,wettability- dispersibility • Defects in dried milk, Reconstitution- instant milk powder • Malted milk beverages like Horlicks, viva, etc.	Board and chalk	To study the composition and manufacture of dairy products	Quiz
V.	**Ice Cream & Indigenous milk products** • Ice cream – history, definition, classification, composition Ingredients sweethearts, stabilizers, flavours, etc-	Board and chalk	To study the composition and manufacture of dairy products	Quiz

	• Preparation of ice cream, calculation of ice cream mix, Pasteurization of milk, homogenization, ageing, freezing, packaging of ice cream-defects and over run in ice cream. • Indigenous milk products: Rabri, kheer, channa, paneer, rasogolla, ghee, khoa, Kalakhand, srikhand &lassi Methods of preparation of Indigenous milk products & composition. • Cultured milk products: Dahi / Yoghurt, their composition • Prebiotics and probiotics. • Changes in constituents during fermentation and flavor development.			

List of References (Book / ICT / Weblinks):

1. Sukumar De, "Outlines of Dairy Technology, Oxford Univ. Press, 1980.
2. Aneja RP, Mathur BN, Chandan RC & Banerjee AK." Technology of Indian Milk Products", Dairy India Publications, 2002.
3. Rathore NS et.al. " Fundamentals of Dairy Technology – Theory & Practices", Himanshu Pub., 2008.
4. Henderson JL, "Fluid Milk Industry", AVI Pub.1971.
5. Web BH, Johnson AH &Lford JA, " Fundamentals of Dairy Chemistry", 3rd Edition. AVI Pub.1987.

Name of the faculty member & Signature:
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Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – V

Department: B.sc Food Technology and Management | **Class & Section: DFT** | **Course Code: FT18505**

Name of the Faculty Member: Yaram Sunanda

Course Title: FOOD SAFETY, QUALITY CONTROL AND SENSORY EVALUATION

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Food safety: characterization and risk analysis. • Food hazards: Physical, chemical and biological Systems for food safety. • Hazard Analysis Critical Control Point (HACCP) and its implementation.	Board and chalk	Create Knowledge on various food hazards.	Quiz
II.	• Quality assurance: Theoretical and practical considerations • Description of different systems: GAP, GMP, TQM, ISO. • Indian food standards- voluntary and obligatory standards (PFA, FPO, MMPO, Meat and Meat Products order, AGMARK etc.) • Food safety and standards act	Board and chalk	Evaluate the importance of food laws and acts.	Quiz

	(FSSA) • Codex alimentarius • Worldwide food safety issues.			
III.	• Sampling methods- random and statistical methods • Quality assurance • Quality control and testing of raw material and finished products in cereals, fruits and vegetables, • dairy, confectionery, beverages, • meat and egg processing plants	Board and chalk	Analyze quality aspects of food commodities.	Assignments and presentation
IV.	• Sensory evaluation- Requirements and methods. 3 • Sensory parameters: colour, flavour, texture, taste, aroma, general acceptability. 3 • Subjective and objective test of sensory parameters. • (Differential tests, Descriptive test, Rating tests, Sensitivity threshold test)	Board and chalk	Understand the subjective and objective testes of sensory parameters.	Quiz
V.	• Cleaning In Place (CIP) • Different Sanitizers and detergents	Board and chalk	Evaluate the role of sanitation and hygiene in food industry.	Assignments and presentation

	• Sanitation and hygiene in quality assurance in different food industries (Fruits and vegetables, Meat, Milk, and Cereal based). • Cost of quality • Supplier development.			

List of References (Book / ICT / Weblinks):

Text Books

1. Schmidt R H and Rodrick G E, " Food safety handbook". JohnWiley and Sons Inc.2003.
2. Jones J M, " Food Safety". AACC. Paul, Minn, USA 1992.

References:

1. Pomeranz Y and Meloan C E, " Food analysis: Theory AndPractice". 3rd ed. CBS Publishers, New Delhi.1996.
2. Nielsen S S, " Introduction to the chemical analysis of foods"Jones and Bartlett Publishers, London.1994.
3. Nielson S S."Food analysis laboratory manual". Chips Ltd, USA.2003.
4. Lawless H T and Heymann H." Sensory Evaluation of FoodsPrinciplesAnd Practices", Chapman and Hall, New York1998.
5. AOAC, "Official methods of analysis. Association of Official Analytical Chemists", Arlington 1995.

Name of the faculty member & Signature:

Yaram Sunanda

Sunanda.

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -I

Department: Food technology and management **Class & Section: AFT** **Course Code:** FT18102

Name of the Faculty Member: V Jyothi
N.V.S.V Priya

Course Title: Food chemistry

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Carbohydrates: - structure and isomerism, monosaccharides, disaccharides, oligosaccharides and polysaccharides , Reactions of carbohydrates: Hydrolysis, acyclic reactions, dehydration, thermal degradation, gelatinization, caramelization, Functions of monosaccharides and oligosaccharides , Hydrophilicity, flavour ligands, Sweetness, Functions of Polysaccharides: Starch, Cellulose, hemi-cellulose, Pentosans, Pectin and Gums(Alginates, carragean, locust bean gum, xanthan gum).	Lecture Method using ICT Tools	Learn and evaluate the importance and role of carbohydrates in food.	Quiz
II.	Proteins: - Amino Acids: classification Chemical properties, Peptides and Proteins: Primary Structure- Spatial relation , Denaturation of protein, Functional Properties: (Hydration, Solubility, Viscosity, Gelatin, Texturization, Emulsification and Foaming), Nutritional Properties	Lecture Method using ICT Tools	Analyzing the functional properties of proteins in food.	Quiz

III.	Lipids: - classification of lipids, definition and examples, Fats and oils, sterols, phospholipids, Physical properties of fats and oils, Chemical properties (oxidation, hydrogenation etc.,), Rancidity and its types, methods to asses rancidity, Products based on hydrogenation of fats and oil, Emulsions , Food dispersions: solutions, gels and foams	Lecture Method using ICT Tools	Understanding oxidative reactions of lipids in foods.	Quiz and Group presentations
IV.	Enzymes: - classification , Specificity, catalysis and regulations, Factors influencing activity: (Temperature, p^H, water activity and ionic strength/ electrolytes), Endogenous enzymes: pectic enzymes, amylases, cathapsins, Browning reactions – Enzymatic & Non enzymatic, Methods to prevent browning	Lecture Method using ICT Tools	Classifying the enzymes of importance in food	Quiz
V.	Water: - Fundamental Properties Structure: Ice, Water- Availability in foods: Water composition , Isotherms – Effect of Water Activity on Food stability (Shelf life), Vitamins - Classification, Structure, Sources, Functions and Deficiencies , Minerals- Types, Sources, Functions, Deficiencies, Effect of Processing on vitamins	Lecture Method using ICT Tools	Evaluating the role of water vitamins and minerals in food.	Group presentations

List of References (Book / ICT / Weblinks):

1. Owen R. Fennema, 1996 **Food Chemistry**, 3rd Edition
2. Meyer L.H, 2004 **Food Chemistry**, 1st Edition
3. Norman N. Potter, 1996, **Food Science**
4. B. Srilakshmi, 2001 **Food Science**, 2nd Edition, New Delhi: New Age International.

Name of the faculty member & Signature: V. Jyothi N.V.S.V. Priya Jyothi

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - III

Department: Food technology and management **Class & Section: NFT** **Course Code:** FT18302

Name of the Faculty Member: V Jyothi
N.V.S.V Priya

Course Title: Food Process Engineering - II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Flow of Fluids – Concept of viscosity Rheology, Newtonian and Non-Newtonian fluids , Viscometry- types , determination of rheological Properties of fluids using, rotational viscometry , Continuous viscosity monitoring and control ,Transportation of Fluids- Continuity principle and Bernoulli equation , Reynolds number, Flow measuring instruments: Orifice meter, Venturi meter, Rotameter- Problems.	Lecture Method using ICT Tools	Understanding the concept of viscosity and flow measuring instruments.	Group presentations
II.	Heat transfer- types , Estimation of thermal conductivity of food products Fourier's law of heat transfer Temperature profile of unidirectional heat transfer through conduction , Heat transfer by convention-Forced convection and Free convection, Heat transfer by radiation, Kirchhoff's law-Stephan- boltz man - plank's distribution law , Wein's displacements law, Microwave and direct electric heating ,Temperature measuring devices- various thermometers Examples.	Lecture Method using ICT Tools	To apply the laws of heat transfer to food processing.	Quiz

III.	Steady state heat transfer-calculationHeat exchanger equipment-types, Local heat transfer coefficients-equation, Heat transfer to non-Newtonian fluids in laminar flow-examples, Unsteady state heat transfer Fourier number – Biot number , Heisler and gurney- Lurie charts-calculations, Evaporation – single effect evaporators, Improving the economy of evaporators, Dehydration-water activity.	Lecture Method using ICT Tools	To understand and be able to compare steady and non-steady heat transfer.	Quiz
IV.	Mass transfer: - Psychometry, heat and Mass transfer in dehydration , Stage of drying , Prediction of drying from drying rate data , Types of driers -Problems , Extraction- types-principles- systems , Problems	Lecture Method using ICT Tools	Identify the combine effects of heat transfer through evaporation and dehydration.	Quiz
V.	Physical separation process- Types, Filtration ,Filtrate flow through filter cake, Types of filtrations, Constant pressure filtration and constant rate filtration, Reverse osmosis , Sieving and Gravity separation- problems Sedimentation, Material handling equipment.	Lecture Method using ICT Tools	Analyzing the different types of filteration.	Quiz

List of References (Book / ICT / Weblinks):

1. Romeo, T. **Fundamental of food process Engineering**. 2nd edition.
2. McCabe, W.L. and Julian Smith. 1993. **Unit operations of chemical engineering.**
3. Pandey, H. 2004. **Experiments in food process engineering** 1st Edition.

Name of the faculty member & Signature: V. Jyothi M.V.S.V. Priya

Jyothi

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER III

Department: Food Technology and Management **Class & Section: NFT** **Course Code:**G23FT1T

Name of the Faculty Member: V Jyothi
N.V.S.V Priya

Course Title: Food Processing and Quality control

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Principles of preservation: Straining, Filtration, Clarification, Preservation by addition of natural preservatives: i) Salt ii) Sugars. 1 Preservation by drying. Preservation by carbonation. Preservation by Preservatives. Preservation by other methods.	Lecture Method using ICT Tools	Gaining knowledge on various principle in food preservation	Quiz
II.	Fruit juices- Squashes and cordials – preparation and preservation Fruit and vegetables-principles of preservation Process operations- washing, peeling, pitting, blanching Commercial canning Canning of fruits and vegetables. Spoilage in canned foods.	Lecture Method using ICT Tools	Various processing methods of fruits and vegetables.	Quiz
III.	Hard-boiled sweets: Ingredients, Product types , Cocoa beans, cocoa fruit, pulp, Cocoa chocolate and related products, Sequence of processes Chocolate recipes, cocoa powder, Mixing, refining and conching, Tempering of chocolates	Lecture Method using ICT Tools	Various processing steps involved in chocolate manufacturing.	Quiz

IV.	Milk: Definition, Source as food composition, Nutritive Value of Milk Physical and chemical properties of Milk, Types of Milk. Processing of Milk: Receiving of milk, platform tests, Filtration, and clarification, Dairy Products: Khoa, Ice cream, Kheer, Paneer, Dahi etc.	Lecture Method using ICT Tools	Various dairy products	
V.	Hazard Analysis Critical Control Point (HACCP) and its implementation. Quality Assurance: Theoretical and practical considerations, Description of different systems: GAP, GMP, TQM, ISO. FSSAI Standards Worldwide food safety issues. Label information of different food products	Lecture Method using ICT Tools	Different foods by using food laws and regulations.	Quiz

List of References (Book / ICT / Weblinks):

1. Potter, N.H. 1998. **Food Science**. New Delhi: CBS Publication.
2. Ramaswamy, H. and Marcotte, M. 2009. **Food Processing Principles and Applications**. United States: CRC Press.
3. Manay, N.S. and Shadaksharaswamy, M. 1987. **Food-Facts and Principles**. New Delhi: New Age International Pvt. Ltd.Publishers.

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 1

Department: B.Sc. Food Technology & Management

Class & Section: AFT

Course Code: FT18101

Name of the Faculty Member: M. Sai Kumar

Course Title: *Food and Human Nutrition*

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Basic definition- Nutrition, health, nutrient, proximate principles, Food – definition, classification – based on nutritive value Classification – based on functions Carbohydrates, Lipids, Protein – classification, examples, sources, deficiency, functions Deficiency symptoms –Kwashiorkor, marasmus, PEM	Lecture Method using chalk and board	Learning the general classification, examples, deficiencies, functions of nutrients	Quiz
II.	Vitamins – definitions, classification, examples, sources, deficiency symptoms, requirements (fat & water soluble) Minerals – definitions, classification, examples, sources, deficiency symptoms, requirements	Lecture Method using chalk and board	Learning the classification of different vitamins and minerals and their requirements	Quiz
III.	Energy-Definition, methods to determine energy value of foods, Physiological fuel value - Energy requirements, Balanced diet – Recommended daily allowances, Nutritional requirements for different age groups: infants, Pre-school children, school children, Adolescents, Adults, old age, Pregnancy, lactation, Industrial workers	Lecture Method using chalk and board	Create various diet plans for various age groups	Group Presentations

	Assessment of nutritional status – Anthropometric measurements, Clinical assessment; Radiological & biophysical methods, Biochemical methods; Diet surveys, Programs to combat Malnutrition of deficiency disorders, Applied Nutrition program; Supplementary feeding program, Anemia prophylaxis program, Goitre control program, Vit – A deficiency control program; Integrated child development program	Lecture Method using chalk and board	Analyze the assessment of nutritional status	Quiz
V.	Supplementary foods & Novel foods, Role of international agencies in overcoming malnutrition – CARE, Role of international agencies in overcoming malnutrition – WHO, FAO, UNICEF Therapeutic diets, Modification of diet – Clear fluid diet, full fluid diet & Soft diet, Obesity, Food faddism, Faulty food habits, Food allergy	Lecture Method using chalk and board	Compare different international agencies in overcoming malnutrition	Quiz

List of References (Book / ICT / Weblinks):

1. Swaminathan M.S. **Essential of food and nutrition**, 1995 Vol I&II, Bangalore: Bangalore Printing and Publishing Co. Ltd.
2. Gopalan C, Ramashastry B.V and Balasubrmanian S, **Nutritive value of Indian food**, NIN.
3. Swaminathan M.S. 1978 **Hand book of Food and Nutrition**, Bangalore: Bappco Ltd,
4. Srilakshmi B, 2006 **Nutrition Science**, New Delhi: New age international Pvt. Ltd. Publishers.

Name of the faculty member & Signature:

MUDAVATH SAI KUMAR

Approved by Head of the Department: M. Anusha

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 3

Department: B.Sc. Food Technology & Management **Class & Section: NFT** **Course Code: FT23303**

Name of the Faculty Member: M. Sai Kumar

Course Title: Technology of Cereals, Pulses and Legumes

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Rice:** General Introduction, Rice production and role of Rice Processing Industry in India, Rice varieties and their quality; Rice structure, proximate Composition, Nutritive value and distribution of various chemical constituents in rice grain, Quality Characteristics of Rice – physical, milling, cooking and nutritional quality, Aging of Rice- Changes in the properties of rice during storage, accelerated aging of rice, Parboiling of Rice – Principle, Physico- chemical changes during parboiling, Effect of parboiling on the milling, nutritional and cooking quality of rice, Parboiling process and Methods of parboiling – Traditional and Modern methods – CFTRI and Jadavpur university process	Lecture Method using Chalk and Board	Learning various methods involved in rice processing	Quiz
II.	**Wheat**: General introduction, wheat production, wheat varieties, types and grades of Wheat, Nature of Wheat grain, structure, chemical	Lecture Method using chalk and board	Learning various milling operations in wheat	Quiz

	composition, and nutritive values, Milling of wheat – General principles and machine operations; cleaning of wheat; Conditioning of wheat- principles, parameters of conditioning and types of conditioning. Process for production of whole wheat flour (Atta); Roller flour milling Operations: - Principles, process description and machineries including brake system, reduction system, purification and Air fractionation of flours Effect of milling on Flour and Flour treatment. Utilization of by-products of wheat milling			
III.	**Corn & Millets**: General introduction, Corn production, Corn varieties, Types and grades of Corn, Nature of grain, structure of grain, proximate composition and Nutritive value. Dry Milling of corn: general principles and machine operations; cleaning, conditioning, de-germing, drying, cooling and milling, Uses for dry-milled maize products, Wet milling operation of corn; general principles and machine operations; cleaning, drying, steeping, degerming, germ separation, grinding/ milling, protein-starch separation, washing and drying. Uses for wet milled corn products. Industrial applications of corn products, corn starch and corn syrups. Sorghum, Oats, Ragi, Barley- Structure of grain, proximate composition and Nutritive value, Processing methods and use.	Lecture Method using ICT tools	Differentiate steps involved in wet and dry milling of corn	Group presentations

IV.	**Pulses &Oil Seeds:** Proximate composition, amino acids composition, anti-nutritional factors, grinding methods and cooking methods. Pulse Milling- Dry Milling and Wet Milling of pulses- General principles and Process operation for production of split pulse (Dal), Traditional, Modern and CFTRI method of pulse milling, Oil seeds- structure, proximate composition and nutritive value, processing method and use Processing of oil seed as vegetable protein isolates and concentrates and their uses, Processing of oil seeds as vegetable milk like beverages	Using PPT	Understanding the processing of pulses, legumes and oil seeds	Quiz
V.	Technology of puffing, roasting and parching of cereals, millets, and legumes. Byproducts from Rice Milling, SEM Process of Rice Milling, Dough rheology: Introduction, basic concepts to dough chemistry, Technology of Durum wheat (semolina) milling- process for production Of Selmolina (Rava), Pasta products- Types, Raw material, Processing methods, Quality characteristics and Use, Corn starch conversion processes- Acid hydrolysis, Enzyme Hydrolysis, Isomerization Process; Corn syrups, Dextrose powder and Corn Flakes, Technology for production of infant foods and baby foods.	Using PPT	Gaining knowledge about the technology involved in various cereals, pulses and legume based products	Quiz

List of References (Book / ICT / Weblinks):

1. Chakraverty, A. —Post Harvest Technology of Cereals, Pulses and Oil Seeds, Third Edition,
2. Oxford & IBH publishing & Co., New Delhi, 2000. Sahay, K.M. and Singh.K.K.—Unit operations of Agricultural Processing, Vikas Publishing House, New Delhi, 1996.

Name of the faculty member & Signature:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 5

Department: B.Sc. Food Technology & Management

Class & Section: DFT

Course Code: FT21503B

Name of the Faculty Member: M. Sai Kumar

Course Title: DSE-1 Technology of Plant and Animal Foods

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction and importance of fruit and vegetable preservation, History and need of preservation. Canning and bottling of fruits and vegetables: Selection of fruits and vegetables, process of canning, containers of packing, spoilage in canned foods. Fruits beverages: Introduction, process and preservation of fruit juices. Jams, jellies and marmalades: Processing and technology, defects in jelly. Pickles, chutneys and sauces: Processing, types, causes of spoilage in pickling. Tomato products: Selection of tomatoes, processing of tomato juice, tomato puree, paste, ketchup, sauce and soup. Dehydration of Fruits and Vegetables	Lecture Method using Chalk and board	Prepare and analyze various fruit based products	Quiz and Group presentations
II.	Wheat - Types, milling, flour grade. Rice – Variety, milling, parboiling. Corn – Variety, milling Millets - milling. Pulses- Dry and wet milling. Oilseeds- Extraction of oil and refining.	Lecture Method using Chalk and board	Use various technologies for production of cereals legumes and oil seeds products	Quiz

III.	Spices - Processing and properties of important spices. Tea and Coffee: Processing	Lecture Method using Chalk and board	Understanding the processing of different spice products	Quiz
IV.	Dairy – FSSA Definition of Milk, Types of Market Milk, Physico-chemical properties of milk, Processing of Milk, Concept of Filtration, Clarification, Homogenization, Pasteurization. Introduction to various Milk Products: Butter, ghee, flavored milk, yoghurt, dahi, shrikhand,icecream, condensed milk, milk powder, channa, paneer, cheese (cheddar). Fish – Classification of fish (fresh water and marine), composition of fish, characteristics of fresh fish, spoilage of fish- microbiological, physiological, and biochemical. Methods of Fish Preservation: chilling, freezing, Drying, salting, smoking.	Lecture Method using Chalk and board	Prepare various animal based products	Quiz
V.	Meat and Poultry – Definition of carcass, composition of meat, marbling, post-mortem changes in meat- rigor mortis. Tenderization of meat, ageing of meat. Concept of an abattoir, Process of slaughtering in an abattoir. Egg – Structure and composition of hen's egg. Egg proteins, characteristics of fresh egg, deterioration of egg quality. Preservation of eggs, Refrigeration and freezing, thermal processing, egg powder.	Lecture Method using Chalk and board	Understand the physical and changes in meat and egg	Quiz

Name of the

1. Girdharilal, Siddappa, G.S and Tandon, G.L. 1998. **Preservation of Fruits & Vegetables**. New Delhi: ICAR.
2. Chakraborty. 1988. **Post Harvest Technology of Cereals, Pulses and Oilseeds**. New Delhi: Oxford and IBH Publishing Co. Pvt Ltd.
3. De Sukumar. 2007. **Outlines of Dairy Technology**. Oxford: Oxford University Press.

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LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023-2024

SEMESTER-III

Department: Environmental Science Class: NFT CourseCode:ES23301

NameofFaculty Member: Dr. G. Sudhakar CourseTitle: EVS&GS

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable & Non Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	LectureMethodusing ICT Tools and Board	UnderstandtheimportanceofEnvironmentaleducation, conservationofnaturalresources& understandtheimportance ofecosystemsandbiodiversity	Oral question and answers Tounderstandtheimportanceofecological balanceforSustainableDevelopment
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earth quakes, and Cyclones**	LectureMethodusing ICT Tools and Board	Understand thepollutionproblemsand applytheenvironmentalsciencknowledgeonsolidwastemanagement,disastermanagement	Oral question and answers Tounderstandtheimpactsofdevelopmentalactivitiesandmitigationmeasures
III.	**Rain-Water Harvesting, Water-shed Management** **Global WarmingOzone depletion, and Acid rainsEnvironmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	LectureMethodusing ICT Tools and Board	Applytheenvironmentalsciencknowledgetoimprovetheresources Evaluateandunderstandthesustainableenvironmentalconditionsandcontrolmethods	Oral question and answers Tounderstandtheenvironmentalpoliciesandregulations

	Why should we study gender issues? **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	LectureMethodusing ICT Tools and Board	Identifytheinteraction sandintersectionsofide ntities(e.g., gender,race, ethnicity, class, sexuality, and so on)	Oral question and answers Todevelopstudents'sensibilitywithr egardtoissuesofgenderincontempo rarylndia
V	**Sexual harassment** **Say no eve teasing** **The caste based violence** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act(2005)**	LectureMethodusing ICT Tools and Board	Understand the gender problems and ways of addressing them, including interactionsacrosslocaltoglobals calesincommunitiesandovercom oinequalitieswithlegislation	Oral question and answers Toexposethestud entstodebateont hepoliticsand economicworksa ndongenderviole nce

Listof References (Book/ICT/ Weblinks):

1 RajagopalanR 2015 **EnvironmentalStudies-fromCrisistoCure.** ThirdEdition.Chennai:OxfordUniversityPress.

DrDkAsthanaand DrMeeraAsthana. 2014.

2 **A Text BookofEnvironmentalStudies**RevisedEdition.New Delhi:S.Chand&Company

3 Sen Amartya**More Than One Million Women Are Missing.** New York Review ofBooks 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomenin theTelangana People'sStruggle**.NewDelhi: Kali for Women.

4 Shatrughna, Veena.**Women'sWorkanditsImpact onChildHealthandNutrition.**Hyderabad: NationalInstituteofNutrition,IndianCouncilofMedicalResearch.1993

Nameofthefacultymember&Signature:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – II

Department: B.Sc Food Technology and Management **Class & Section: AFT** **Course Code: FT22204**

Name of the Faculty Member: M.Anusha **Course Title: Food Biochemistry**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to biochemistry, analytical methods used in biochemistry. Principle & uses of all analytical methods (Chromatography, electrophoresis, and spectrophotometer) Enzymes- definition, halo enzyme, apoenzyme zymogene forms. Classification of enzymes- Factors affecting the rate of enzyme activity. Mechanisms of enzyme inhibition & enzyme activation. Cofactors & coenzymes with examples	Lecture Method: Chalk and board	Evaluate various analytical methods	Group Discussions
II.	Definition of carbohydrates, Functions & uses of carbohydrates, Classification with examples. Properties of carbohydrates (physical & chemical). Digestion &absorption of carbohydrates. Metabolism of carbohydrates-(Glycolysis, conversion of pyruvate to acetyl CoA) Citric acid cycle. H.M.P shunt pathway. Glycogenolysis, Glycogenesis,	Lecture Method: Chalk and board	Classify carbohydrates and different metabolic pathways	Group Discussions

III.	Lipids-definition, classification with examples, and functions. Phospholipids, sterols definition sources classification with examples. Digestion & Absorption of fats Fatty acids-classification with examples. Glycerol:monoglycerides, diglycerides & triglycerides, with examples Synthesis of fatty acids even& odd number with energetics	Lecture Method Using ICT Tools	Classify lipids and fatty acids and synthesis of fatty acids	Group Presentations
IV.	Protein- definition, classification of proteins with examples. Classification of amino acids with examples. Digestion & Absorption of proteins. Oxidation of amino acids De-amination: Oxidative and non-oxidative de-amination Transamination followed by de-amination. Removal of carboxylic group Carbon skeleton metabolism	Lecture Method Using ICT Tools	Distinguish transamination and deamination	Group Discussions
V.	Steps in protein biosynthesis. Activation of amino acids. Initiation of peptide chain. Elongation of peptide chain. Termination of peptide chain& release Folding & processing Structure of proteins primary, secondary, tertiary, quarter nary Different types of bonding & forces acting in protein structure	Lecture Method: Chalk and board	Demonstrate protein biosynthesis	Group Presentations

1. Lehininger, 1970 **Principles of Biochemistry**, New Delhi: CBS Publication.
2. Voet D and Voet G, 1994 **Biochemistry**, New Jersey: John Wiley and Sons Publications.
3. Berg, J.M., Tymoczko, J.L., 2007 **Biochemistry**, 6th Edition, New York: W H Freeman and Company.
4. Satyanarayana and Chakrapani U, 2006 **Biochemistry**, 3rd Edition, Kolkata: Books and Allied Pvt

Name of the faculty member & Signature: M.Anusha

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER: VI

Department: : B.Sc. Food Technology & Management

Class & Section:DFT

Course Code: FT18503B

Name of the Faculty Member:: M.Anusha

Course Title: Technology Of Non Fermented Beverages

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Beverages: Introduction, Classification of beverages Beverage industry in India – Consumption patterns, Nutrition and Health concern. Ingredients for beverages: Water - sources and purification, Types of water Purification systems Fruit pulps, juices, concentrates, Sweeteners - sugars, artificial sweeteners Acids, Colors, flavors, Additives & Preservatives. Other raw materials	Lecture Method: Chalk and board	Explain introduction and classification of beverages	Group Presentations
II.	Introduction, Processing of fruit juices (selection, juice extraction, deaeration, straining, filtration and clarification preservation of fruit juices (pasteurization, chemically preserved with sugars, freezing, drying, tetra-	Lecture Method : Using ICT Tools	Preparation and preservation of fruit juices	Group Discussions

	packing) processing of squashes, cordials, nectars, syrup, fruit juice concentrates and powders, barley water.			
III.	Composition and Formulations of Beverages: Syrup room operations (Design, equipment, CIP system and detergents) Containers (Glass, Plastic, metal) and Closures, Handling Empty Containers. Carbonation (carbonators) and Filling (Proportioners, fillers and filling valves) Container decoration, Container inspection, Secondary and Territory packaging. CIP in Beverage Plants. Problems in Beverage Industry.	Lecture Method : Using ICT Tools	Formulation and composition of beverages	Group Presentations
IV.	Tea: Types of Tea, Harvesting, Fermentation of Tea, Drying, Packing, Grading and Different Tea products. Coffee: Harvesting of coffee berries, Pulping process, Drying, Roasting, Packing, Grading and different coffee products. Production of whey based beverages, Malt-based beverages, health drinks Flavored milks, protein shakes, soya milk	Lecture Method : Using ICT Tools	Processing of non-fermented beverages	Group Discussions

	health benefits Vegetable juices: carrot juice, beetroot juice, spinach juice, cucumber juice 3 Wheat grass juice, Aloevera juice, Gojiberri juice-Health benefits and side effects Sabja/ basil seed drinks and their health benefits	Lecture Method: Chalk and board	Explain the importance of non fermented beverages	

List of References (Book / ICT / Weblinks):

1. Sirivastava R P and Sanjeev K, 2002. Fruit and vegetable preservation - principles and practices. 3rd ed. International Book Distributing Co.Luckno India.
2. Fruits and Vegetable Juice Processing Technology - Tressler, D.K & M.A Josyln 1971—AVI Pub.-USA.
3. Mitchell A J (Ed). 1990. Formulation and production of carbonated soft drinks.- AVI Pub. Co. Inc, Westport, Connecticut.
4. Woodroof, J.G & G.F Philips (1981)Beverages, Carbonated and Non Carbonated - - AVI Pub.-USA.

Siddhapa GS, Lal G and Tandon. Preservation of fruits and vegetables. Indian Council of Agriculture Research, New Delhi, 1998

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – IV

Department: B.Sc. Food Technology & Management

Class & Section: NFT

Course Code: FT20404

Name of the Faculty Member: A Esther Sandhya

Course Title: Baking Science & Technology

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Bread types, quality assessment and formulations • Ingredients: wheat flour, components and functions; proteins carbohydrates, lipids and enzymes Miscellaneous flours (rye, tricale) • shortenings; functions, sources, types and mechanisms • sweeteners; functions; types • yeast; functions, types and factors influencing the fermentation • Minor ingredients; yeast foods enzymatic supplements, oxidizing agents, salt, dairy and egg products, mold inhibitors, dough strengtheners/ softeners and enrichment	Using ICT Tools	To plan the ingredients used in bread making.	Quiz

II.	• Bread making methods: straight dough, emergency dough methods mechanical dough development • Mixing and dough processing; functions of mixing, mixer types • fermentation, knock back, dough make up dividing ,rounding, intermediate proofing • moulding, panning and pan proofing Process • Baking process, bread cooling, packing, thermal reactions, keeping properties of bread and related products • Bread spoilage and staling, factors and control measures	Using ICT Tools	To develop bread making process.	Group Discussions
III.	• Biscuits; biscuits, cookies and crackers • ingredient and their functions, wheat flour, granulation, Shortening, sweeteners, chemical leaveners • Baking powder, function, composition, and reactive rates, neutralizing value • Preparation of biscuits : Short dough biscuits	Using ICT Tools	To produce different types of biscuits.	Group Discussions

	• Fermented dough biscuits, hard dough biscuits • Biscuit baking, heat transfer mechanism, changes during baking Cooling, packaging and storage			
IV.	• Cakes: cake varieties, ingredients and their functions • wheat flour, components; shortening, egg, baking powder • icing, confectionery coating, minor ingredients • formulations, formula balance • cake mixing objectives and methods • Batter specific gravity, temperature and P^H, baking reactions	Using ICT Tools	To construct the recipe for cakes.	Group Presentations
V.	• Wafers: Ingredients and their functions • flour, water, shortening, aerating agent and minor ingredients • mixing, storage and depositing of wafer batter, baking, cooling and conditioning of wafer sheets • Frozen dough products • Flat bread technology • Starches-sources, composition, properties, modification methods and applications in bakery industry	Using ICT Tools	To prepare wafers, frozen dough products and flat breads.	Group Presentations

List of References (Book / ICT / Weblinks):

1. Dubey, S.C. 2007. **Basic Baking** 5th Ed. New Delhi: Chanakya Mudrak Pvt. Ltd.
2. Raina 2003. **Basic Food Preparation-A complete Manual.** 3rd Ed. Mumbai: Orient Longman Pvt. Ltd.
3. Manay, S. and Shadaksharaswami, M. 2004. **Foods: Facts and Principles.** New Delhi: New Age Publishers.

Name of the faculty member & Signature: A. Esther Sandhya

Approved by Head of the Department: M.Anusha

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – VI

Department: B.Sc. Food Technology & Management

Class & Section: DFT

Course Code: FT21504B

Course Title: Tech. of Spices & Condiments

Name of the Faculty Member: A Esther Sandhya

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Definition of Spices, Condiments and Herbs. • Differences between Spices and Condiments. • Spices- Common name, Scientific name and Chemical constituents/ important flavor compounds. • Importance or Role of Spices in food processing. • Classification of spices and condiments. Scope of spices and condiments in India.	Using ICT Tools	Differentiate spices and condiments and their importance.	Quiz
II.	• Herbs -classification and properties • Quality specifications for Herbs and Spices • Uses of Herbs and Spices • Functional Properties of Herbal	Using ICT Tools	Identify various components present in spices and condiments	Group Discussions

	Spices: Nutritional, Antioxidant, Antimicrobial and Medicinal properties • Therapeutic uses or Medicinal value of spices and condiments			
III.	• Important spices added in food products • Processing of major Indian spices: Pepper, Cinnamon, Cardamom, Cloves • Processing of leafy spices: Bay, Oregano • Processing of seed spices: Fenugreek, Coriander • Processing of tamarind, chilli and onions	Using ICT Tools	Processing of major Indian spices	Group Discussions
IV.	• Spices extracts: Essential oils/ Volatile oils, encapsulated oils and oleoresins • Spices blends and Ready mixes • Super critical fluid extraction of oils • Spice oils and oleoresins uses in processed foods	Using ICT Tools	Produce various spice oils	Group Presentations
V.	• Spice processing machineries or equipment • Packaging aspects of spices and spice products • Shelf life of spices and condiments • Detection of adulterants in spices	Using ICT Tools	Analyse various spices and condiments and their shelf life	Group Presentations

List of References (Book / ICT / Weblinks):

1. NIIR 2004. Handbook on Spices. National Institute of Industrial Research Board, Asian Business Press Inc.
2. NIIR Board of Consultants & Engineers., "The complete book on spices and condiments (with cultivation, processing & uses)" by Asia Pacific Business Press Inc, 2nd Revised edition.
3. H.Panda, "Handbook on spices & condiments (cultivation, processing & extraction)", Asia Pacific Business Press Inc.
4. D.A. Patil& D.A. Dhale, "Spices & condiments: Origin, history & applications", Book Radar.
5. Farrell,K.T, "Spices, Condiments & Seasonings", Springer.
6. Carol Ann Rinzler, "The new complete book of Herbs, Spices & Condiments: A nutritional, medical & culinary guide" Facts on File Inc.

Name of the faculty member & Signature: A. Esther Sandhya

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER II

Department: B.Sc Food Technology and Management

Class & Section: AFT

Course Code: FT18202

Name of the Faculty Member: Yaram Sunanda

Course Title: Food Additives and Toxicology

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Pigments** • Pigments- structure , properties and effect of processing on plant and animal pigment haemoglobin, myoglobin, • Chlorophyll, carotenoids, • anthocyanins, flavanoids • Toxicants – naturally occurring- plant origin, animal origin. • Fish poisoning. Microbial toxins (bacterial and fungal toxins) • Accidentally added – pesticide residues, post harvest residues,	Board and marker	Explain structure and properties of plant and animal pigments	Quiz

	toxic heavy metals, processing residues • Intentionally added – additives.			
II.	**Food Additives** • Introduction to food additives • classifications (nutritional, preservatives/ antimicrobial agents, antioxidants, flavoring agents, sweeteners, enzymes, p^{H} controls agents, clelating agents, and acidulants) • Risks and benefits of different food additives. • Food additives and hypersensitivity	Board and marker	Classify different food additives and their role in food industry	Quiz
III.	**Food Colours** • Food colours- sources of food colours • Types with reference to natural and synthetic • properties/ reactions reference to processing, food applications • Unpermitted colors – risks and health hazards	Board and marker	Identify the various food colours and flavours and their use in food industry	Quiz

	• Food flavours- natural, natural identical and synthetic • Flavour enhancers and potentiaters and applications • Flavouring materials made by processing			
IV.	**Anti Microbial Agents** • Anti-microbial agents – different types • Antimicrobial agents used in food industry and their applications • Antibrowning agents – browning reactions • Different antibrowning agents used in food industry and their food applications	PPT	Evaluate the role of antimicrobial agents in food industry	Quiz
V.	**Antioxidants** • Antioxidants – brief description of oxidation reactions in foods • Antioxidants used in food industry and their applications • Sweeteners – natural & artificial • Food applications • Risks and benefits of	PPT	Apply the knowledge of role of antioxidants and sweeteners in foods	Quiz

	sweeteners			

List of References (Book / ICT / Weblinks):

1. Owen R. Fennema, 1996. **Food Chemistry**, 3rd Edition, New York: Marcel and Dekker Publishers.
2. Meyer L.H, 2004. **Food Chemistry**, 1st Edition, New Delhi: CBS Publishers.
3. Norman N. Potter 1996. **Food Science**, 5th Edition, New Delhi: CBS Publishers.
4. Srilakshmi B. 2001 .**Food Science**, 2nd Edition, New Delhi: New Age International.
5. Branen A.L, Davidson P.M &Salminen S. 2001 **Food Additives**, 2nd Edition, New York: Marcel Dekker.

Name of the faculty member & Signature:

Sunanda.

Yaram Sunanda

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.Sc Food Technology and Management

Class & Section: IV

Course Code: FT18406

Name of the Faculty Member: Yaram Sunanda

Course Title: Food Plant Sanitation and Waste Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Food Plant Layout and Equipment Design** • General principles of food plant Design and layout. • Design of food processing equipment • Size Reduction, mixing separation, extraction, filtration • centrifugation, distillation • Gas absorption equipment's.	Board and marker	Plan food plant layout and equipment design	Quiz
II.	**Food Plant Hygiene and Sanitation** • Waste disposal, Control methods using Physical and Chemical Agents. • Pest and Rodent Control. • ETP Design and Layout.	PPT	Evaluate food plant hygiene and sanitation	Quiz

	• Food storage sanitation, • transport sanitation and • water sanitation			
III.	**Treatment of wastewater** • Methods of sampling waste waters-individual and composite sampling-sample preservation and handling • Characterization of waste water- definitions • Determination of oxygen demands Classification of waste water treatment systems • Screening and screening equipment • Sedimentation –types of sedimentation and sedimentation equipment • Theory and practice of coagulation and flocculation • Floatation and floatation equipment • Fundamentals of reverse Osmosis, ion exchange and electro dialysis	Board and marker	Classify the wastewater treatment systems	Quiz

	water • Biological oxidation of waste water • Role of microorganisms Microbial growth curve • Aerobic process-Description working of aeration equipment • Description and working of activated sludge processes • Aerated lagoons and stabilization ponds Description, working of trickling filters Rotating biological contactors • Anaerobic process –description and working of anaerobic filters anaerobic digestion equipment	Board and marker	Differentiate the different biological treatments of wastewater	Quiz
V.	**Utilization of food industry wastes** Management of waste by products: • Sugar • fruits and vegetable • Meat, fish • oil and fat • Dairy and cereals • Recovery of useful materials from effluents by different systems	PPT	Explain the utilization of food industry wastes	Quiz

List of References (Book / ICT / Weblinks):

1. Rao, D. G. 2010. **Fundamentals of Food Engineering**. New Delhi: PHI learning Private Ltd.
2. Fellows, P. 2000. **Food Processing Technology**. 2nd Edition. United States: Woodhead Publishing Limited and CRC Press LLC.

Name of the faculty member & Signature:
Yaram Sunanda Sunanda

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: B.Sc Food Technology and Management

Class & Section:DFT

Course Code: FT21602A

Name of the Faculty Member: Yaram Sunanda

Course Title: Food Product Development

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Product Development** • Concept of product development • Product success and failure, factors for success • Process of product development, managing for product's success • Innovation strategy - possibilities for innovation, building up strategy • Product development program	PPT	Explain the concept involved in food product development	Quiz
II.	**Product Development Process** • The product development process	PPT	Demonstrate various stages of food product development	Quiz

	• Product strategy • Product design and process development • Product commercialization • Product launch and evaluation			
III.	**Consumers in product development** • Role of consumers in product development • Consumer behavior, food preferences, avoiding acceptance • Integration of consumer needs in product development • Sensory needs • People in product development management	PPT	Identify role and behaviour of consumers in food product development	Quiz
IV.	**Design & Management of Product Development Process** • Designing the product development process, key decision points • Establishing outcomes, budgets and constraints • Managing and organizing product development process • Knowledge for conversion of product concept to new product • Technological knowledge: product qualities, raw material properties, processing. packaging requirement, distribution and marketing.	Board and marker	Explain the design and management of product development process	Quiz

	Process • Improving the product development process - key message • evaluating product development • Improving success potential of new products • market exploration and acquisition • Legal aspects of new product launch	Board and marker	Create awareness on improving product success	Quiz

List of References (Book / ICT / Weblinks):

1. Fuller. Gordon, W. 2004. **New Product Development- From Concept to Marketplace**. United States: CRC Press.
2. Anil Kumar, S. Poornima, S.C. Abraham, M.K. and Jayashree, K. 2004. **Entrepreneurship Development**. New Delhi: New Age International Publisher
3. Moskowitz, Howard and Saguy, R. I. 2009. **An Integrated Approach to New Food Product**. United States: CRC Press.
4. Clarke and Wright, W. 1999. **Managing New Product and Process Development**. India: Free Press.
5. Earle and Earle, 2001. **Creating New Foods**. U.K: Chadwick House Group.

Name of the faculty member & Signature:
Yaram Sunanda

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - II

Department: Food Technology and Management **Class & Section: AFT** **Course Code:** FT18203

Name of the Faculty Member: V Jyothi
N.V.S.V Priya

Course Title: Food Process Engineering I

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Units and Dimensions – Definitions of the terms, Systems of measurements, The S.I system , Conversion of units , Dimensional consistency , Conversion of dimensional equations , Examples.	Board	Understanding the System of measurements.	Quiz
II.	Material balances – Basic principles , Problems involved in dilution, Concentration, Dehydration , Blending of Food ingredients, Evaporation, Examples.	Board	Developing the understanding of principles of material balance in food processing.	Problem solving
III.	Energy balances – Basic principles, Energy terms , Heat properties of saturated steam , Super heated steam, Problems based on steam table, Heat balances , Steam quality, examples.	Board	Understanding the heating properties of various types of steam.	Problem solving
IV.	Gases and vapors – Definitions, equation of state for an ideal and real gases, Ideal gas equation-P.V.T. relationship for ideal gases-gas mixture, Thermodynamics: Thermodynamic variables, Enthalpy – relationship between Cp and Cv for gases, P.V.T relationship for ideal gases in thermodynamic	Board	Analyzing the changes in thermodynamic properties of gases and vapours	Quiz

	process , changes in thermodynamic properties , Work and heat associated with the thermodynamic processes.			
V.	Refrigeration – mechanical refrigeration system, refrigeration cycle, use of refrigerant charts, condenser, evaporator, compressor, refrigeration load, Freezing – types, freezing curve, Freezing applications in food industry.	Powerpoint presentation	Understand various mechanical refrigeration systems.	Group presentations

List of References (Book / ICT / Weblinks):

1. Romeo T. Toledo. 2006 Fundamentals **of food process engineering**, 2nd edition.
2. Paul Singh R. 2004 **Introduction to Food Process Engineering** 3rd Edition.
3. Warren L Macabe, Julian C Smith, PeterHariot, 2004 **Unit Operations of Chemical Engineering.**

Name of the faculty member & Signature: V. Jyothi N.V.S.V. Priya

Jyothi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: BSc Food technology and Management

Class & Section: NFT

Course Code:FT23403

Name of the Faculty Member: V Jyothi N V S V Priya

Course Title: Technology of oils and fats

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Compostition and Classification of fats** Fat – Definition, Importance, Chemical composition. Monoglycerides and di and triglycerides – their structure and composition, Free fatty acids – phosphatides, Sterols – fatty alcohols, Tocopherols.	Board	Understanding the composition and classification of fats and oils.	Quiz
II.	**Characteristics of fats** – Nutritional aspects of fats and oils with relation to health and diseases, Non allergenicity of edible oils , Fat reduction in foods, Physical properties of fats and oils, Chemical reactions of fats and fatty acids, Important characteristics of oils: Coconut, cotton seeds , Palm , Sunflower, sesame, safflower, rice bran , rape seed, mustard , Linseed, soybean , castor and lard.	Board	Obtaining knowledge on various characteristics of fats and oils	Quiz
III.	**Processing of plant oils and animal origin fat** Processing methods of oils – Degumming , Refining , Bleaching ,	Board	Understanding processing of oils and fats , different fat blends and products .	Group presentations

	Deodourization , fractionation, Hydrogenation , Inter esterification and esterification, Common products preparation – salad and cooking oils , shortenings (baking and frying fats), hard butters , margarine and spreads , Dressings for food – mayonnaise and salad dressings, pourable – type dressings, reduced calorie dressings Toppings, coffee whiteners , confectionery coatings , Low fat spreads for traditional breakfast fat. Heat treatment of oil bearing material s- Principles , processing types – animal origin , wet rendering , dry rendering , Digestive rendering.			
IV.	**Value added Products from fats** Growing demands on oils and lipids from traditional and convenience food markets in terms of quality Functional , sensory and nutritional strengths, Technologies to improve the edible oil pool in India, Stability of oils and fats, Value added products from vegetable oil refining industy : Lecithin, Wax, Vitamin E, Oryzanol, Alternative methods for extraction and processing of oils.	Board	Gaining knowledge about the value addition to the oil processing technology.	Group presentations
V.	**By product utilization** Value added products from non-traditional oils and fats. By products from bran oil refining industry Utilization of lingo cellulosic waste from oil industry Bakery fats with zero trans fatty acids Refining procedures for edible oils with a note on analytical techniques	Board	How utilization of by-products is done in the oil industry.	Quiz

	in lipids.			

List of References (Book / ICT / Weblinks):

1. Swern wiley, D. Bailey's industrial oils and fat products.New York: Inter science publications.
2. Min, B.B. Akoh: Oxford: Oxford & IBH Publishing Co.Pvt.Ltd

Name of the faculty member & Signature: V. Jyothi N.V.S.V. Priya

Jyothi

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 4

Department: B.Sc. Food Technology & Management

Class & Section: NFT

Course Code: FT20401

Name of the Faculty Member: M. Sai Kumar

Course Title: TECHNOLOGY OF ANIMAL BASED FOODS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Sources of meat and meat products in India its importance in national economy, Microscopic structure of meat, Physico-chemical properties of meat, Nutritive value of meat, Effect of feed, breed and management on meat production and quality, Conversion of muscle to meat.	Using chalk and board	Conduct survey on the sources of meat and meat in India	Quiz and Group presentations
II.	Premortem inspection and care of animals, Stunning and slaughtering types, Slaughterhouse operations, Dressing, anti and postmortem changes in carcass composition, Grading of meat and meat cuts.	Using chalk and board	Differentiate the various changes in meat processing	Quiz
III.	Processing and preservation of meat, spoilage of meat and its control, comminuted and non-comminuted meat products, Meat byproducts.	Using PPT	Develop various preservation methods in meat	Quiz
IV.	Poultry meat: Classes, Commercial methods of slaughtering, dressing, post-slaughtering handling, storage and preservation, spoilage and its control. Eggs: Composition, handling, candling, washing, coating, packaging,	Lecture Method using ICT Tools	Understand various processing methods in meat	Quiz and Group presentations

	storage, processing, spoilage and its control			
V.	Fish: Types, composition, structure, post-mortem changes, processing and preservation, byproducts. Shrimp and its processing.	Using PPT	Prepare fish products by different preservation methods	Quiz

List of References (Book / ICT / Weblinks):

1. Lawrie, R.A. "Meat Science", 2nd edition. Pergamon Press, Oxford UK, 1975.
2. Portsmouth, J.I. "Commercial Rabit Meat Production", 2nd Edition. Saiga Survey, England, 1979.
3. Stadelmen, W.J. and Cotterill, O.J., "Egg Science and Technology", 2nd Edition. AVI, Westport, 1977.

Name of the faculty member & Signature: M. Sai Kumar

Approved by Head of the Department: M. Anusha

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 4

Department: B.Sc. Food Technology & Management **Class & Section: NFT** **Course Code: FT23405**

Name of the Faculty Member: M. Sai Kumar **Course Title: Food Packaging**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to packaging, Packaging operation, package functions and design, Principle in development of protective packaging, Deteriorative changes in foodstuff and packaging methods for prevention, Shelf life of packaged foodstuff.	Using chalk and board	Identify the importance, functions and design of packaging	Quiz and Group presentations
II.	Food containers: wooden boxes, crates, plywood and wire bound boxes, corrugated and fiber board boxes, textile and paper sacks. Metal containers: tinplate, corrosion of containers, aluminium. Food packages- bags, pouches, wrappers, cartons and other traditional package.	Using chalk and board	Classify the food packaging materials (paper and metal)	Quiz
III.	Plastics: Their properties, Polymerization process, packaging additives. Glass: Manufacture, advantages and disadvantages.	Using chalk and board	Explain the packaging materials (plastic and glass) and their properties	Quiz
IV.	Evaluation of packaging material and package performance, Packaging equipment, Metering and filling of different foods, Labelling requirements, Barcoding- Printing,	Lecture Method using ICT Tools	Evaluate the packaging material, package performance and packaging equipment	Quiz and Group presentations

	regulations.			
V.	MAP, CAP, Shrink packaging, Aseptic packaging and retortable pouches, Biodegradable packaging, Active packaging, Smart packaging. Packaging of different foods.	Using chalk and board	Compare the recent trends in packaging	Quiz

List of References (Book / ICT / Weblinks):

1. Robertson, G.L. 2012. Food Packaging- Principles and Practice. United States: CRC Press Taylor and Francis Group.
2. Paine, F.A and Paine, H.Y.1992. A Handbook of Food Packaging. Glassgow: Blackie Academic and Professional.

Name of the faculty member & Signature: M. Sai Kumar

Approved by Head of the Department: M. Anusha

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 6

Department: B.Sc. Food Technology & Management

Class & Section: DFT

Course Code: FT18601A

Name of the Faculty Member: M. Sai Kumar

Course Title: EXTRUSION TECHNOLOGY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Food Extrusion, Historical development, Function of Extrusion, Extrusion Advantages and Disadvantages, Extrusion Applications, Energy consideration-Shelf life consideration, New generations of extruders and their advantages.	Lecture Method using ICT Tools	Compare the advantages and disadvantages of extrusion	Quiz
II.	Design of Food Extruder, Single screw and Twin screw extruder and their applications, Extruder parts and processing zones, Cleaning of extruder and its screw, Preconditioning of raw materials, operations and benefits.	Lecture Method using ICT Tools	Design single and twin screw extruder	Quiz
III.	Chemical and nutritional changes occurring in food during extrusion.	Lecture Method using ICT Tools	Differentiate the chemical and nutritional changes occur in food during extrusion	Quiz
IV.	Various models of extruders, Common extrusion problems and their solutions, Processing of snack foods, potato snacks, RTE foods, semi-processed foods, direct expanded snacks, coextruded snacks, manufacturing of animal foods.	Lecture Method using ICT Tools	Make the different processing of snack foods and animal foods by using extrusion	Quiz and group presentations

	vegetable protein, Changes in extrusion during TVP processing, TVP additives, Nutritional, high protein foods, full fat flours and blended foods.	Lecture Method using ICT Tools	Prepare the RTE cereals and texturized vegetable protein	Quiz and group presentations

List of References (Book / ICT / Weblinks):

1. Extrusion of Food- By Harper (Vol-1 &2)
2. Food Extrusion Science and Technology- By M.V. Kame
3. Extrusion in Food Applications- By Mian N Riaz

Name of the faculty member & Signature: M. Sai Kumar

Approved by Head of the Department: M. Anusha

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - II

Department: ENGLISH **Class & Section:** AFT **Course Code:** EN23201

Name of the Faculty Member: Dr. Shivali Sharma **Course Title:** GENERAL ENGLISH-2

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Flash Fiction- 'The Mice' by Lydia Davies** Simple, Complex and Compound Sentences Conversion of Sentences Information Transfer	Lecture using ICT Tools like PPTs, videos and online grammar exercises, images, Visual representation charts.	Students were able to: Learn about flash fiction. Learn about the fundamentals of communication. Identify types of sentences and convert them to different forms as required	Reading Comprehension activity Solving grammar exercises on conversion Information transfer activities.
II.	**Short Story- 'The Face on the Wall' by E V Lucas** • Active and Passive Voice • Conjunctions • Essay Writing	Lecture using ICT Tools like PPTs Video of short story Grammar exercises	Comprehend complex narratives. Learn effective reading and writing	Narration of short stories by students. Grammar exercises Essay writing exercises
III.	**From the text *Three Days to See* by Helen Keller** • Explanation of the text • Grammar- Usage of Modal Auxiliary Verbs • Vocabulary – Collective Nouns, Technical Vocabulary Writing Skill – Newspaper Report	Lecture using ICT Tools like PPTs Grammar exercises Newspaper discussion	Recognize the philosophical and moral elements which underlie the text. Understand the challenges of physical disability. Identify the different types of modal auxiliary verbs in a sentence composition and to learn the correct usage of Collective Nouns and Technical Vocabulary.	Role play Group Discussions Grammar exercises like fill in the blanks, multiple choice and true or false. Newspaper Report writing exercises.

IV.	**Short Story from the text 'Leela's Friend' by R.K. Narayan** • Explanation of the text • Grammar- Phrasal Verbs, **Wh-**questions • Vocabulary- Noun and Verb Suffixes • Writing Skill- Writing a Narrative	Lecture Method using ICT Tools like PPTs, AV clips of the story and R K Narayan's life.	Language comprehension and Language proficiency for effective writing and speaking skills. Understand the use of phrasal verbs and generation of new words using prefixes and suffixes. Narrate an experience or event	Role Play Presentations Description of the different characters of the story. Grammar exercises Exercises like fill in the blanks, multiple choice and true or false. Practice in writing a narrative
V.	**From the text 'The Last Leaf' by O. Henry** • Explanation of the text • Grammar- Prepositions • Vocabulary – Idioms Writing Skill – Precis Writing	Lecture Method using ICT Tools PPTs	Write grammatically correct sentences and usage of idioms in sentences.	Role play and quiz on idioms Textbook exercises and worksheets Precis' writing exercises.

List of References (Book / ICT / Weblinks):

Epitome of Wisdom, Maruthi Publications

SUGGESTED READING:

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges.* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing.* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Name of the faculty member & Signature:

(Dr. Shivali Sharma)

Approved by Head of the Department:

(Dr. Swaralipi Nandi)

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023-2024

SEMESTER: II

Department: ENGLISH

Class &Section: B.Sc. AFSN

Course Code: EN23201

Course Title: GENERAL ENGLISH

Name of the Faculty Member: Dr T Sai Mamata

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**FUNDAMENTALS OF EFFECTIVE COMMUNICATION:** Flash Fiction- *The Mice by* **Lydia Davies** **Grammar:** Simple, Complex and Compound sentences Conversion of sentences Information Transfer	**Communicative Language Teaching [CLT]** **Total Physical Response [TPR]** **ICT Tools**	To identify a sound understanding on the formation of words and to demonstrate the functional grammatical component in the sentence.	Observing, understanding and discussing the general human psychology and attitudes.
II.	**LANGUAGE PROFICIENCY FOR EFFECTIVE WRITING AND SPEAKING SKILLS-II** **Short Story-***The Face on the Wall* by **EV Lucas** **Grammar:** Active and Passive Voice Conjunctions **Writing Skill:** Essay Writing	**Communicative Language Teaching [CLT]** **Task Based Learning** **Videos/ PPTS** on grammar	To paraphrase ideas and thoughts in a coherent, neat and organized manner in order to utilize the writing skills for sound writing propagandas.	Gathering primary and secondary sources and writing an essay on the given curren and contemporary topics.
III.	**HEALTH** **Short Story-** *Three Days to See* by **Hellen Keller** Explanation of the text **Grammar:**	**Communicative Language Teaching [CLT]** **Task Based Learning** **ICT Tools- PPTS on** auxiliary verbs, technical vocabulary	To create an understanding on Indian Literature, alongside to develop and chisel their communication skills.	Describing marvelous an miraculous beauty of natur on their en routes. Gathering information ar writing a newspaper repo

	Usage of Modal Auxiliary Verbs Vocabulary- Collective Nouns, Technical Vocabulary **Writing Skill:** News Paper Report	and collective nouns		on the college events.
IV.	**SHORT STORY** *Leela's Friend* by **R K Narayan** Explanation of the text **Grammar-** Phrasal Verbs Wh- questions Vocabulary- Noun and Verb Suffixes **Writing Skill-** Writing a Narrative	**Communicative Language Teaching [CLT]** **Task Based Learning** **ICT Tools-** PPTs/ Videos on Phrasal Verbs	To recognize the moral element which underlies in the short story; an exposure to informal language.	Role play Narrating a movie tl have watched recently
V.	**INSPIRATION** *The Last Leaf* by **O. Henry** Explanation of the text **Grammar –** Prepositions Vocabulary- Idioms **Writing Skill-** Precis Writing	**Communicative Language Teaching [CLT]** **Total Physical Response [TPR]** **Videos on the short story** *The Last Leaf* and Idioms	To develop listening and speaking skills through effective sentence constructions and efficient delivery.	Dramatizing the story Unfolding their ec thoughts and how were transformed lat

List of References (Book/ICT/ Web links):

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges.* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing.* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Name of the faculty member & Signature: DR MAMATA Mamata

Approved by Head of the Department: M. Qiraf Typhosa

IV.	Preservation using irradiation-UV and gamma radiations Preservation by brining, sugaring, inert gas-pickling, carbonation and syruping Preservation using chemical preservatives Preservation by fermentation-vinegar, alcoholic beverages	Using PPT	identify the latest developments in food preservation	Group discussion
V.	Preservation techniques in convenience foods: Some examples Role of packaging in food preservation Extruded products	Using PPT	appraise the role of packaging in food preservation	quiz

List of References

1. **Norman N. potter 1996 Food science 5th edition**
2. **B. sri lakshmi 2001 Food science 2nd edition**

M. Onix

Name of the faculty member & Signature:

Approved by Head of the Department:

IV.	Tuberculosis: Epidemiological indices of tuberculosis (Agent factors, host factors, social factors of tuberculosis) Risk factors (malnutrition and tuberculosis, HIV and tuberculosis, diabetes and tuberculosis, drug resistance Aims and objectives of RNTCP, BCG vaccination, DOTS strategy	Using PPT	types of fevers and types of vaccinations	Group discussio
V.	Bacterial food infections-Salmonellosis, Shigellosis and Listeriosis. Food poisoning: (Staphylococcal & Botulism)-Symptoms, mode of transmission and prevention	Using PPT	epidemiology of food borne diseases and food poisoning.	quiz

List of References

- Public Health Nutrition – Michale J. Gibney, Barrie M. Margetts, John M. Kearney and Lenore Arab (Eds.) – Nutrition Society Textbook Series, Blackwell Publishing.
- Nutritional Science – B. Sri Lakshmi, New Age International Publ;ishers, 2nd edition.
- Text Book of Human Nutrition – Mahtab S Bamji, N PrahladRao, Vinodini Reddy,2nd editon, Oxford & IBH Publishing Co. Pvt. L
- Social and Preventive Medicine – Part & Park.
- The Management of Nutrition in Major emergencies, WHO in collaboration with UNHCR, International Federation of Red Cro WFP.
- Owen. A. Y. and Frankle, R. T. (1986) Nutrition in the Community. The Art of delivering Services, 2nded. Times Mirror/ Mosby.

Name of the faculty member & Signature:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

epartment: B. Sc, Food Science, Nutrition & ietetics

SEMESTER- II

Class : AFSN

ame of the Faculty Member:Dr.K.Musalaiah

Course Code:IC-23101

Course Title: Indian Heritage and Culture

nit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation

	to prevent browning			
IV.	Structure, properties and effect of processing on plant and animal pigments,haemoglobin,myoglobin chlorophylls,carotenoids,anthocyanins and flavanoids	Using PPT	pigments	Group discussion
V.	Naturally occurring toxicants-plantorigin,microbial and animal origin, accidentally occurring toxicants and food additives	Using PPT	Food toxicology	quiz

List of References

1.Sethi Mohini rao R.S (2011)Food science Experiment and applications second editions ,CBS publishers ,New Delhi

2.Swaminathan.M9(1979) Food science and experimental food ,Ganesh and co. Madras

Name of the faculty member & Signature: Glory Joanna Manne - [signature]

Approved by Head of the Department:

	Non digestive carbohydrates,polyphenol,etc			
IV.	Mode of action of phytochemical. Classification of phytochemicals terpenoids,carotenoids, carotene, lutein, zeaxanthin lycopene flavoinoides ,phytosetrogens,sulphur containing compounds	Using PPT	Phytochemicals as nutraceuticals	Group discussion
V.	Definition,Mechanism of action of antioxidants,role of endogenous antioxidant and exogenous antioxidants	Using PPT	Sources and role of antioxidants as nutraceuticals	quiz

List of References

1.Cho s.s and Dreher m.l(2001):Handbook Dietary fibre,Marcel Dekker inc., New York.
Yuraweez,M.P.,Mossoba ,J.K.G.Kramer,m.w.Pariza and G.J.Nelson eds (1999)Advances in conjugated linoleic Acid research,vol.1,AO
Press,Champaign.

Name of the faculty member & Signature: Glory Joanna Marie - dhanoj

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

artment: Food science, nutrition and etics

Class & Section:DFSN

Course Code:FS23604(B)

e of the Faculty Member:GLORY NA

Course:NUTRITION COMMUNICATION AND COUNSELLING

	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
	Setting objectives of a nutrition education communication programme,nutrition objectives,communication objectives and identifying target audience	Using PPT	Understand the basics of communication	quiz
	Essential elements of a message design,media for communication,advantages and disadvantages ,development of a communication strategy	Using PPT	Design messages for communication	Group discussion
	Introduction to nutrition care process,steps of nutrition care process,tools of effective communication,patient feedback	Lecture	Understand different modes of communication	Charts, poster
	Role of counseling at hospital and community level,diet counseling for mother and child,PEM,GIT infections in child	Using PPT	Learn the techniques and tools	Group discussion
	Diet counceling for obese, diabetics,CVD,kidney disorders,liver disorders,gout,hypothyroidism and hyperthyroidism patient	Using PPT	Knowledge about patient care	quiz

List of References (Book / ICT / Weblinks):

1. Srilakshmi B- Food science 4Th edition New age International Ltd,(2007).
2. NIN, ICMR 1990. Nutritive value of Indian foods.

Name of the faculty member & Signature:



V.Krupa Satyavedam



Approved by Head of the Department:

List of References (Book / ICT / Weblinks):

1. Edwards experimental design in psychological research.
2. Kerlinger: foundation of educational research.

Name of the faculty member & Signature:



V.Krupa Satyavedam



Approved by Head of the Department:

List of References (Book / ICT / Weblinks):

1. Gibney M.J., Margetts, B.M., Kearney, J.M., Arab, L.(Eds) (2004) Public health nutrition, NS Bla
2. Prochaska, K.L., Trans theoretical model of behavioural change, Shumaker SA (Eds).

Name of the faculty member & Signature:

V.Krupa Satyavedam

Approved by Head of the Department:

	spoilage and beneficial role of microorganisms in foods.			
IV.	Application of microorganisms in food, fermented food products bread making, alcoholic beverages.vinegar,cheese other lactic acid fermented products ,microbial proteins and vitamins, acid fermented vegetables single cell protein	ICT USAGE	The students will be able to know the food preservation techniques	Poster making
V.	Food borne illnesses-pathogens, food borne infections E.coli,salmonella,staphylococcusvibrio,yersinia ,Listeria, food poisoning ,food borne intoxications ,Hepatitis A and B,Gastroenteritis viruses	ICT USAGE	The students will be able to learn food borne illnesses .	Group discussion

List of References (Book / ICT / Weblinks):

1. Frazier W.C1995 Food microbiology 1v edition ,new York:mcgraw hill book company
2.James M jay 1996 Modern food microbiology 1V edition,New Delhi:CBS publishers

G. Gnana Sheeba

Name of the faculty member & Signature: Sheeba .

Approved by Head of the Department: M. Qui

IV.	Inborn errors of metabolism Definition , signs and symptoms ,dietary management of phenylketonuria,galactosemia,lactos eintolerance and food allergy	Chalk and board	To understand the inborn errors of metabolism	Group discussion
V.	Nutrition and immune response, role of immune nutrients, immunological components of breast milk, effect of under nutrition and over nutrition on immunesystem,immunoenhancers,im munosuppresants and conditionally essential nutrients	Chalk and board	Students will be able to understand the basic aspects of immune nutrients	Group discussion

Listof References (Book/ICT/ Weblinks):

1. Antia,F.P.(2010) clinical dietetics and nutrition (4thedition) pharmamed
2. Srilakshmi B (2011).Dietetics (6th edition)wiley Eastern limited.
3. 3. SueRodwell Williams (2009) nutrition ,Diet therapy(12 th edition),WB Saunders company,London.

G. Gnana Sheeba

Nameofthefacultymember&Signature: Sheeba .

Approvedby HeadoftheDepartment: M. Devi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER VI

Department:b.sc(Food science,nutrition and dietetics)

Class&Section:DFSN

CourseCode:Community nutriti

CourseTitle:FS 23601(A)

Nameofthe FacultyMember:G.Gnanasheeba

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopment
I.	Definition and concept of community, vital ststistics,mortality,morbidity,nutrition and health policies, occupational hazards,physical,chemical and biological hazard. Protection of health and nutritional status of workers ,medical measures of women employees, infrastructures and legislation	ICT USAGE	Students will be able to understand the concept of community nutrition	Group discu
II.	Anthropometry measurements-weight,height,mid arm circumference, skinfoldthickness,BMI uses and limitations ICMR standards, Gomez and waterloo classification, dietsurvey, biochemical methods uses and limitations, clinicalassessment, uses and limitations and biomarkers	Chalk and board	Students will acquire knowledge regarding the assessment of nutritional status	quiz
III.	Importance of nutrition and health education, tools and techniques of health education-visual aids, audiovisual aids, advantages and disadvantages, types of approaches-perasonal,group, and mass,	ICT USAGE	Students will be able to understand nutrition education and health education	charts

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –

2024 SEMESTER:II

artment: Food science, nutrition and etics

Class & Section: AFSN

Course Code:FS21203

ne of the Faculty Member :
RUSHITHA

Course Title: Family Meal Management

t	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
	Meal planning for the family, objectives, nutritional adequacy of the meal, family size and composition, principles and steps of meal planning, food exchange list, reference man and women, nutritional requirements of adult man and adult women	CHALK AND BOARD	Students will be able to describe basic terms and principles of meal planning	Quiz
	Nutrition in pregnancy, physiological stage of pregnancy, preconception nutrition, expected weight gain , complications, nutrition in lactation, role of hormones, food requirements	ICT USAGE	Students will be able to use nutritional knowledge to apply during pregnancy and lactation period	Quiz
	Nutrition in infancy, food requirements, preterm baby and weaning, nutrition in preschool, food requirement, nutrition related problems	ICT USAGE	Students will be able to identify nutrition related problems in infancies and preschool children	Group discussion
	Nutrition in school children, food requirements, packed lunch's, school lunch programmers', nutrition during adolescence, nutritional problems	ICT USAGE	Students will be able to construct knowledge on nutrition programmes held by government	Poster making

V.	Nutrition in old age, process of aging, food requirements, nutrition related problems, degenerative diseases,	ICT USAGE	Students will be able to identify nutritional requirements, nutritional problems in adults and geriatrics	Group dis

List of References (Book / ICT / Weblinks):

Srilaxmi 2007,Dietetics ,7th edition, New delhi, new age international limited

Bamji MS krishnaswamy brahmam GNV 2009, TEXTBOOK OF HUMAN NUTRITION 3rd edition newdelhi, oxfard an

Name of the faculty member & Signature:

D. Krushitha

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024 SEMESTER: IV

Department:Food science,nutrition and dietetics

Class & Section NFSN

Course Code:FS22404

Name of the Faculty Member : D.Krushitha

Course Title: ADVANCED NUTRITION

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development A
I.	Human energy requirements, components of energy requirements, factors effecting energy expenditure and requirement, methods of estimation of energy expenditure, dietary energy recommendations for various age groups and physiological conditions	ICT USAGE	Students will be able to learn human energy requirements	Quiz
II.	Protein quality, evaluation of protein quality utilization, protein efficiency ratio, estimation of protein requirements at different stages, effects of protein quality and quantity	ICT USAGE	Students will be able to apply the knowledge of assessing protein quality	Quiz
III.	Nutrition for gene expression, role of specific nutrients in controlling gene expression, nutrition and immune response, effect of under nutrition and overnutrition on immune function, effect of food, nutrients, nutritional stage on drug dosage	CHALK AND BOARD	Students will be able to understand the nutrition for gene expression	Group discussion
IV.	Free radicals, sources, disease processes, markers of oxidative stress, antioxidants, immunity and	ICT USAGE	Students will be able to assess antioxidants	Poster making

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023-2024

SEMESTER: II

epartment: ENGLISH **Class &Section:** B.Sc, AFSN **Course Code:** EN23201

ame of the Faculty Member: Dr T Sai Mamata **Course Title:** GENERAL ENGLISH

it	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activi
	FUNDAMENTALS OF EFFECTIVE COMMUNICATION: Flash Fiction- *The Mice by* **Lydia Davies** **Grammar:** Simple, Complex and Compound sentences Conversion of sentences Information Transfer	**Communicative Language Teaching [CLT]** **Total Physical Response [TPR]** **ICT Tools**	To identify a sound understanding on the formation of words and to demonstrate the functional grammatical component in the sentence.	Observing, understanding and discussing the general human psychology and attitudes.
I.	**LANGUAGE PROFICIENCY FOR EFFECTIVE WRITING AND SPEAKING SKILLS-II** **Short Story-***The Face on the Wall* by **EV Lucas** **Grammar:** Active and Passive Voice Conjunctions **Writing Skill:** Essay Writing	**Communicative Language Teaching [CLT]** **Task Based Learning** **Videos/ PPTS** on grammar	To paraphrase ideas and thoughts in a coherent, neat and organized manner in order to utilize the writing skills for sound writing propagandas.	Gathering primary secondary sources and w an essay on the given c and contemporary topics.
III.	**HEALTH** **Short Story-** *Three Days to See* by **Hellen Keller** Explanation of the text **Grammar:**	**Communicative Language Teaching [CLT]** **Task Based Learning** **ICT Tools- PPTS on** auxiliary verbs, technical vocabulary	To create an understanding on Indian Literature, alongside to develop and chisel their communication skills.	Describing marvelous miraculous beauty of on their en routes. Gathering informatio writing a newspaper

	Usage of Modal Auxiliary Verbs Vocabulary- Collective Nouns, Technical Vocabulary **Writing Skill:** News Paper Report	and collective nouns		on the college events.
IV.	**SHORT STORY** *Leela's Friend* by **R K Narayan** Explanation of the text **Grammar-** Phrasal Verbs Wh- questions Vocabulary- Noun and Verb Suffixes **Writing Skill-** Writing a Narrative	**Communicative Language Teaching [CLT]** **Task Based Learning** **ICT Tools-** PPTs/ Videos on Phrasal Verbs	To recognize the moral element which underlies in the short story; an exposure to informal language.	Role play Narrating a movie that the have watched recently.
V.	**INSPIRATION** *The Last Leaf* by **O. Henry** Explanation of the text **Grammar –** Prepositions Vocabulary- Idioms **Writing Skill-** Precis Writing	**Communicative Language Teaching [CLT]** **Total Physical Response [TPR]** **Videos on the short story** *The Last Leaf* and Idioms	To develop listening and speaking skills through effective sentence constructions and efficient delivery.	Dramatizing the story Unfolding their eccentric thoughts and how they were transformed later.

List of References (Book/ICT/ Web links):

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges.* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing.* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Name of the faculty member & Signature: DR MAMATA Mamata

Approved by Head of the Department: M. Qiraj Typhora

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: Food science, nutrition and dietetics

Class & Section: NFSN

Course Code: FS22402

Name of the Faculty Member: M. Onix Tryphosa

Course: Food Preservation

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Ac
I.	Importance of food preservation Principles involved in preservation of foods Factors affecting growth of microorganisms Food laws and agencies	Using PPT	understand the importance of food preservation	quiz
II.	Fruit juices, squashes and cordials Jams, jellies and marmalades Tomato products Chutneys and sauces	Using PPT	prepare various food products	Group discussion
III.	Preservation by means of low temperature-freezing and deep freezing Preservation by means of high temperatures Drying, pasteurization, dehydration, smoking and curing Spray drying, Lyophilization, Vacuum packaging, Canning	Lecture	distinguish between low and high temperature preservation	Charts, poster

IV.	Preservation using irradiation-UV and gamma radiations Preservation by brining, sugaring, inert gas-pickling, carbonation and syruping Preservation using chemical preservatives Preservation by fermentation-vinegar, alcoholic beverages	Using PPT	identify the latest developments in food preservation	Group discussion
V.	Preservation techniques in convenience foods: Some examples Role of packaging in food preservation Extruded products	Using PPT	appraise the role of packaging in food preservation	quiz

List of References

1. **Norman N. potter 1996 Food science 5th edition**
2. **B. sri lakshmi 2001 Food science 2nd edition**

M. Oraix

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

rtment: Food science, nutrition and ics

Class & Section:DFSN

Course Code: FS23601 (B)

of the Faculty Member: M. Onix iosa

Course: PUBLIC HEALTH NUTRITION

Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
ublic health –Rise , Changing concepts; cology of Health , Responsibility for health. latural history of disease, Concepts of isease control, Concepts of prevention, Modes of intervention.	Using PPT	public health and ecology of health	quiz
Malaria: Prevalent major epidemiological ypes of malaria. Factors responsible for malaria transmission. ilariasis: Factors responsible for the ransmission of lymphatic filariasis. Infection and infectivity	Using PPT	vector borne diseases like malaria, filariasis and dengue	Group discussion
moebiasis: Agent factors (agent, eservoir of infection, period of communicability), host factors and environmental factors econdary prevention (early diagnosis nd treatment) of amoebiasis.	Lecture	concepts of epidemiology of zoonal disease	Charts, poster

IV.	Tuberculosis: Epidemiological indices of tuberculosis (Agent factors, host factors, social factors of tuberculosis) Risk factors (malnutrition and tuberculosis, HIV and tuberculosis, diabetes and tuberculosis, drug resistance Aims and objectives of RNTCP, BCG vaccination, DOTS strategy	Using PPT	types of fevers and types of vaccinations	Group discussion
V.	Bacterial food infections-Salmonellosis, Shigellosis and Listeriosis. Food poisoning: (Staphylococcal & Botulism)-Symptoms, mode of transmission and prevention	Using PPT	epidemiology of food borne diseases and food poisoning.	quiz

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- II

epartment: B. Sc, Food Science, Nutrition & etetics

Class : AFSN

ame of the Faculty Member:Dr.K.Musalaiah

Course Code:IC-23101

Course Title: Indian Heritage and Culture

nit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period, Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation

V.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the constitution.	Quiz and group presen
.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

ist of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

ame of the faculty member & Signature: Dr. K. Musalaiah

Approved by Head of the Department:

:.K.Musalaiah

Mrs.M. Onix Tryphosa

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER II

Department: Food science, nutrition and dietetics

Class & Section: AFSN

Course Code: FS21204

Name of the Faculty Member: GLORY HOANA

Course: PRINCIPLES OF FOOD SCIENCE

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Functionality of protein,hydration and solubility, properties, flavor binding Functionality of carbohydrates- Resistant starch, complex carbohydrates,gums,modified starches,gelation,viscosity,sweeteners ,principles of sweetening Functionality of lipids- emulsion, polymorphism, physiochemical properties	Using PPT	Functionality of protein,carbohydrates and fat	quiz
II.	Properties of water-melting and boiling point of water, structure of ice and effects of salts on aqueous solutions. Types of water –free and bound water, water activity, functionality of water in foods – emulsions surface tension	Using PPT	Water and water activity	Group discussion
III.	Classification and regulations of enzymes, factors affecting enzyme activity, enzymes in food processing, browning reactions in food, methods	Lecture	Enzymes in food	Charts, poster

	to prevent browning			
IV.	Structure, properties and effect of processing on plant and animal pigments,haemoglobin,myoglobin chlorophylls,carotenoids,anthocyanins and flavanoids	Using PPT	pigments	Group discussion
V.	Naturally occurring toxicants-plantorigin,microbial and animal origin, accidentally occurring toxicants and food additives	Using PPT	Food toxicology	quiz

List of References

1.Sethi Mohini rao R.S (2011)Food science Experiment and applications second editions ,CBS publishers ,New Delhi

2.Swaminathan.M9(1979) Food science and experimental food ,Ganesh and co. Madras

Name of the faculty member & Signature: Glory Joanna Manne - dhanraj

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 1V

)epartment: Food science, nutrition and ietetics

Class & Section:NFSN

Course Code:FS22405

lame of the Faculty Member:GLORY OANA

Course Title: FUNCTIONAL FOODS AND NUTRACEUTICALS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition and types of functional foods. Benefits of functional foods and nutraceuticals and mechanism of action of nutraceuticals.Marketing and regulatory issues of functional and nutraceuticals .Development of biomarkers to indicate efficacy of functional ingredients	Using PPT	Basic aspects of functional food and nutraceuticals	quiz
II.	Different food sources of functional food-cereal products, fruits ,vegetables, milk and milk products,legumes,nuts,seafoods,coffee,tea etc Complex carbohydrates, proteins and fats including omega3 fatty acids and conjugated linoleic acid	Using PPT	Sources of functional foods	Group discussion
III.	Important features of probiotic microorganisms, health effects of probiotics and mechanism of actions on GI health. Sources of prebiotics,health benefits of prebiotics galacto oligosaccharides and functional disaccharides	Using PPT	Probiotics and prebiotics	Charts, poster

	Non digestive carbohydrates,polyphenol,etc			
	Mode of action of phytochemical. Classification of phytochemicals terpenoids,carotenoids, carotene, lutein, zeaxanthin lycopene flavoinoides ,phytosetrogens,sulphur containing compounds	Using PPT	Phytochemicals as nutraceuticals	Group discussion
	Definition,Mechanism of action of antioxidants,role of endogenous antioxidant and exogenous antioxidants	Using PPT	Sources and role of antioxidants as nutraceuticals	quiz

: of References

) s.s and Dreher m.l(2001):Handbook Dietary fibre,Marcel Dekker inc., New York.
weez,M.P.,Mossoba ,J.K.G.Kramer,m.w.Pariza and G.J.Nelson eds (1999)Advances in conjugated linoleic Acid research,vol.1,
,Champaign.

ne of the faculty member & Signature: Glory Joanna Marne - dharmaj

proved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: Food science, nutrition and dietetics

Class & Section:DFSN

Course Code:FS23604(B)

Name of the Faculty Member:GLORY JOANA

Course:NUTRITION COMMUNICATION AND COUNSELLING

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Setting objectives of a nutrition education communication programme,nutrition objectives,communication objectives and identifying target audience	Using PPT	Understand the basics of communication	quiz
II.	Essential elements of a message design,media for communication,advantages and disadvantages ,development of a communication strategy	Using PPT	Design messages for communication	Group discussion
III.	Introduction to nutrition care process,steps of nutrition care process,tools of effective communication,patient feedback	Lecture	Understand different modes of communication	Charts, poster
IV.	Role of counseling at hospital and community level,diet counseling for mother and child,PEM,GIT infections in child	Using PPT	Learn the techniques and tools	Group discussion
V.	Diet counceling for obese, diabetics,CVD,kidney disorders,liver disorders,gout,hypothyroidism and hyperthyroidism patient	Using PPT	Knowledge about patient care	quiz

List of References

1.Gibney M.J.Margetts,B.M.Kearney ,J.M.Arab .L9EDS0 (2004) Public health nutrition,ns Blackewell publishing.

2.Prochaska,K.L.,The Transtheoretical Model of Behavioural change ,shumaker SA(EDS).

Name of the faculty member & Signature: Glory Joanna Marne - dhanraj

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

epartment: Food science, nutrition and ietetics

Class & Section: AFSN

Course Code:FS21202

ame of the Faculty Member: V.Krupa atyavedam

Course Title: Basic Dietetics

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Developmen
I.	Diet therapy- therapeutic diets, texture , nutrients and consistency modification, roles of dietician in hospital and community.	Using PPT	Practical aspects of meal planning	Group discussion, Cl
II.	Diet for weight management- underweight, obesity- causes, signs, symptoms, types, complication and diet modifications.	Using PPT	Understanding diet for weight management	Group discussion,
III.	Strategies for weight management- BMI, RDA, Guidelines for planning weight management diets.	Using PPT	Strategies for menu plan	Group discussior
IV.	Diets for weight loss- low carbs diet, south beach diet, intermittent fasting, general motors diet.	Using PPT	Importance of various weight loss diets	Quiz, poster pres
V.	Diet in deficiency disorders (hypertension, atherosclerosis, diabetes) diseases- definition, causes, symptoms, types, complication and dietary modifications.	Using PPT	Modification of diet for diabetes and CVD	Group discuss

List of References (Book / ICT / Weblinks):

1. Srilakshmi B- Food science 4th edition New age International Ltd.(2007).
2. NIN, ICMR 1990. Nutritive value of Indian foods.

Name of the faculty member & Signature:

V.Krupa Satyavedam

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: Food science, nutrition and dietetics

Class & Section: NFSN

Course Code:FS22406

Name of the Faculty Member: V.Krupa Satyavedam

Course Title: Basic of Research

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Research- objectives, types, significance, variables, hypothesis, formulation of research questions.	Using PPT	Significance of research methodolgy	E-poster presentation
II.	Sampling and sampling design- population and sample, sampling bias and error, census and sample survey, types of sample.	Using PPT	Types of sampling and sampling designs	Group discussion.
III.	Research design- principle and purpose, features of good research, quasi experimental design,	Using PPT	Principles and purpose of research designs	Charts making
IV.	Research tools and methods of data collection- quantitative and qualitative tolls, observation, methods of data collection and reliability & validity of measuring instruments.	Using PPT	Various research tools and collection of data	Survey on food products
V.	Analysis and report writing- coding, classification and tabulation of data, diagrammatic representation, analysis and interpretation of data.	Using PPT	Coding and data classification	Questionnaire presentation

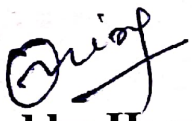
List of References (Book / ICT / Weblinks):

1. Edwards experimental design in psychological research.
2. Kerlinger: foundation of educational research.

Name of the faculty member & Signature:



V.Krupa Satyavedam



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: Food science, nutrition and dietetics

Class & Section: DFSN

Course Code:FS23603 (A)

Name of the Faculty Member: V.Krupa Satyavedam

Course Title: Diet counselling and Patient care

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Basics of diet counseling- types, sequence in diet counseling, materials needed for counseling.	Using PPT	Knowledge on counseling	Group discussion.
II.	Basics of nutrition communication- process, linguistics, techniques and impact of counselling on health,	Using PPT	Types of counseling	Group discussion, Quiz.
III.	Patient care process- nutrition care process, tools for effective counselling, organizing health camps.	Using PPT	Health camps organizing at community level	Group discussion.
IV.	Diet counselling at hospital and community level- mother and child diet counseling, PEM, GIT infections.	Using PPT	Techniques and tools for nutrition counselling	Poster presentation
V.	Diet counselling at hospital and community level- Obese, diabetic, liver disorders, gout and hyperthyroidism.	Using PPT	Patient care in hospital and community level	Health camp

List of References (Book / ICT / Weblinks):

1. Gibney M.J., Margetts, B.M., Kearney, J.M., Arab, L.(Eds) (2004) Public health nutrition, NS Blackwell publishing,
2. Prochaska, K.L., Trans theoretical model of behavioural change, Shumaker SA (Eds).

Name of the faculty member & Signature:

V.Krupa Satyavedam

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024 SEMESTER:11

Department:Food science,nutrition and dietetics

Class & SectionAFSN

Course Code:FS21201

Name of the Faculty Member :G.GNANA SHEEBA

Course Title:FOOD MICROBIOLOGY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Food microbes-types, role of microorganisms and their general characteristics ,role of micro organisms in food spoilage, factors affecting growth of microbes, antimicrobial barriers and constituents	ICT USAGE	The students will be able to identify the different microorganisms associated with food	Quiz
II.	Microbial estimation-sources, Useful micro organisms, total cell count, viable cell count, plate counters, estimating the number of micro organisms, aseptic collection of samples, indicator organisms, microbiological quality control and HACCP	ICT USAGE	The students will learn the microbial estimation in food	Quiz
III.	Microorganisms associated with food and water-contamination and preservation of foods cereals,pulses,nuts and oilseeds, fruits and its products, vegetable and its product, meat and dairy products,	CHALK AND BOARD	The students will be able to identify the microorganism associated with food and water	Group discussion

	spoilage and beneficial role of microorganisms in foods.			
IV.	Application of microorganisms in food, fermented food products bread making, alcoholic beverages,vinegar,cheese other lactic acid fermented products ,microbial proteins and vitamins, acid fermented vegetables single cell protein	ICT USAGE	The students will be able to know the food preservation techniques	Poster making
V.	Food borne illnesses-pathogens, food borne infections E.coli,salmonella,staphylococcusvibrio,yersinia ,Listeria, food poisoning ,food borne intoxications ,Hepatitis A and B,Gastroenteritis viruses	ICT USAGE	The students will be able to learn food borne illnesses .	Group discussion

ist of References (Book / ICT / Weblinks):

1. Frazier W.C1995 Food microbiology 1v edition ,new York:mcgraw hill book company
2.James M jay 1996 Modern food microbiology 1V edition,New Delhi:CBS publishers

G. Gnana Sheeba

ame of the faculty member & Signature: Sheeba.

pproved by Head of the Department: M. Qui

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER IV

Department:Food science,nutrition and dietetics **Class&Section:NFSN** **CourseCode:FS22403**

Nameofthe FacultyMember: G.Gnanasheeba **CourseTitle:Diet Therapy**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Dietary supplements, types of supplements,adjunts to diet therapy, defense mechanisms in the body, role of nutrition in infectious and dietary modifications, metabolic changes in fever, dietary management of typhoid, tuberculosis ,signs and symptoms, foods to be included and excluded	Chalk and board	The students will be able to understand the basic principles in defense mechanisms and during fever.	Group discussion
II.	Definition,causes,types,symptoms , complications, risk factors dietary modification, foods to be included and foods to be avoided in Arthritis patient,Gout,Cancer and acquired immunodeficiency syndrome	Using ICT	The students will be able to understand the dietary requirements during arthriris,gout,cancer and AIDS	quiz
III.	Dietary management in surgical condition, preoperative nutritional assessment and dietary management, post-operative nutritional management,causes,symptoms and dietary management of sepsis ,trauma and burns, assessment of TBSA degrees of burns	Using ICT	The students will learn about the pre and post operative care	charts

Inborn errors of metabolism Definition , signs and symptoms ,dietary management of phenylketonuria,galactosemia,lactos eintolerance and food allergy	Chalk and board	To understand the inborn errors of metabolism	Group discussion
Nutrition and immune response, role of immune nutrients, immunological components of breast milk, effect of under nutrition and over nutrition on immunesystem,immunoenhancers,im munosuppresants and conditionally essential nutrients	Chalk and board	Students will be able to understand the basic aspects of immune nutrients	Group discussion

References (Book/ICT/ Weblinks):

Antia,F.P.(2010) clinical dietetics and nutrition (4thedition) pharmamed

Srilakshmi B (2011).Dietetics (6th edition)wiley Eastern limited.

3. SueRodwell Williams (2009) nutrition ,Diet therapy(12 th edition),WB Saunders company,London.

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER VI.

)epartment:b.sc(Food science,nutrition and lietetics) **Class&Section:DFSN** **CourseCode:Community nutrition**

Jameofthe FacultyMember:G.Gnanasheeba **CourseTitle:FS 23601(A)**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Definition and concept of community, vital ststistics,mortality,morbidity,nutrition and health policies, occupational hazards,physical,chemical and biological hazard. Protection of health and nutritional status of workers ,medical measures of women employees, infrastructures and legislation	ICT USAGE	Students will be able to understand the concept of community nutrition	Group discussion
II.	Anthropometry measurements-weight,height,mid arm circumference, skinfoldthickness,BMI uses and limitations ICMR standards, Gomez and waterloo classification, dietsurvey, biochemical methods uses and limitations, clinicalassessment, uses and limitations and biomarkers	Chalk and board	Students will acquire knowledge regarding the assessment of nutritional status	quiz
III.	Importance of nutrition and health education, tools and techniques of health education-visual aids, audiovisual aids, advantages and disadvantages, types of approaches-perasonal,group, and mass,	ICT USAGE	Students will be able to understand nutrition education and health education	charts

	responsibility of nutritional counselor at community level ,central level, state level village level and primary level			
IV.	Magnitude of malnutrition, consequences of malnutrition in India, nutritional problems in I ndia,PEM,Anemia,iodine deficiency disorder ,Vitamin A deficiency ,Dental caries,fluorosis	Chalk and board	Students will get knowledge on nutrition and health intervention	charts
V.	Measures to combat malnutrition ICDS,IDDCP,Role of national organization -ICMR,ICAR,NIN,Role of international organization CARE,WHO,FAO,ICRISAT	Chalk and board	Students will learn about the difference between national and international organization	Group discussion

Listof References (Book/ICT/ Weblinks):

1. Social and preventive medicine –park and park
2. Goyet,Fish.V.Seaman.J and Geijer(1978)The management of nutrition emergencies in large population ,WHO, Genev

3 .Owen a.Y.andFrankle ,R.T(1986) Nutrition in the community, The art of delivering services, times mirror Mosby

G. Gnana Sheeba

Nameofthefacultymember&Signature:

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024 SEMESTER:II

Department: Food science, nutrition and dietetics

Class & Section: AFSN

Course Code:FS21203

Name of the Faculty Member : D.KRUSHITHA

Course Title: Family Meal Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meal planning for the family, objectives, nutritional adequacy of the meal, family size and composition, principles and steps of meal planning, food exchange list, reference man and women, nutritional requirements of adult man and adult women	CHALK AND BOARD	Students will be able to describe basic terms and principles of meal planning	Quiz
II.	Nutrition in pregnancy, physiological stage of pregnancy, preconception nutrition, expected weight gain , complications, nutrition in lactation, role of hormones, food requirements	ICT USAGE	Students will be able to use nutritional knowledge to apply during pregnancy and lactation period	Quiz
III.	Nutrition in infancy, food requirements, preterm baby and weaning, nutrition in preschool, food requirement, nutrition related problems	ICT USAGE	Students will be able to identify nutrition related problems in infancies and preschool children	Group discussion
IV.	Nutrition in school children, food requirements, packed lunch's, school lunch programmers', nutrition during adolescence, nutritional problems	ICT USAGE	Students will be able to construct knowledge on nutrition programmes held by government	Poster making

V	Nutrition in old age, process of aging, food requirements, nutrition related problems, degenerative diseases,	ICT USAOE	Students will be able to identify nutritional requirements, nutritional problems in adults and geriatrics	Group discuss

List of References (Book / ICT / Weblinks):

Srilaxmi 2007,Dietetics ,7th edition, New delhi, new age international limited

Ramji MS krishnaswamy brahmam GHV 2009, TEXTBOOK OF HUMAN NUTRITION 7th edition newdelhi, oxford and I

Name of the faculty member & Signature:

Approved by Head of the Department:

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Teaching Plan for the Academic Year 2023 –

2024 SEMESTER: IV

nent:Food science,nutrition and

:

f the Faculty Member : D.Krushitha

Class & Section NFSN

Course Code:FS22404

Course Title: ADVANCED NUTRITION

	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
	Human energy requirements, components of energy requirements, factors effecting energy expenditure and requirement, methods of estimation of energy expenditure, dietary energy recommendations for various age groups and physiological conditions	ICT USAGE	Students will be able to learn human energy requirements	Quiz
	Protein quality, evaluation of protein quality utilization, protein efficiency ratio, estimation of protein requirements at different stages, effects of protein quality and quantity	ICT USAGE	Students will be able to apply the knowledge of assessing protein quality	Quiz
	Nutrition for gene expression, role of specific nutrients in controlling gene expression, nutrition and immune response, effect of under nutrition and overnutrition on immune function, effect of food, nutrients, nutritional stage on drug dosage	CHALK AND BOARD	Students will be able to understand the nutrition for gene expression	Group discussion
	Free radicals, sources, disease processes, markers of oxidative stress, antioxidants, immunity and	ICT USAGE	Students will be able to assess antioxidants	Poster making

	ageing neurological diseases, compacting free radicals and reactive oxygen species, sources			
V.	Sports nutrition, nutritional consideration for sports, energy substrate for activates, fluid balance, in sports and exercise, dietary supplements and ergogenic aids	ICT USAGE	Students will be able to gain knowledge on sports nutrition	Group discussion

List of References (Book / ICT / Weblinks):

Zaloga GP 1994, nutrition in critical care, times mirror/miosby

Mahan, L.K and Escott- stump, s 2000 : Krause food nutrition and diet therapy 10th edition W.B SANDERS LTD.

Name of the faculty member & Signature:

D. Kavishtha

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(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER III

FSN Lesson Plan

Department: Food science, nutrition and dietetics

Class & Section:NFSN

Course Code:FS22302

Name of the Faculty Member: M. Onix Tryphosa

Course:Principles of food processing

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Wheat composition, making of bread, types of rice and corn millets	Using PPT	Principles involved in processing of various food grains	quiz
II.	Types of legumes, pulses oil seeds and nuts processing and antinutrients	Using PPT	Eliminate antinutritional components	Group discussion
III.	Composition of milk and products. Processing types of milk, effect of heat on cookery	Lecture	Identify various dairy processing method	Charts, poster
IV.	Structure of fruits and vegetables. Changes occurring during maturation ripening	Using PPT	Changes ocuuring during maturation	Group discussion
V.	Types of fats and oils. Sugar structure and sources, sweetening agents and types of candies	Using PPT	Role of sugar in food preparation	quiz

List of References

1. **Norman N. potter 1996 Food science 5th edition**
2. **B. sri lakshmi 2001 Food science 2nd edition**

M. Oviya

Name of the faculty member & Signature:

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: Food science, nutrition and dietetics

Class & Section:DFSN

Course Code:FS23502(B)

Name of the Faculty Member: M. Onix Tryphosa

Course: Food product development and entrepreneurship

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to product development, Factors affecting development of new product. Process of new product development	Using PPT	Develop a new food product	quiz
II.	Basic principles and concepts of food product development. Standardization methods involved in product development. Portion size and portion control, calculation of nutritive value and cost of production. Shelf life and storage stability evaluation procedure of developed food Products.	Using PPT	Identify the actions which are important in new product Development.	Group discussion
III.	Product labeling: purposes, types and regulations. Nutrition labeling. Grading of foods, specifications of grading of rice, wheat and eggs. Emblems and names (prevention of improper use) Act, 1950.	Lecture	understand the labelling information	Charts, poster
IV.	Marketing characteristics- packaging, price, advertisements, distribution and regulations.	Using PPT	to understand the marketing and promoting strategies	Group discussion

	Food marketing ethics. Challenges of marketing. Role of government in promoting agricultural marketing.			
V.	Concept and definition of entrepreneurship, determinants of entrepreneurship. Dimensions of entrepreneurship- rural, social, women and cultural. Small business: definition and composition of small business- economic contribution of small business. Strategic planning for small business- steps in strategic planning	Using PPT	to implement new ideas in the form of small business	quiz

List of References

1. Orientation for Food Professionals, A Hand book – P V Suryaprakasa Rao.
2. Indian Patents Law - Legal and Business Implications, Eds Ajith Parulekar, Saritha D'Souza.
3. The law of Intellectual Property Rights – Ed Shiv Sahai Singh

M. Ones

Name of the faculty member & Signature:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: Food science, nutrition and dietetics

Class & Section:DFSN

Course Code:FS23508

Name of the Faculty Member: M. Onix Tryphosa

Course: Food Hygiene and sanitation

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Sources of food spoilage Signs of food spoilage in various foods. Food borne infections: incubation period, symptoms, Mode of transmission, control of food borne illnesses. Food borne poisoning: incubation period, symptoms, Mode of transmission, control of food borne illnesses	Using PPT	knowledge about food spoilage and food borne diseases	quiz
II.	Food safety regulations: Prevention of food adulteration Act, Essential Commodities Act, BIS, AGMARK, Standards of weights and measures Act, Export quality control inspection Act, Consumer Protection Act, Certification marks, Food Safety Standard Authority In India. International Standards: WTO, CODEX ALIMENTARIUS, HACCP	Using PPT	differentiate food safety regulation and international standards	Group discussion
III.	Definition of hygiene, food hygiene and sanitation, Basic aspects of personal hygiene, Hygienic Food Handling-Procedures to minimize microbial load, common faults food preparation. Layout and premises- Ventilation and lighting of	Lecture	understand faults in food preparation	Charts, poster

	premises, General guidelines Of cleaning equipment and preparation area			
IV.	Uses and sources of water. Causes and Prevention of water pollution. Large scale purification of water and Small scale purification of water. Chlorination and methods of chlorinati	Using PPT	know the concept of purification of water	Group discussion
V.	Disposal of solid waste. Disposal of liquid waste or sewage. Disposal of gaseous waste.Causes and Prevention of air pollution, soil pollution- pollution by pesticide residue.	Using PPT	identify different types of disposal wastes	quiz

List of References

1 S. Roday 2005 Food Hygiene and Sanitation in Food Industry 7th Edition Published by Tata McGraw Hill Publishing Company New Delhi .
2. Shubhangini A.Joshi.2015 Nutrition and Dietetics 4th Edition Published by McGraw Hill Education (India)Private Limited

Name of the faculty member & Signature:

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LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 -2024

SEMESTER: I

Department: ENGLISH

Class & Section: B. Sc, AFSN

Course Code: EN23101

Name of the Faculty Member:
DR T SAI MAMATA

Course Title: GENERAL ENGLISH

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**FUNDAMENTALS OF COMMUNICATION-** Short Story- *The Mystery Story* Present Tense Past Tense Future Tense Paragraph Writing	**Communicative Language Teaching [CLT]** **ICT Tools**	To distinguish between words which are either spelt or pronounced alike, yet render distinct meanings; imparting a sound clarity on everyday usage of language, and for developing the art of parallel listening and writing	Narrating a past incident
I.	**LANGUAGE PROFICIENCY FOR EFFECTIVE WRITING AND SPEAKING SKILLS-I** Poem-*Goodbye Party for Miss Pushpa T.S.* by Nissim Ezekiel Subject- Verb Agreement Punctuations Review Writing	**Communicative Language Teaching [CLT]** **Video**	To construct vocabulary and to gain understanding on the tense component, a pivotal constituent for language structuring and vocabulary building.	Writing a review of a movie that was screened in the class.
I.	**WIT AND HUMOUR** From the text *A Tea Party* Ruth Prawer Jhabvala Explanation of the text Grammar – Nouns, Articles Vocabulary – Homonyms,	**Communicative Language Teaching [CLT]** **ICT Tools**	To identify with economical word constructions, paying specific attention in constructing sound writing skills.	Role Play Dialogues Making notes of given passages.

	Homophones, Homographs Writing Skill- Note-Making			
IV.	**HUMAN VALUES** From the text *India's Contribution to World Unity* Explanation of the text Grammar-adverbs Vocabulary- Adjective and Adverb Suffixes Writing Skill- Formal letters and Curriculum Vitae	**Communicative Language Teaching [CLT]** **ICT Tools**	To interpret functional grammar, the basic part involved in sentence constructing to improve linguistic skills.	Interpretation and analysis CV writing
V.	**SACHIN TENDULKAR** Explanation of the text Grammar – Adjectives, Comparison of Adjectives Vocabulary – Common Errors, Commonly Misspelt Words, Commonly Confused Words Writing Skill- References and Bibliographies	**Communicative Language Teaching [CLT]** **Video on Sachin Tendulkar**	To develop communication skills to provide a platform for language efficiency for effective language deliver.	Describing famous personalities using adjectives References and bibliographies.

List of References (Book / ICT / Weblinks):

1. *Skills Annexe. Functional English for Success.* Orient Black Swan
2. Balasubramaniam, M. 1985. *Business Communication.* New Delhi: Vani Educational Books,
3. Krishna Mohan and Meera Banerjee, 1990, *Developing Communication Skills.* New Delhi: Macmillan India Ltd.
4. Krishnaswamy, N. and Sriraman, T. 1995. *Current English for Colleges.* Madras: Macmillan India Ltd.
5. Narayanaswamy, V.R. 1979 *Strengthen your Writing.* New Delhi: Orient Longman.
6. Sharma.R. and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata McGraw-Hill Publishing Co.

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: Food science, nutrition and dietetics

Class & Section: AFSN

Course Code:FS21103

Name of the Faculty Member:V.Krupa Satyavedam

Course Title: Fundamentals of Nutrition

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Basic nutrition, definition of health, functions of food, functions of nutrients, importance, sources, requirements and deficiency symptoms of nutrients.	Using PPT	Nutrient interrelationship and functions of food	Group discussion, Quiz.
II.	Human nutrition requirements- food groups, food pyramid, balanced diet and its importance.	Using PPT	Concepts of RDA by ICMR	Group discussion, E-poster presentation
III.	Energy metabolism- measurement of energy by direct and indirect calorimeter, energy balance, TEE, water balance.	Using PPT	Evaluation of metabolism of energy	Group discussion, charts preparation
IV.	Macro nutrients- classifications, functions, requirements, deficiencies.	Using PPT	Macro nutrients in detail	Group discussion
V.	Micro nutrients- fat soluble vitamins, water soluble vitamins, and micro & macro minerals.	Using PPT	Micro nutrients in detail	Group discussion

List of References (Book / ICT / Weblinks):

1. Swaminathan M (2000) Advanced textbook on foods and nutrition, vol I (2Rd ed.)
2. Bamji MS, prahlad rao and N reddy V (2010) A textbook on Human nutrition (3Rd ed.)

Name of the faculty member & Signature:

V.Krupa Satyavedam

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: Food science, nutrition and dietetics | **Class & Section:NFSN** | **Course Code:FS22304**

Name of the Faculty Member: V.Krupa Satyavedam | **Course Title: Therapeutic Dietetics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Diet for weight management- underweight, obesity, eating disorders.	Using PPT	Understanding diet for weight management	Group discussion,. E-poster presentation
II.	Diet in diabetes and cardiovascular (hypertension, atherosclerosis, diabetes) diseases- definition, causes, symptoms, types, complication and dietary modifications.	Using PPT	Modification of diet for diabetes and CVD	Group discussion,
III.	Diet in renal diseases (nephritis, nephrosis, renal calculi, renal failure)- definition, causes, symptoms, types, complication and dietary modifications	Using PPT	Renal diseases and its diet	Group discussion,
IV.	Diet in gastro intestinal diseases (diarrhoea, constipation, celiac diseases, peptic ulcer)- definition, causes, symptoms, types, complication and dietary modifications.	Using PPT	GI disease and its diet modification	Quiz
V.	Diet in liver and billary disorders (hepatitis, cirrhosis, gall stones, pancreatitis)- definition, causes, symptoms, types, complication and dietary modifications	Using PPT	Liver and billary disorders diet.	Group discussion

List of References (Book / ICT / Weblinks):

1. Swaminathan M (2000) Essentials of foods and nutrition, vol II.
2. Srilakshmi B- Dietetics 5Th edition New age International publishers,(2002).

Name of the faculty member & Signature:

V.Krupa Satyavedam

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-V

Department: Food science, nutrition and dietetics

Class & Section: DFSN

Course Code:FS23506(B)

Name of the Faculty Member: V.Krupa Satyavedam

Course Title: Geriatric Nutrition

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to ageing- biology, physiological and social processes, food requirements.	Using PPT	Life pattern of Geriatric	Group discussion.
II.	Issues and challenges of ageing- abuse, neglect, abandonment, physical, health and sensory problems.	Using PPT	Requirements of aged persons	Group discussion.
III.	Clinical geriatric- nutritional related problems(anaemia, malnutrition, infection) . Degenerative disorders- Parkinson's, alzheimers.	Using PPT	Challenges faced by geriatric	Group discussion.
IV.	Social geriatric- types of family, isolation and loneliness and dependency, financial aspects, Govt and NGO's role.	Using PPT	Volunteer in geriatric care services	Group discussion
V.	Geriatric services- Day hospitals and centers, long stay care institution, ethical issues in geriatric medicine.	Using PPT	Geriatric and their activities	Group discussion

List of References (Book / ICT / Weblinks):

1. Swaminathan M (2000) Advanced textbook on foods and nutrition, vol I (2Rd ed.)
2. Bamji MS, prahlad rao and N reddy V (2010) A textbook on Human nutrition (3Rd ed.)

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER I

Department: Food science, nutrition and dietetics **Class & Section: AFSN** **Course Code: FS21102**

Name of the Faculty Member: K.Pravalika **Course: BASIC FOOD SCIENCE**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Major food commodities and minor food commodities, Objectives of cooking, preliminary preparation of foods,Methods of food preparation. Dry heat, Moist heat and combination meth) Microwave cooking and Solar cooking, nutrient losses during cooking.	Using PPT	• To understand Major and minor food commodities • Methods and Medium of food preparation	quiz
II.	Starch: Structure, gelatinization, methods for following gelatinization changes. Characteristic of some food starches. Gelatinization. Modified food starches.Non-starchPolysaccharides Sugar and Sweeteners:	Using PPT	• To understand Starch NonstarchPolysaccharides • Sugar and Sweeteners	Group discussion
III.	• Cereal grains:(i) Structure and composition.(ii) Flours and flour quality.Extruded foods Cereal products- (i)Sources, composition, effects of composition on fat properties.(ii)Functional properties of fat and uses in food preparations.	Lecture	• To understand Extruded foods • Fats, Oils and Related Products	Charts, poster

IV.	• Proteins – Classification composition, denaturatio • Enzymes: Nature of enzymes, stability and action carbohydrates and application, Immobilized enzymes.	Using PPT	To understand Proteins, Enzymes.	Group discussion
V.	• Milk - Composition. Physical and functional properties. Effects of processing and storage,Dairy products- curd, yoghurt, butter, whey, cottage cheese, cheese,frozen desserts.Poultry, Egg - Meat and Fish – composition and Nutritive value and changes during cooking	Using PPT	• To understand Milk, Dairy products, Poultry, Egg, Meat and Fish – composition and Nutritive value and changes during cooking	quiz

List of References

1. Owen R. Fennema, 1996 **Food Chemistry**, 3rd Edition, New York: Marcel and Dekker Publishers.
2. Meyer L.H, 2004 **Food Chemistry**, 1st Edition, New Delhi: CBS Publishers.
3. Norman N. Potter, 1996, **Food Science**, 5th Edition, New Delhi: CBS Publishers.
4. B. Srilakshmi, 2001 **Food Science**, 2nd Edition, New Delhi: New Age International.

Name of the faculty member & Signature: K.PRAVALIKA

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department: Food science, nutrition and dietetics | **Class & Section:DFSN** | **Course Code: FS23505 (A)**

Name of the Faculty Member: K.Pravalika | **Course: Quantity Food production and service**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**QUANTITY FOOD PRODUCTION** General procedures used in institutional and commercial. Types of equipments – cooking and non-cooking equipments. Types of industrial, welfare and transport catering.	Using PPT	General procedures used in institutional and commercial food production	quiz
II.	Selection of menus and ingredient control. Production forecasting. Production scheduling Safeguard in food production.	Using PPT	Production forecasting. scheduling and control	Group discussion
III.	Principles, purchase and storage in traditional, commissary, ready prepared and assembly services., Methods of purchasing- informal/ open market buying, formal/ competitive big	Lecture	To understand Principles, purchase and storage in traditional, commissary, ready prepared and assembly services.	Charts, poster

IV.	Storage- storage space: dry and low temperature, storage room management- organization of storage and store room records. Delivery and service of foodgoals and issues;.Methods of delivery/service-	Using PPT	To understand the Storage- storage space Delivery and service of foods	Group discussion
V.	Cost concepts. Food cost control. Book keeping. Books of account.	Using PPT	To understand the Cost concepts. Food cost control.	quiz

List of References

1. Catering Management – An Integrated Approach – MohiniSethi, SurjeetMalhan, 2nd edition, New Age International Publishers.
2. Food Hygiene and Sanitation – S Roday, Tata McGraw Hill Publishing Co. Ltd., 3rd reprint.
3. Institutional Food Management –Mohini Sethi

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: Food science, nutrition and dietetics **Class & Section:NFSN** **Course Code: FS22303**

Name of the Faculty Member: K.Pravalika **Course: CLINICAL NUTRITION**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Food acceptance in illness, Purpose and principles of hospital diets, • Nutritional assessment in clinical setting, planning of Therapeutic Diets • classification of therapeutic diets- Liquid diets and soft diet modification of normal diet Special feeding methods: Basic concepts and methods of - (a) Oral feeding (b) Tube feeding (c) Parental nutrition (d) Intravenous feeding. • Types of formulas. Pre and post operative diets.	Using PPT	• To understand Nutritional assessment in clinical setting, planning of Therapeutic Diets	quiz
II.	• Role of Dietician in the hospital. Inpatient Nutritional care process Patients' checkup and dietary counseling, interpersonal relationship with patient, planning and implementation of dietary care	Using PPT	• To understand Team approach to nutritional care. Tools for effective nutritional counseling	Group discussion

	• Team approach to nutritional care. • Tools for effective nutritional counseling - Teaching aids used by dietitians- charts, leaflets, posters etc food choice, Communication, behavior modification, Motivation.			
III.	• Nutritional status and disease common. • Pathogenesis, Metabolic changes of nutritional deficiency disease - PEM, Anemia, IDD, Vitamin A Deficiency, Vitamin D, Vitamin B12. • Interpretation of report of blood and urine in - PEM, Anemia, IDD, • Vitamin A Deficiency, Vitamin D, Vitamin B12.	Lecture	To understand Nutritional status and disease common. Pathogenesis, Metabolic changes of nutritional deficiency disease	Charts, poster
V.	• Effect of drugs on food intake and absorption: • Effect of food on absorption of drugs • Effect of various food and beverages on drug action, Drug effects on nutrients, Interaction of drugs and nutrient • Effect of food, nutrients and nutritional status on drug dosage and Efficacy.	Using PPT	To understand the Effect of drugs on food intake and absorption	quiz

List of References

Zaloga, G.P. (1994): Nutrition in Critical Care, Times Mirror/Mosby.

List of References

Zaloga, G.P. (1994): Nutrition in Critical Care, Times Mirror/Mosby.
2. Shils, M.E., Olson, J.A., Shike, M. and Ross, A.C. (Ed) (1999): Modern Nutrition in Health and Disease. 9th Edtion, Williams and Wilkins.
3. Shikora, S.A. and Blackburn, G.L. (Ed) (1999). Nutritional Support – Theory and Therapeutics, Chapman and Hall, ITP (International Thomson Publishing).
4. Mahan, L.K. and Escott – Stump, S. (2000): Krause's Food Nutrition and Diet Therapy, 10th Ed. W.B. Saunders Ltd.
5. Phillips, G.D. and Lodgers C.L. (1986). Parenteral and Enteral Nutrition. A Practical Guide. Churchill Livingstone.
Kinney, J.M. and Borum, P. R. (editors) (1989) Perspectives in Clinical Nutrition. Urban and Schwarzenberg.
7. Torosian, M. H. (editor) (1995) Nutrition for the Hospitalised Patient. Basic Science & Principles of Practice.



Name of the faculty member & Signature: K.PRAVALIKA



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 1

Department: Food science, nutrition and dietetics

Class & Section:AFSN

Course Code: FS21101

Name of the Faculty Member:G.Gnana sheeba

Course Title: Human Anatomy and Physiology

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Cell and its organelles, Cell division, tissue level of organization, types and structure of tissues, skin-structure and functions, the integumentary systems	ICT usage	Students will be able to describe basic aspects of anatomy and physiology	quiz
II.	Digestive and respiratory system ,major organs of the digestive system, anatomy and functions of the organs of digestive system, physiology of digestion, role of enzymes and hormones, absorption mechanisms, respiratory system, physiology of gases exchange	Chalk and board	Students will be able classify different functions of digestive and respiratory system	Group discussion
III.	Circulatory system, blood and its composition ,coagulation of blood, cardiac cycle, structure and functions of heart,circulation of blood,purkinje fibres, arterial and venous system heart rate, cardiac rate, blood pressure and its regulation,lymphatic vessels, bodys defense ,innate and immune response.	Chalk and board	Students will be able to identify different blood groups,	Charts, poster

IV.	Nervous and musculoskeletal systems, nerve cell structure and function, central nervous system autonomous and parasympathetic musculoskeletal system ,formation of bone and teeth	ICT usage	Students will be able to appraise the functions of nervous and Musculo skeletal system	Group discussion
V.	Reproductive and excretory system,sex glands, menstrual cycle, Role of B6 and B12 vitamins in neuronal development, menopause, physiology of pregnancy, excretory system, functions of kidney, bladder formation of urine, counter current mechanisms, structure and function of skin, regulation of body temperature	Chalk and board	Students will be able to describe the functions of reproductive and excretory system	quiz

List of References

1. Best CH and Taylor(1989).The human body. Published by Asia, New Delhi, national book depot,Mumbai,india

2.Winwood(1988).Sears anatomy and physiology for nurses, published by Edward Arnold, London

3.Peace Evelyn (1992) Anatomy and Physiology for nurse,published by Faber and Faber ltd @co limited London.

G. Gnana Sheeba

Name of the faculty member & Signature: Sheeba.

Approved by Head of the Department: M. Qais

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 111

Department: Food science,Nutrition and Dietetics

Class & Section:NFSN

Course Code:FS22301

Name of the Faculty Member: G.Gnana sheeba

Course Title:Food safety,quality control and sensory evaluation

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Basics of food safety and hygienic handling, safety of leftover foods, factors affecting food safety food contamination, sources of contamination, safety of left over foods, safety in food processing, determinants of personal hygiene, handling and serving of food.	ICT Method	The students will be able to understand the basic principle of food safety	Using Chart
II.	Food laws and standards-introduction to standards, specifications and limits.-national food regulation-FSSAI,BIS,APEDA International regulatory organization WHO,FAO,ICMSF	Chalk and board	The students will be able to apply them knowledge of food laws for safe food production	Group discussion
III.	Management of hazards and quality control. design of food plant, storage of food, personnel hygiene, Quality of water and its analysis, general principles of hygiene, methods of sanitation and hygiene, waste product handling, waste disposal, rodent control, effluent treatment, rodent control, functions of quality control	ICT Method	Students will be able to understand the toxicants associated with food	quiz

IV.	Hazards associated with food, food adulteration, mode of entry of hazards, physical hazards,natural,environment and intentionally added, chemical hazards and biological hazards,packaging material as a threat, impact on health ,sea and shell food poisoning	ICT Method	Toxicants in foods at various levels	Group discussion
V.	Sensory aspects of food quality,appearance,colour,texture sensory testing of foods, threshold test, hedonic test, difference test,acceptasnce and preference test preparation of samples, factors affecting sensory measurements	Chalk and board	Microbial toxin associated with food	Group discussion

List of References (Book / ICT / Weblinks):

1.FSSAI(2006)Manual of food safety management system FSS 2006
2.Deshpande S.S (2013) Handbook of food toxicology book(free download)
3.Fernandes and rose (2013) persistent organic pollutants and toxic foods,Elsevier publication.

Name of the faculty member & Signature: G. Gnana Sheeba Sheeba

Approved by Head of the Department: M. Dhivya

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER v

Department: Food science, nutrition and dietetics

Class & Section:DFSN

Course Code:FS23506(A)

Name of the Faculty Member:G.Gnana sheeba

Course Title: MATERNAL AND CHILD NUTRITION

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning and objectives of maternal nutrition, health problems of mother and child in India, current scenario of maternal and child nutrition in india,vital statistics related to mother and child, management and importance of ante natal care, complications of antenatal care ,	ICT USAGE	Students will perceive the concept about maternal nutrition care	Chart
II.	Development of mammary tissues and role of hormones, physiology and endocrinology of lactation, composition of human milk, lactation amenorrhea, effects of breast feeding, breast feeding vs bottle feeding, recent guidelines in infant feeding and complementary feeding	ICT USAGE	Students will learn the role of food requirement during lactation,infancy,adolescent stages	Group discussion
III.	Infant physiology, growth and development during infancy, immunization schedule, nutritional requirements and modification of food for infants, weaning and principles in preparing complementary food supplements.	Chalk and board	Students will learn about the physiology and endocrinology of different medical condition	quiz

IV.	Growth and development of preschool children using growth chart, nutritional requirements of preschool and school going children,, nutritional challenges with special need, childhood obesity	Chalk and board	Students will understand the different types of health care programs	posters
V.	Nutritional requirements during adolescence,pregnancy,weighr control, anorexia nervosa, health programmes-ANP, Special nutritional programmes,ICDS.	ICT USAGE	Students will gain knowledge about different feeding methods	Group discussion

List of References (Book / ICT / Web links):

1. Park ,K(2000)Parks textbook of preventive and social medicine 18 th edition
2. Food nutrition and diet therapy-Kathelene Mahan @krause, slviaescott stump
3. Bamji MS,Rao NP @Reddy (1999) Textbook of Human Nutrition Oxford @IBH

G. Gnana Sheeba

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER V

Department:FOOD SCIENCE, NUTRITION AND DIETETICS **Class & Section:DFSN** **Course Code:FS23504**

Name of the Faculty Member:G.GNANA SHEEBA **Course Title:MEDICAL NUTRITION THERAPY**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Nutritional screening of critically ill patients, history and physical findings, prognostic indices, laboratory tests, monitoring therapy and nutritional goals,methods of nutritional assessment,subjective global assessment,prognostic indices,laboratory assessment,catabolic index,body composition,functional test,basal energy expenditure,Harris-Benedict Equation	Chalk and board	Students will be able to understand about nutritional screening and assessment	Group discussion
II.	Pediatric critical care-RDA,assessment of nutritional status and requirements of hospitalized children,,nutrition for SAM, nutritional care in diarrheal diseases, respiratory diseases,diabetes,hepatic diseases ,pancreatitis and heart diseases	ICT USAGE	Students will be able to acquire knowledge on planning of diets	Group presentation

III.	Medical nutrition therapy in critical illnesses and ethical care in terminally ill patients-pathphysiclogical,clinical and metabolic aspects, nutritional requirements, nutritional goals, rehabilitation ,monitoring therapy in diabetes mellitus, heart failure, cardiac surgery and transplant, respiratory failure,neurosurgery,head injury, spinal cord injury,diarrhea.Wound healing, nutrients involved in wound healing	ICT USAGE	Students will be able to identify special nutritional requirements	quiz
IV.	Critical GI diseases-pathophysiological,clinical and metabolic aspects, rehabilitation ingastro intestinal tract surgery,gastro –esophageal reflux,gastrointestinal stritches and obstruction,intestinal surgery,liver transplant,pre and post liver transplant, hepatic failure, pancreatitis and renal disease	ICT USAGE	Students will get knowledge about critical illnesses and managements	Poster presentation
V.	Other critical illnesses-cancer,AIDS,stress and trauma, sepsis and multiple organ failure	Chalk and board	Students will learn about pediatric critical care and their RDA	Group discussion

List of References (Book / ICT / Weblinks):

1.Zaloga G.P (1994)NUTRITION IN CRITICAL CARE.TIMES MIRROR /MOSBY

2.Charlette R, Gallagher-Allied (2005).Nutrition care of the terminally ill.

3.KE Elizebeth (2007)Nutrition and child development,paras medical publishers

G.Gnana Sheeba Sheeba.

Name of the faculty member & Signature:G.GNANA SHEEBA

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER I

Department: Food science,nutrition and dietetics

Class & Section: AFSN

Course Code: FS21104

Name of the Faculty Member : D.KRUSHITHA

Course Title: NUTRITIONAL BIOCHEMISTRY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Enzymes: Definition, importance, nomenclature and classification of enzymes, factors affecting enzyme activity, Digestion, Absorption and utilization of Nutrients. Nutrient Metabolism, Transport of metabolites across membranes	Using PPT	The students will be able to identify the importance of nutrient utilization	Quiz
II.	Carbohydrate Chemistry and Metabolism, Importance, classification of carbohydrates Metabolism of carbohydrates: Glycolysis, Citric Acid Cycle, Glycogenesis, Glycogenolysis, Gluconeogenesis, Hexose Monophosphate Shunt and Blood sugar regulation	Using PPT	The students will be able to explain the carbohydrates chemistry and its metabolism.	Quiz
III.	Importance, classification of lipids, properties of lipids, Metabolism of lipids: Oxidation of fatty acids, fatty acid synthesis, Metabolism of unsaturated fatty acids, Types of lipoproteins and their functions	Using PPT	The students will be able to explain lipid chemistry and its metabolism.	Group discussion

IV.	Amino Acids and Proteins – Chemistry and Metabolism-Structure of proteins – primary, secondary, tertiary and quarternary structures and Functions of proteins,Classification of amino acids, Biologically important peptide,General reactions: Transamination, deamination and decarboxylation Reactions and Urea cycle	Using PPT	The students will be able to explain protein chemistry and its metabolism	Poster making
V.	**INTERMEDIARY METABOLISM-** Methods to study metabolism-Bioenergetics and Importance of biological oxidation, Components of electron transport chain, Oxidative phosphorylation and ATP generation	Using PPT	The students will be able to identify the importance of bioenergetics and biological oxidation	Group discussion

List of References (Book / ICT / Weblinks):

1.Biochemistry-U-satyanarayan-4th-edition
2.Nutritional biochemistry B.Srilakshmi

Name of the faculty member & Signature:
D. Kruthika

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER I

Department:Food science,nutrition and dietetics

Class & Section: GE-3

Course Code: G22FS1T

Name of the Faculty Member : D.KRUSHITHA

Course Title: NUTRITION AND DIETETICS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Concepts of food, importance and classification based on origin and function, importance & objectives of cooking. Preliminary preparations and processing	Using PPT	Classify food in relation to health	Quiz
II.	Methods, principles of preservation. Preservation by high, cold temperature, using sugar salt and chemicals	Using PPT	Various principles and methods of preservation	Quiz
III.	Introduction to nutrition, nutrients. Classification of nutrients. Energy values of foods and energy requirements	Using PPT	Knowledge on energy value of foods	Group discussion
IV.	Importance, deficiency disorders of carbohydrates, proteins, fats vitamins and minerals	Using PPT	Various deficiency disorders due to imbalance of nutrition	Poster making
V.	Balanced diet, food guide, ICMR food groups importance, principles of planning diets, RDA-definition, factors effecting ot. Steps in making menu.	Using PPT	Construct various diet plans	Group discussion

List of References (Book / ICT / Weblinks):

1.Swaminathan M,Food Science and experimental foods
2. Dietetics by B.Srilakshmi.

Name of the faculty member & Signature:

D. Krushitha

Approved by Head of the Department: M. Vijaya Jyothsna

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER IV

Department: Food science, Nutrition and dietetics

Class & Section: DFSN

Course Code: FS23501

Name of the Faculty Member : D.KRUSHITHA

Course Title: FOOD SERVICE MANAGEMENT

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Concepts of types of menus,classification of food institutions, food services and management of personnel in food services organizations and food cost and components.	Using PPT	Different types of menus, food service institutions	Quiz
II.	Functions of management, catering management principles tools of management and management of resources	Using PPT	Functions &tools of management, catering principles of catering management & resources	Quiz
III.	Planning a layout for food service institutions, types of storage spaces, selection of equipment classification ,care and maintenance	Using PPT	Kitchen designs, types of storage and equipment selection.	Group discussion
IV.	Characteristics of food, types of food, food purchasing, receiving and food storage,delivery methods.	Using PPT	Characteristics and quality of food	Poster making
V.	Concepts of formulation and standardization of recipes, patent laws, evolution of IPR patent rights in india and food product labeling-purpose and types.	Using PPT	Labelling of food product and evaluate the various steps involved in formal and standardization of recipes	Group discussion

List of References (Book / ICT / Weblinks):

List of References (Book / ICT / Weblinks):

1.Catering management-Mohini sethi
2.Institutional food service management- Mohini Sethi
3.Food Hygiene and sanitation_S.Roday.

Name of the faculty member & Signature:

D. Krishitha

Approved by Head of the Department: M. Qiraj Tryphosa

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER V

Department: Food science, Nutrition and Dietetics

Class & Section: DFSN

Course Code: FS23502

Name of the Faculty Member : D.KRUSHITHA

Course Title: SPORTS NUTRITION

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Concepts of physical activity, exercise and sports, physical activity pyramid and bioenergetics in exercise.	Using PPT	Learn about physical activity exercise and sports	Quiz
II.	Sports physiology, types of exercises, exercise on muscular skeletal system, on cardiac cycle, cardiac output, blood pressure, exercise on respiratory system, and training on heart and lung performance.	Using PPT	The sports physiology, types exercises and its impact	Quiz
III.	Dietary intake and optimal exercise performance, nutritional requirement of sports person, sports drinks, importance of hydration, dehydration, carbs, protein and fat as energy source.	Using PPT	To identify the nutritional requirement of sports person and fluid balance	Group discussion
IV.	Sport specific nutrient requirement, pre game and post game regime, special nutrition for female athlete, nutrition education to athlete and coach	Using PPT	To acquire knowledge about special nutrition for female athletes	Poster making

V.	Challenges among athletes, menstrual problem of female athlete, athlete triad, chronic dieting& eating disorders, alcohol influence on athlete,	Using PPT	To study about chronic diseases and alcohol effect on athletes	Group discussion

List of References (Book / ICT / Weblinks):

1. **Bamji S.M RaoNP and Reddy V. 1998. Text book of Human Nutrition. Oxford and IBH publishing C. New Delhi.**
2. **Burke Louse and Deak in Vicky (2006) Clinical Sports Nutrition.**

Name of the faculty member & Signature:

D Koushitha

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023-2024

SEMESTER: II

Department: ENGLISH **Class &Section:** B.Sc, AFSN **Course Code:** EN23201

Name of the Faculty Member: Dr T Sai Mamata **Course Title:** GENERAL ENGLISH

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**FUNDAMENTALS OF EFFECTIVE COMMUNICATION:** Flash Fiction- *The Mice by* **Lydia Davies** **Grammar:** Simple, Complex and Compound sentences Conversion of sentences Information Transfer	**Communicative Language Teaching [CLT]** **Total Physical Response [TPR]** **ICT Tools**	To identify a sound understanding on the formation of words and to demonstrate the functional grammatical component in the sentence.	Observing, understanding and discussing the general human psychology and attitudes.
II.	**LANGUAGE PROFICIENCY FOR EFFECTIVE WRITING AND SPEAKING SKILLS-II** **Short Story-***The Face on the Wall* by **EV Lucas** **Grammar:** Active and Passive Voice Conjunctions **Writing Skill:** Essay Writing	**Communicative Language Teaching [CLT]** **Task Based Learning** **Videos/ PPTS** on grammar	To paraphrase ideas and thoughts in a coherent, neat and organized manner in order to utilize the writing skills for sound writing propagandas.	Gathering primary and secondary sources and writing an essay on the given current and contemporary topics.
III.	**HEALTH** **Short Story-** *Three Days to See* by **Hellen Keller** Explanation of the text **Grammar:**	**Communicative Language Teaching [CLT]** **Task Based Learning** **ICT Tools- PPTS on** auxiliary verbs, technical vocabulary	To create an understanding on Indian Literature, alongside to develop and chisel their communication skills.	Describing marvelous and miraculous beauty of nature on their en routes. Gathering information and writing a newspaper report

	Usage of Modal Auxiliary Verbs Vocabulary- Collective Nouns, Technical Vocabulary **Writing Skill:** News Paper Report	and collective nouns		on the college events.
IV.	**SHORT STORY** *Leela's Friend* by **R K Narayan** Explanation of the text **Grammar-** Phrasal Verbs Wh- questions Vocabulary- Noun and Verb Suffixes **Writing Skill-** Writing a Narrative	**Communicative Language Teaching [CLT]** **Task Based Learning** **ICT Tools-** PPTs/ Videos on Phrasal Verbs	To recognize the moral element which underlies in the short story; an exposure to informal language.	Role play Narrating a movie that they have watched recently.
V.	**INSPIRATION** *The Last Leaf* by **O. Henry** Explanation of the text **Grammar –** Prepositions Vocabulary- Idioms **Writing Skill-** Precis Writing	**Communicative Language Teaching [CLT]** **Total Physical Response [TPR]** **Videos on the short story** *The Last Leaf* and Idioms	To develop listening and speaking skills through effective sentence constructions and efficient delivery.	Dramatizing the story Unfolding their eccentric thoughts and how they were transformed later.

List of References (Book/ICT/ Web links):

1. Krishna Mohan and Meera Banerjee. *Developing Communication Skills.* 1990. New Delhi: Macmillan India Ltd.
2. Krishnaswamy. N. and Sriraman, T. *Current English for Colleges.* 1995. Madras Macmillan India Ltd.
3. Narayanaswamy, V.R. *Strengthen your Writing.* 1979. New Delhi: Orient Longman.
4. Sharma, R.C and Krishna Mohan. *Business Correspondence.* 1978. New Delhi: Tata Mc Graw- Hill Publishing Co.

Name of the faculty member & Signature: DR MAMATA Mamata

Approved by Head of the Department: M. Orix Tryphosa

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: Food science, nutrition and dietetics | **Class & Section: NFSN** | **Course Code: FS22402**

Name of the Faculty Member: M. Onix Tryphosa | **Course: Food Preservation**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Importance of food preservation Principles involved in preservation of foods Factors affecting growth of microorganisms Food laws and agencies	Using PPT	understand the importance of food preservation	quiz
II.	Fruit juices, squashes and cordials Jams, jellies and marmalades Tomato products Chutneys and sauces	Using PPT	prepare various food products	Group discussion
III.	Preservation by means of low temperature-freezing and deep freezing Preservation by means of high temperatures Drying, pasteurization, dehydration, smoking and curing Spray drying, Lyophilization, Vacuum packaging, Canning	Lecture	distinguish between low and high temperature preservation	Charts, poster

IV.	Preservation using irradiation-UV and gamma radiations Preservation by brining, sugaring, inert gas-pickling, carbonation and syruping Preservation using chemical preservatives Preservation by fermentation-vinegar, alcoholic beverages	Using PPT	identify the latest developments in food preservation	Group discussion
V.	Preservation techniques in convenience foods: Some examples Role of packaging in food preservation Extruded products	Using PPT	appraise the role of packaging in food preservation	quiz

List of References

1. **Norman N. potter 1996 Food science 5th edition**
2. **B. sri lakshmi 2001 Food science 2nd edition**

M. Oneix

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: Food science, nutrition and dietetics | **Class & Section:DFSN** | **Course Code: FS23601 (B)**

Name of the Faculty Member: M. Onix Tryphosa | **Course: PUBLIC HEALTH NUTRITION**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Public health –Rise , Changing concepts; Ecology of Health , Responsibility for health. Natural history of disease, Concepts of Disease control, Concepts of prevention, Modes of intervention.	Using PPT	public health and ecology of health	quiz
II.	Malaria: Prevalent major epidemiological types of malaria. Factors responsible for malaria transmission. Filariasis: Factors responsible for the transmission of lymphatic filariasis. Infection and infectivity	Using PPT	vector borne diseases like malaria, filariasis and dengue	Group discussion
III.	Amoebiasis: Agent factors (agent, reservoir of infection, period of communicability), host factors and environmental factors Secondary prevention (early diagnosis and treatment) of amoebiasis.	Lecture	concepts of epidemiology of zoonal disease	Charts, poster

IV.	Tuberculosis: Epidemiological indices of tuberculosis (Agent factors, host factors, social factors of tuberculosis) Risk factors (malnutrition and tuberculosis, HIV and tuberculosis, diabetes and tuberculosis, drug resistance Aims and objectives of RNTCP, BCG vaccination, DOTS strategy	Using PPT	types of fevers and types of vaccinations	Group discussion
V.	Bacterial food infections-Salmonellosis, Shigellosis and Listeriosis. Food poisoning: (Staphylococcal & Botulism)-Symptoms, mode of transmission and prevention	Using PPT	epidemiology of food borne diseases and food poisoning.	quiz

List of References

- Public Health Nutrition – Michale J. Gibney, Barrie M. Margetts, John M. Kearney and Lenore Arab (Eds.) – Nutrition Society Textbook Series, Blackwell Publishing.
- Nutritional Science – B. Sri Lakshmi, New Age International Publ;ishers, 2nd edition.
- Text Book of Human Nutrition – Mahtab S Bamji, N PrahladRao, Vinodini Reddy,2nd editon, Oxford & IBH Publishing Co. Pvt. Ltd.
- Social and Preventive Medicine – Part & Park.
- The Management of Nutrition in Major emergencies, WHO in collaboration with UNHCR, International Federation of Red Cross and Red Crescent societ WFP.
- Owen. A. Y. and Frankle, R. T. (1986) Nutrition in the Community. The Art of delivering Services, 2nded. Times Mirror/ Mosby.

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- II

Department: B. Sc, Food Science, Nutrition & Dietetics

Class : AFSN

Name of the Faculty Member:Dr.K.Musalaiah

Course Code:IC-23101

Course Title: Indian Heritage and Culture

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation

IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the constitution.	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature: Dr. K. Musalaiah

Approved by Head of the Department: M. Onix Tryphosa

Dr.K.Musalaiah

Mrs.M. Onix Tryphosa

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER II

Department: Food science, nutrition and dietetics | **Class & Section:AFSN** | **Course Code:FS21204**

Name of the Faculty Member:GLORY JOANA | **Course:PRINCIPLES OF FOOD SCIENCE**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Functionality of proteins,hydration,and solubility, properties, flavor binding Functionality of carbohydrates- Resistant starch, complex carbohydrates,gums,modified starches,gelation,viscocity,sweeteners ,principles of sweetening Functionality of lipids- emulsion, polymorphism, physicochemical properties	Using PPT	Functionality of protein,carbohydrates and fat	quiz
II.	Properties of water-melting and boiling point of water, structure of ice and effects of salts on aqueous solutions. Types of water –free and bound water, water activity, functionality of water in foods – emulsions surface tension	Using PPT	Water and water activity	Group discussion
III.	Classification and regulations of enzymes, factors affecting enzyme activity, enzymes in food processing, browning reactions in food, methods	Lecture	Enzymes in food	Charts, poster

	to prevent browning			
IV.	Structure, properties and effect of processing on plant and animal pigments,haemoglobin,myoglobin chlorophylls,carotenoids,anthocyanins and flavanoids	Using PPT	pigments	Group discussion
V.	Naturally occurring toxicants-plantorigin,microbial and animal origin, accidentally occurring toxicants and food additives	Using PPT	Food toxicology	quiz

List of References

1.Sethi Mohini rao R.S (2011)Food science Experiment and applications second editions ,CBS publishers ,New Delhi

2.Swaminathan.M9(1979) Food science and experimental food ,Ganesh and co. Madras

Name of the faculty member & Signature: Glory Jacinta Manne - dhanraj

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 1V

***Department:* Food science, nutrition and dietetics**

Class & Section:NFSN

Course Code:FS22405

Name of the Faculty Member:GLORY JOANA

Course Title: FUNCTIONAL FOODS AND NUTRACEUTICALS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition and types of functional foods. Benefits of functional foods and nutraceuticals and mechanism of action of nutraceuticals.Marketing and regulatory issues of functional and nutraceuticals .Development of biomarkers to indicate efficacy of functional ingredients	Using PPT	Basic aspects of functional food and nutraceuticals	quiz
II.	Different food sources of functional food-cereal products, fruits ,vegetables, milk and milk products,legumes,nuts,seafoods,coffee,tea etc Complex carbohydrates, proteins and fats including omega3 fatty acids and conjugated linoleic acid	Using PPT	Sources of functional foods	Group discussion
III.	Important features of probiotic microorganisms, health effects of probiotics and mechanism of actions on GI health. Sources of prebiotics,health benefits of prebiotics galacto oligosaccharides and functional disaccharides	Using PPT	Probiotics and prebiotics	Charts, poster

	Non digestive carbohydrates,polyphenol,etc			
IV.	Mode of action of phytochemical. Classification of phytochemicals terpenoids,carotenoids, carotene, lutein, zeaxanthin lycopene flavoinoides ,phytosetrogens,sulphur containing compounds	Using PPT	Phytochemicals as nutraceuticals	Group discussion
V.	Definition,Mechanism of action of antioxidants,role of endogenous antioxidant and exogenous antioxidants	Using PPT	Sources and role of antioxidants as nutraceuticals	quiz

List of References

1.Cho s.s and Dreher m.l(2001):Handbook Dietary fibre,Marcel Dekker inc., New York.
Yuraweez,M.P.,Mossoba ,J.K.G.Kramer,m.w.Pariza and G.J.Nelson eds (1999)Advances in conjugated linoleic Acid research,vol.1,AOCS Press,Champaign.

Name of the faculty member & Signature: Glory Joanna Marne - dhanraj

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: Food science, nutrition and dietetics

Class & Section:DFSN

Course Code:FS23604(B)

Name of the Faculty Member:GLORY JOANA

Course:NUTRITION COMMUNICATION AND COUNSELLING

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Setting objectives of a nutrition education communication programme,nutrition objectives,communication objectives and identifying target audience	Using PPT	Understand the basics of communication	quiz
II.	Essential elements of a message design,media for communication,advantages and disadvantages ,development of a communication strategy	Using PPT	Design messages for communication	Group discussion
III.	Introduction to nutrition care process,steps of nutrition care process,tools of effective communication,patient feedback	Lecture	Understand different modes of communication	Charts, poster
IV.	Role of counseling at hospital and community level,diet counseling for mother and child,PEM,GIT infections in child	Using PPT	Learn the techniques and tools	Group discussion
V.	Diet counceling for obese, diabetics,CVD,kidney disorders,liver disorders,gout,hypothyroidism and hyperthyroidism patient	Using PPT	Knowledge about patient care	quiz

List of References

1.Gibney M.J.Margetts,B.M.Kearney ,J.M.Arab .L9EDS0 (2004) Public health nutrition,ns Blackewell publishing.

2.Prochaska,K.L.,The Transtheoretical Model of Behavioural change ,shumaker SA(EDS).

Name of the faculty member & Signature: Glory Joanna Manne - dhanraj

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: Food science, nutrition and dietetics

Class & Section: AFSN

Course Code:FS21202

Name of the Faculty Member: V.Krupa Satyavedam

Course Title: Basic Dietetics

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Diet therapy- therapeutic diets, texture , nutrients and consistency modification, roles of dietician in hospital and community.	Using PPT	Practical aspects of meal planning	Group discussion, Chart making.
II.	Diet for weight management- underweight, obesity- causes, signs, symptoms, types, complication and diet modifications.	Using PPT	Understanding diet for weight management	Group discussion,
III.	Strategies for weight management- BMI, RDA, Guidelines for planning weight management diets.	Using PPT	Strategies for menu plan	Group discussion,
IV.	Diets for weight loss- low carbs diet, south beach diet, intermittent fasting, general motors diet.	Using PPT	Importance of various weight loss diets	Quiz, poster presentation.
V.	Diet in deficiency disorders (hypertension, atherosclerosis, diabetes) diseases- definition, causes, symptoms, types, complication and dietary modifications.	Using PPT	Modification of diet for diabetes and CVD	Group discussion

List of References (Book / ICT / Weblinks):

1. Srilakshmi B- Food science 4Th edition New age International Ltd,(2007).
2. NIN, ICMR 1990. Nutritive value of Indian foods.

Name of the faculty member & Signature:

V.Krupa Satyavedam

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: Food science, nutrition and dietetics

Class & Section: NFSN

Course Code:FS22406

Name of the Faculty Member: V.Krupa Satyavedam

Course Title: Basic of Research

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Research- objectives, types, significance, variables, hypothesis, formulation of research questions.	Using PPT	Significance of research methodolgy	E-poster presentation
II.	Sampling and sampling design- population and sample, sampling bias and error, census and sample survey, types of sample.	Using PPT	Types of sampling and sampling designs	Group discussion.
III.	Research design- principle and purpose, features of good research, quasi experimental design,	Using PPT	Principles and purpose of research designs	Charts making
IV.	Research tools and methods of data collection- quantitative and qualitative tolls, observation, methods of data collection and reliability & validity of measuring instruments.	Using PPT	Various research tools and collection of data	Survey on food products
V.	Analysis and report writing- coding, classification and tabulation of data, diagrammatic representation, analysis and interpretation of data.	Using PPT	Coding and data classification	Questionnaire presentation

List of References (Book / ICT / Weblinks):

1. Edwards experimental design in psychological research.
2. Kerlinger: foundation of educational research.

Name of the faculty member & Signature:

V.Krupa Satyavedam

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-VI

Department: Food science, nutrition and dietetics | **Class & Section: DFSN** | **Course Code:FS23603 (A)**

Name of the Faculty Member: V.Krupa Satyavedam | **Course Title: Diet counselling and Patient care**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Basics of diet counseling- types, sequence in diet counseling, materials needed for counseling.	Using PPT	Knowledge on counseling	Group discussion.
II.	Basics of nutrition communication- process, linguistics, techniques and impact of counselling on health,	Using PPT	Types of counseling	Group discussion, Quiz.
III.	Patient care process- nutrition care process, tools for effective counselling, organizing health camps.	Using PPT	Health camps organizing at community level	Group discussion.
IV.	Diet counselling at hospital and community level- mother and child diet counseling, PEM, GIT infections.	Using PPT	Techniques and tools for nutrition counselling	Poster presentation
V.	Diet counselling at hospital and community level- Obese, diabetic, liver disorders, gout and hyperthyroidism.	Using PPT	Patient care in hospital and community level	Health camp

List of References (Book / ICT / Weblinks):

1. Gibney M.J., Margetts, B.M., Kearney, J.M., Arab, L.(Eds) (2004) Public health nutrition, NS Blackwell publishing,
2. Prochaska, K.L., Trans theoretical model of behavioural change, Shumaker SA (Eds).

Name of the faculty member & Signature:

V.Krupa Satyavedam

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024 SEMESTER:11

Department:Food science,nutrition and dietetics

Class & SectionAFSN

Course Code:FS21201

Name of the Faculty Member :G.GNANA SHEEBA

Course Title:FOOD MICROBIOLOGY

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Food microbes-types, role of microorganisms and their general characteristics ,role of micro organisms in food spoilage, factors affecting growth of microbes, antimicrobial barriers and constituents	ICT USAGE	The students will be able to identify the different microorganisms associated with food	Quiz
II.	Microbial estimation-sources, Useful micro organisms, total cell count, viable cell count, plate counters, estimating the number of micro organisms, aseptic collection of samples, indicator organisms, microbiological quality control and HACCP	ICT USAGE	The students will learn the microbial estimation in food	Quiz
III.	Microorganisms associated with food and water-contamination and preservation of foods cereals,pulses,nuts and oilseeds, fruits and its products, vegetable and its product, meat and dairy products,	CHALK AND BOARD	The students will be able to identify the microorganism associated with food and water	Group discussion

	spoilage and beneficial role of microorganisms in foods.			
IV.	Application of microorganisms in food, fermented food products bread making, alcoholic beverages,vinegar,cheese other lactic acid fermented products ,microbial proteins and vitamins, acid fermented vegetables single cell protein	ICT USAGE	The students will be able to know the food preservation techniques	Poster making
V.	Food borne illnesses-pathogens, food borne infections E.coli,salmonella,staphylococcusvibrio,yersinia ,Listeria, food poisoning ,food borne intoxications ,Hepatitis A and B,Gastroenteritis viruses	ICT USAGE	The students will be able to learn food borne illnesses .	Group discussion

List of References (Book / ICT / Weblinks):

1. Frazier W.C1995 Food microbiology 1v edition ,new York:mcgraw hill book company
2. James M jay 1996 Modern food microbiology 1V edition,New Delhi:CBS publishers

G. Gnana Sheeba

Name of the faculty member & Signature: Sheeba

Approved by Head of the Department: M. Arul

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER IV

Department:Food science,nutrition and dietetics **Class&Section:NFSN** **CourseCode:FS22403**

Nameofthe FacultyMember: G.Gnanasheeba **CourseTitle:Diet Therapy**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Dietary supplements, types of supplements,adjunts to diet therapy, defense mechanisms in the body, role of nutrition in infectious and dietary modifications, metabolic changes in fever, dietary management of typhoid, tuberculosis ,signs and symptoms, foods to be included and excluded	Chalk and board	The students will be able to understand the basic principles in defense mechanisms and during fever.	Group discussion
II.	Definition,causes,types,symptoms , complications, risk factors dietary modification, foods to be included and foods to be avoided in Arthritis patient,Gout,Cancer and acquired immunodeficiency syndrome	Using ICT	The students will be able to understand the dietary requirements during arthriris,gout,cancer and AIDS	quiz
III.	Dietary management in surgical condition, preoperative nutritional assessment and dietary management, post-operative nutritional management,causes,symptoms and dietary management of sepsis ,trauma and burns, assessment of TBSA degrees of burns	Using ICT	The students will learn about the pre and post operative care	charts

IV.	Inborn errors of metabolism Definition , signs and symptoms ,dietary management of phenylketonuria,galactosemia,lactos eintolerance and food allergy	Chalk and board	To understand the inborn errors of metabolism	Group discussion
V.	Nutrition and immune response, role of immune nutrients, immunological components of breast milk, effect of under nutrition and over nutrition on immunesystem,immunoenhancers,im munosuppresants and conditionally essential nutrients	Chalk and board	Students will be able to understand the basic aspects of immune nutrients	Group discussion

Listof References (Book/ICT/ Weblinks):

1. Antia,F.P.(2010) clinical dietetics and nutrition (4thedition) pharmamed
2. Srilakshmi B (2011).Dietetics (6th edition)wiley Eastern limited.
3. 3. SueRodwell Williams (2009) nutrition ,Diet therapy(12 th edition),WB Saunders company,London.

Nameofthefacultymember&Signature: G. Gnana Sheeba

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER VI

Department:b.sc(Food science,nutrition and dietetics) **Class&Section:DFSN** **CourseCode:Community nutrition**

Nameofthe FacultyMember:G.Gnanasheeba **CourseTitle:FS 23601(A)**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Definition and concept of community, vital ststistics,mortality,morbidity,nutrition and health policies, occupational hazards,physical,chemical and biological hazard. Protection of health and nutritional status of workers ,medical measures of women employees, infrastructures and legislation	ICT USAGE	Students will be able to understand the concept of community nutrition	Group discussion
II.	Anthropometry measurements-weight,height,mid arm circumference, skinfoldthickness,BMI uses and limitations ICMR standards, Gomez and waterloo classification, dietsurvey, biochemical methods uses and limitations, clinicalassessment, uses and limitations and biomarkers	Chalk and board	Students will acquire knowledge regarding the assessment of nutritional status	quiz
III.	Importance of nutrition and health education, tools and techniques of health education-visual aids, audiovisual aids, advantages and disadvantages, types of approaches-perasonal,group, and mass,	ICT USAGE	Students will be able to understand nutrition education and health education	charts

	responsibility of nutritional counselor at community level ,central level, state level village level and primary level			
IV.	Magnitude of malnutrition, consequences of malnutrition in India, nutritional problems in I ndia,PEM,Anemia,iodine deficiency disorder ,Vitamin A deficiency ,Dental caries,fluorosis	Chalk and board	Students will get knowledge on nutrition and health intervention	charts
V.	Measures to combat malnutrition ICDS,IDDCP,Role of national organization -ICMR,ICAR,NIN,Role of international organization CARE,WHO,FAO,ICRISAT	Chalk and board	Students will learn about the difference between national and international organization	Group discussion

Listof References (Book/ICT/ Weblinks):

1. Social and preventive medicine –park and park
2. Goyet,Fish.V.Seaman.J and Geijer(1978)The management of nutrition emergencies in large population ,WHO, Geneva.

3 .Owen a.Y.andFrankle ,R.T(1986) Nutrition in the community, The art of delivering services, times mirror\Mosby

G. Gnana Sheeba

Nameofthefacultymember&Signature: Sheeba

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –

2024 SEMESTER:II

Department: Food science, nutrition and dietetics

Class & Section: AFSN

Course Code:FS21203

Name of the Faculty Member :
D.KRUSHITHA

Course Title: Family Meal Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meal planning for the family, objectives, nutritional adequacy of the meal, family size and composition, principles and steps of meal planning, food exchange list, reference man and women, nutritional requirements of adult man and adult women	CHALK AND BOARD	Students will be able to describe basic terms and principles of meal planning	Quiz
II.	Nutrition in pregnancy, physiological stage of pregnancy, preconception nutrition, expected weight gain , complications, nutrition in lactation, role of hormones, food requirements	ICT USAGE	Students will be able to use nutritional knowledge to apply during pregnancy and lactation period	Quiz
III.	Nutrition in infancy, food requirements, preterm baby and weaning, nutrition in preschool, food requirement, nutrition related problems	ICT USAGE	Students will be able to identify nutrition related problems in infancies and preschool children	Group discussion
IV.	Nutrition in school children, food requirements, packed lunch's, school lunch programmers', nutrition during adolescence, nutritional problems	ICT USAGE	Students will be able to construct knowledge on nutrition programmes held by government	Poster making

V.	Nutrition in old age, process of aging, food requirements, nutrition related problems, degenerative diseases,	ICT USAGE	Students will be able to identify nutritional requirements, nutritional problems in adults and geriatrics	Group discussion

List of References (Book / ICT / Weblinks):

Srilaxmi 2007,Dietetics ,7th edition, New delhi, new age international limited

Bamji MS krishnaswamy brahmam GNV 2009, TEXTBOOK OF HUMAN NUTRITION 3rd edition newdelhi, oxfard and IBH publishing PVT ltd

Name of the faculty member & Signature:

D. Kavyshitha

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –

2024 SEMESTER: IV

Department:Food science,nutrition and dietetics | **Class & Section NFSN** | **Course Code:FS22404**

Name of the Faculty Member : D.Krushitha | **Course Title: ADVANCED NUTRITION**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Human energy requirements, components of energy requirements, factors effecting energy expenditure and requirement, methods of estimation of energy expenditure, dietary energy recommendations for various age groups and physiological conditions	ICT USAGE	Students will be able to learn human energy requirements	Quiz
II.	Protein quality, evaluation of protein quality utilization, protein efficiency ratio, estimation of protein requirements at different stages, effects of protein quality and quantity	ICT USAGE	Students will be able to apply the knowledge of assessing protein quality	Quiz
III.	Nutrition for gene expression, role of specific nutrients in controlling gene expression, nutrition and immune response, effect of under nutrition and overnutrition on immune function, effect of food, nutrients, nutritional stage on drug dosage	CHALK AND BOARD	Students will be able to understand the nutrition for gene expression	Group discussion
IV.	Free radicals, sources, disease processes, markers of oxidative stress, antioxidants, immunity and	ICT USAGE	Students will be able to assess antioxidants	Poster making

LESSON PLAN

Name of the Lecturer: Mrs.Ananda Mary
Department: Food Science and Nutrition.
Paper: Human Physiology
Class: 1Year/I Semester **Year: 2022-2024** **Semester: I**

Serial No:	Topic Allotted	No of Hrs.
1	Blood composition and function	1
2	Plasma protein composition and function	1
3	Blood formation and factors controlling erythropoesis	1
4	Pathophysiology of anemia	1
5	Pathophysiology of jaundiced	1
6	Cardiac cycle	1
7	Cardiac output and heart sounds	1
8	Heart rate and regulation	1
9	Blood pressure and hypertension	1
10	Coronary artery disease	1
11	Hemorage and componsatory changes after hemorrhage	1
12	Transport and exchange of gases	1
13	Control of respiration and respiratory control tests	1
14	Lung volume and capacity and copd	1
15	Urine formation	1
16	Acid base balance	1
17	Pathophysiology of renal stones	1
18	Pathology of urinary track infections	1
19	Pathophysiology of glomerular nephritis	1
20	Physiology and functions of stomach	1
21	Physiology and functions of liver	1
22	Physiology and functions of pancreas and gall Bladder	1
23	Composition function and regulations of salivary juice	1
24	Composition function and regulations of pancreatic juice	1

25	**Composition function and regulation of bile juice**	**1**
26	**Composition function and regulations of intestinal juice**	**1**
27	**Gi hormones**	**1**
28	**Peptic ulcer pathophysiology gerd**	**1**
29	**Cholelithiasis pathophysiology**	**1**
30	**Portal hypertension pathophysiology**	**1**
31	**Fatty liver pathophysiology**	**1**
32	**Liver cirrhosis pathophysiology**	**1**
33	**Structure and function of neuron**	**2**
34	**Structure and function of nerve**	**1**
35	**Conduction of nerve impulse**	**1**
36	**Synapse and neuro transmitters**	**1**
37	**General organisation of nervous system.**	**1**
38	**Protection structure and function of brain**	**1**
39	**Protection structure and function of spinal cord**	**1**
40	**Cerebrospinal fluid**	**1**
41	**Structure function and role of sensory organs skin eyes**	**1**
42	**Structure function and role of ears nose and toung**	**1**
43	**Effects of pituitary thyroid**	**1**
44	**Effects Parathyroid**	**1**
45	**Effects of adrenal**	**1**
46	**Effects of pancreatic harmonies**	**1**
47	**Pathophysiology of diabetes mellitus**	**1**
48	**Pathophysiology of metabolic syndrome**	**1**
49	**Pathophysiology of harshimoto disease**	**1**
50	**Pathophysiology of tetanus**	**1**
51	**Pathophysiology of Cushing syndrome**	**1**
52	**Pathophysiology of mensuation**	**1**
53	**Pathophysiology of menopause**	**1**
54	**Pathophysiology of aging**	**1**

55. **56** **57** **58**	**Pathophysiology of pregnancy** **Pathophysiology of lactation** **Pathophysiology of pcod** **Pathophysiology of infertility**	**1** **1** **1** **1**
	No of Units : Total Hrs :	**60**

LESSON PLAN

Name of the Lecturer: Ms.Pravalika

Department: Food Science and Nutrition.
Paper: Principles of food science
Class: 1Year/I Semester **Year: 2022-2023** **Semester: I**

Serial No:	Topic Allotted	No of Hrs.
1	Water	4
2	PH	2
3	Oxidation reduction potential of foods	1
4	application in food systems	1
5	Enzymes Classification	1
6	application in food industry and immobilized enzymes	2
7	Proteins	3
8	Sugars	4
9	Lipids	4
10	Basic concepts of new product development	3
11	Food additives	1
12	preservatives	1
13	Antioxidants	1
14	emulsifiers	1
15	Humectants, hydrocolloids	1
16	Sweeteners, acidulants. Buffering salts, anticaking agents	1
17	Food uses and functions in formulation	1
18	Toxicological evaluation of food additives	1
19	Food processing and preservation by heat	3
20	Food processing and preservation by low temp	3
21	Food processing and preservation by non thermal technologies	3
22	Food processing and preservation by other methods	3
	No of Units : Total Hrs :	37

LESSON PLAN

Name of the Lecturer: Ms.Shirley Lillian
Department: Food Science and Nutrition.
Paper: Advanced nutritional biochemistry and instrumentation
Class: 1Year/I Semester **Year: 2023-2025 Semester: I**

Serial No:	Topic Allotted	
1	Glycolysis	1
2	Gluconeogenesis	1
3	Hexose monophosphate shunt	1
4	Citric acid cycle	1
5	Fatty acids synthesis of saturated	1
6	Synthesis of unsaturated fatty acids	1
7	Triacyl glycerol synthesis	1
8	Phospholipid synthesis	1
9	Lipoprotein synthesis	1
10	Cholesterol synthesis and regulation	1
11	Genetic code	1
12	Translation	1
13	Post translational modifications	1
14	Genetic mutations	1
15	Genetic recombination	1
16	Basic principles of Nutrigenomics	1
17	Elementary knowledge of DNA recombinant technology	1
18	Nucleotide structure	1
19	Biosynthesis and breakdown of purine nucleotides	1
20	Biosynthesis and breakdown of pyrimidine nucleotides	1
21	DNA organisation	1
22	DNA Replication and repair	1
23	RNA synthesis and processing in prokaryotes	1

24	**RNA synthesis and processing in eukaryotes**	**1**
25	**Regulation of gene expression in lac Oberon**	**1**
26	**Restriction enzymes**	**1**
27	**Chimera DNA**	**1**
28	**Clonning**	**1**
29	**Genomic library and cDNA library**	**1**
30	**Target cell concept**	**1**
31	**Receptors**	**1**
32	**Classification of harmones**	**1**
33	**Signal transduction**	**1**
34	**Intracellular messengers**	**1**
35	**Beer Lamberts law**	**1**
36	**Colorimetry**	**1**
37	**Atomic absorption**	**1**
38	**Flame photometry**	**1**
39	**Gel filtration chromatography**	**1**
40	**Ion exchange chromatography**	**1**
41	**Affinity chromatography**	**1**
42	**High pressure liquid chromatography**	**1**
43	**Gas chromatography**	**1**
44	**Electrophoresis polyacrylide gel electrophoresis**	**1**
	Native and SDS	**1**
45	**Agarose gel Electrophoresis**	**1**
46	**Ph Meter**	**1**
47	**Radio isotopes and their application**	**1**
	No of Units : 3 **Total Hrs :**	**47**

LESSON PLAN

Name of the Lecturer: Ms.Divya Bhanu
Department: Food Science and Nutrition.
Paper: Advanced Human Nutrition
Class: 1Year/I Semester **Year: 2022--2024** **Semester: I**

Serial No:	Topic Allotted	No of Hrs.
1	Historical perspective of nutrient requirements	2
2	Methods of assessment of nutrient needs – a critical review	2
	Critical evaluation of sensitive methods and derivations of requirements and recommended dietary allowances of macronutrients for all age groups	
3	Energy	1
4	Carbohydrates and dietary fiber	2
5	Proteins and amino acid	2
6	Lipids	1
7	Water	1
8	Critical evaluation of national and international nutrient allowances; factors affecting the requirements	1
9	Water soluble vitamins	4
10	Fat soluble vitamins	3
11	Minerals and trace elements	3
12	Critical evaluation of national and international nutrient allowances; factors affecting the requirements, dietary guidelines for Indians	2
13	Extreme temperatures – low and high	2
14	High altitude	2
15	Space nutrition and food systems	2
16	Sports nutrition	2
17	Host defense mechanisms and nutrients essential in the development of immune system	2

18	**Effect of Infections on the nutritional status of an individual**	**2**
19	**Nutrient deficiencies and excesses affecting the immuno-competence and susceptibility to infections**	**2**
20	**Ongoing nutrition transition and its implications**	**2**
21	**Changing trends in life style patterns in population groups and their implications**	**2**
22	**Nutrigenomics, nutraceuticals, bioactive compounds**	**2**
23	**Ways of enhancing nutritional quality of diets**	**2**
24	**Assessment of protein quality- By various indices and their interpretation**	**2**
25	**Dietary diversification**	**2**
26	**Bioavailability of nutrients**	**2**
	TOTAL	**47**

LESSON PLAN

Name of the Lecturer: Dr.G.Gladvin
Department: Food Science and Nutrition.
Paper: Research Methodology
Class: 1Year/II Semester **Year: 2022-2024** **Semester: II**

Serial No:	Topic Allotted	No of Hrs.
1	Data Collection,	1
2	Data Measurment	1
3	Definition and characteristics of data	1
4	Primary data characteristics advantages and disadvantages	1
5	secondary data characteristics advantages and disadvantages	1
6	Sources of data	1
7	Methods of data collection	1
8	Observation method	1
9	Personal interview forms schedules	1
10	Questionary method–	1
11	Documentation sources of data	1
12	Case study	1
13	Sampling and sampling Design,	1
14	Definitions and variables,	1
15	Methods of sampling	1
16	probability sampling methods,	1
17	simple random sampling, stratified sampling	1
18	systematic sampling multistage sampling.	1
19	Non Propbability sampling	1
20	judgement sampling conveinience sampling	1
21	quota sampling hit or accidental sampling.	1
22	Size of sampling determination of sampling	1
23	size sampling	1
24	non- sampling errors	1

25	**Attitude measurement measurement of attitudes concept of scale**	**1**
26	**scales definition of attitude importance**	**1**
27	**Basis of scale classifications**	**1**
28	**Attitude scales Thurston scale**	**1**
29	**likerts scale guttmans or basic statistical tools**	**1**
30	**Data processing editing**	**1**
31	**Codification classification and tabulation of data quantitative analysis of data**	**1**
32	**Report writing and presentation**	**1**
33	**Definition purpose report synopsis types of report**	**1**
34	**Characteristics of a good report.**	**1**
35	**Structure of a good research report writing**	**1**
36	**Formatting of reports.**	**1**
	No of Units : 3 Total Hrs :	**36**

LESSON PLAN

Name of the Lecturer: Mrs.Pravalika
Department: Food Science and Nutrition.
Paper: Advance Food Science
Class: 1Year/I Semester **Year: 2022--2024** **Semester: I**

Semester: II

Serial No:	Topic Allotted	No of Hrs.
	Application of heat : processing, effect on food texture, colour, flavour and nutritional value of foods by:	
1.	**Heat processing using steam or water –Pasteurization and Heat sterilization, Evaporation and distillation**	**4**
2.	**Extrusion**	**2**
3.	**Heat processing by hot air**	**2**
4.	**Baking**	**2**
5.	**Frying using oil**	**2**
	Effects of Cold Processing on Food:	
6.	**Chilling**	**3**
7.	**Controlled and modified atmosphere storage and packaging**	**4**
8.	**Freezing**	**2**
9.	**Freeze drying and freeze concentration**	**3**
	Preservation of food by Fermentation:	
10.	**Food conversion**	**2**
11.	**Food cultures**	**2**
12.	**Lactic acid bacteria and other bacteria**	**2**
13.	**Lactic acid bacteria with yeast**	**2**

14.	**Lactic acid bacteria with moulds**	**2**
15.	**Miscellaneous fermentation**	**2**
	Preservation of food by Irradiation of foods	
16.	**Theory**	**1**
17.	**Equipment**	**1**
18.	**Application and effect on food- Colour**	**2**
19.	**Application and effect on food- Flavour**	**2**
20.	**Application and effect on food- Nutrients**	**2**
21.	**Application and effect on food- Micro organisms**	**2**
22.	**Effect on packaging and detection of irradiated foods**	**2**
23.	**Food Additives, Classification, Interactions with foods**	**3**
24.	**Food Adulterants**	**2**
25.	**Methods of improving nutritional value of foods**	**2**
26.	**Food enrichment**	**2**
27.	**Restoration and fortification of Food**	**3**

NO.OF UNITS	**05**	**TOTAL HOURS**	**60**

LESSON PLAN

Name of the Lecturer: Mrs.Shirley Lillian
Department: Food Science and Nutrition.
Paper: Food Microbiology and food safety
Class: 1Year/I Semester **Year: 2022--2024** **Semester: II**

Serial No:	Topic Allotted	No of Hrs.
1.	Definition, Scope of Food Microbiology	2
	An introduction to microbial world: Bacteria, Fungi, Yeast, Viruses Bacterial groups based on their morphology:	
2.	Gram+ve/Gram –ve bacteria	1
3.	Motile/Non-motile bacteria	1
4.	Sporulating/Non-sporulating bacteria	2
5.	Bacterial groups based on their physiological growth factors: Temperature, pH, water activity, availability of oxygen	2
6.	Fungi and Yeast: General features & their importance in food microbiology	2
7.	Viruses and Bacteriophages: Definition, their general characteristics & multiplication.	2
	Food spoilage: Definition, sources of contamination and microorganisms involved in spoilages of various foods:	
8.	Milk	1
9.	Bread	1
10.	Canned food	1
11.	Vegetables and fruits	1
12.	Fruit juices	1
13.	Meat	1
14.	Eggs and Fish	1
	Physical and chemical means used in destruction of microbes:	

15.	**Definition of sterilization and disinfection**	**1**
16.	**Role of heat**	**1**
17.	**Filtration and radiation in sterilization**	**1**
18.	**Use of chemical agents-alcohol**	**1**
19.	**Halogens and detergents**	**1**
	Importance of microbes in food biotechnology:	
20.	**Genetically engineered organisms**	**2**
21.	**Probiotics**	**2**
22	**Single cell proteins.**	**3**
23.	**Dairy products (cheese and yoghurt)**	**3**
24.	**Traditional Indian fermented foods and their health benefits.**	**2**
25.	**Sources of contamination of food**	**1**
26.	**Cleaning and sanitation in food processing in home and industry**	**1**
27.	**Food plant sanitation**	**1**
28.	**Hygienic handling**	**1**
29.	**Processing**	**1**
30.	**Packaging and service of food.**	**2**
31.	**Contamination of water –Microorganisms in contaminated water, test for contamination, standards for drinking water.**	**3**
32.	**Food Borne Diseases – Sources, symptoms and methods of prevention and control.**	**2**
33.	**Public health hazards due to microbial contamination of foods: Important food borne infections and intoxications due to bacteria, moulds, viruses (*Salmonella typhi, Helicobacter pylori, Campylobacter jejuni, Yersinia enterocolitica, Bacillus cereus, Staphylococcus aureus, Clostridium botulinum, Escherichia coli, Mycotoxins, Hepatitis A virus & Rota virus*)- Symptoms, mode of transmission and methods of prevention.**	**6**
34.	**Assessing the microbiological quality of food: indicator organisms, microbiological standards, principles of GMP & HACCP in food processing. Safety management at household and industrial level.**	**6**

NO.OF UNITS	**05**	**TOTAL HOURS**	**60**

LESSON PLAN

Name of the Lecturer: Ms.Divya Bhanu
Department: Food Science and Nutrition.
Paper: Therapeutic Nutrition
Class: 1Year/I1 Semester **Year: 2022--2024** **Semester: II**

Serial No:	Topic Allotted	No of Hrs.
1	Nutrition care process Nutritional screening and assessment of patients – out patient & hospitalized	3
2	Nutritional interpretation of routine medical and laboratory data Nutrition care plan and implementation Monitoring and follow up Ethical issues	3
3	Dietary Counseling	2
4	Nutrition Support: Enteral Nutrition	2
5	Weight imbalance disorders	3
6	Overweight and Underweight	3
7	Diabetes Mellitus – Type 1	3
8	Type 2 and Gestational diabetes	3
9	Cardio Vascular Diseases – Hypertension, Hyperlipidemia	3
10	Metabolic syndrome, peripheral and Cerebro vascular disease	3
11	Gastrointestinal tract Disorders – GERD, peptic ulcer	3
12	Diarrhea, lactose intolerance, celiac disease	3
13	Liver and Gall bladder disorders : Jaundice,	3
14	Hepatitis-B and Liver Cirrhosis	3
15	Renal Disorders: Nephritis, Nephrosis	3
16	Renal Failure, Kidney stones.	3
17	Cancer - Role of diet in etiology and management	2
18	Alzheimer’s disease and Parkinson’s disease	2
19	HIV-AIDS	2

TOTAL HOURS	52

LESSON PLAN

Name of the Lecturer:Ms.Pravalika
Department: Food Science and Nutrition.
Paper:Institutional food management
Class: AMFSN /II Semester **Year: 2022-2024** **Semester: II**

Serial No:	Topic Allotted	No of Hrs.
1	Management theories	1
2	Classical scientific behavioral and systemic approaches	1
3	Contingency approach MBO JIT and TQM	1
4	Managerial operations functions of management	1
5	Principles of management	1
6	Definition of organization and steps in organizingv	1
7	Tools of management tangible tools	1
8	Intangible tools	1
9	Menu planning functions and factors effecting menu planning	1
10	Menu construction	1
11	Types of menu and menu card	1
12	Qualifications of menu planner	1
13	Purchase Market buyer and vendor	1
14	Methods of purchase formal and informal	1
15	Purchasing procedure	1
16	Storage types of storage	1
17	Store room requirements	1
18	Appropriate temperature for storage of different foods	1
19	Store room records	1
20	Food production planning and control	1

21	**Importance of planning**	**1**
22	**Production forecast**	**1**
23	**Estimations quantities to buy**	**1**
24	**Quantity preparation techniques**	**1**
25	**Production schedule**	**1**
26	**Product evaluation**	**1**
27	**Standardization recipes**	**1**
28	**Recipe adjustments and portion control**	**1**
29	**Food delivery and service : centralized and de centralized**	**1**
30	**Factors effecting selection**	**1**
31	**Styles of service**	**1**
32	**Delivery and service equipment**	**1**
33	**Man power planning**	**1**
34	**Functions of personal managers**	**1**
35	**Need of unit menu**	**1**
36	**Types of operations**	**1**
37	**Types of service**	**1**
38	**Job description and job specifications**	**1**
39	**Manpower placement**	**11**
40	**Recruitment process and sources internal and external**	**1**
41	**Selection process and interview**	**1**
42	**Tests**	**1**
43	**Orientation importance and content of prpgramme**	**1**
44	**Developing orientation programme**	**1**
45	**Training importance types**	**1**
46	**Developing a training programme**	**1**
47	**Contract negotiation with employee**	**1**
48	**Appointment letters**	**1**
49	**Establishment of wages**	**1**
50	**Components of wages**	**1**

51	**Rules and regulations duties and services and benefits**	**1**
52	**Contact with vendors**	**1**
53	**Performance appraisal importance methods limitations**	**1**
54	**Leadership importance styles traits and skills**	**1**
55	**Motivational theories content theories**	**1**
56	**Motivational theories process and reinforcement theories**	**1**
57	**Dealing with organizational behavior**	**1**
58	**Absenteeism**	**1**
59	**Labour turn over**	**1**
60	**Conflict**	**1**
61	**Trade unions**	**1**
62	**Collective bargaining**	**1**
63	**Labour laws and policies**	**1**
	No of Units : 5 Total Hrs :	**63**

LESSON PLAN

Name of the Lecturer: MS. S. DIVYA BHANU
Department: MSC FOOD SCIENCE AND NUTRITION
Paper: PROGRAMME PLANNING IN PUBLIC HEALTH NUTRITION

Class: NMFSN **Year: 2nd Year**
Semester: 3

Serial No:	Topic Allotted	No of Hrs.
1	Concept of Community Health &Nutrition	2
2	Concept of Community- types of community, factors affecting health of the community.	3
3	Health Care- Levels of health care- Primary Health Care- Primary health care, health care delivery	3
4	National immunization schedule	2
5	Role of public nutritionist in health care delivery	2
6	Demography, nutrition and quality of life	2
7	Demographic cycle- Population trends in India- Population structure- sex composition Age composition- Fertility behavior- Vital statistics in vulnerable groups ,population growth (Maternal Mortality rate, Infant Mortality Rate, Net Reproduction Rate)	3
8	Causes of malnutrition, consequences of malnutrition, Intervention in malnutrition	3
9	Food security- PDS, Food production- Food Pricing	2
10	Method and Assessment of Nutritional Status	4
11	Identification of risk groups(random and purposive) Direct assessment – Diet surveys, Anthropometry, Clinical and Biochemical Estimation	4

12	**Indirect assessments- Food balance sheets and Agricultural Data. Use of growth charts.**	**4**
13	**Intervention Programmes**	**4**
14	**ICDS, Mid-Day Meal Programme, NIPPCD**	**4**
15	**Fortification and Enrichment of foods**	**4**
16	**Nutritional Problem of Community**	**3**
17	**Nutritional and Non- nutritional- Incidence of nutritional problems, signs, symptoms and treatment- Protein Energy Malnutrition-Micro Nutrient deficiencies (Vit-A, Iron, Iodine and Zinc),Fluorosis**	**3**
18	**Communicable Diseases -cholera, polio, measles, HIV**	**3**
19	**Impact of NCD's on public health: Obesity, DM 2, CVD, Cancers and Osteoporosis and hip fractures.**	**3**

NO.OF UNITS	**05**	**TOTAL HOURS**	**60**

LESSON PLAN

Name of the Lecturer: MS. S. PRAVALIKA
Department: MSC FOOD SCIENCE AND NUTRITION
Paper: COMMUNITY NUTRITION

Class: NMFSN **Year: 2nd Year**
Semester: 3

Serial No:	Topic Allotted	No of Hrs.
1	Nutrition of a Community - Introduction Definition of community nutrition role of nutrition in community development methods of improving nutritional quality	1
2	Modern Methods of Improving Nutritional Quality	1
3	Food Fortification – definition methods advantages disadvantages	2
4	Nutrient Supplementations - Introduction types of supplement advantages disadvantages	2
5	Nutrition education themes and messages in nutrition and health	2
6	Antenatal Care - definition importance objectives methods nutrition education	2
7	Postnatal Care - definition importance objectives methods nutrition education	2
8	Protein Energy malnutrition – etiology, prevalence, causes, prevention and control	2
9	Other Major nutritional problems – Macro nutrient deficiencies and micronutrient deficiencies, etiology, symptoms, prevention and control	2
10	Assessment of nutritional status – meaning need, objectives, and techniques	2
11	Primary Methods: Anthropometric measurement, Weight, Height skin fold, Head circumference MUAC. Chest	3

	circumference, use of growth chart, Biochemical assessment, clinical assessment, Diet surveys	
12	**Secondary Methods: Vital statistics, Mortality rates, survival rate, morbidity rate, fertility rate**	**3**
13	**Nutrition Monitoring and Nutrition surveillance objectives and components**	**3**
14	**Nutrition monitoring and current programmes. Nutrition Surveillance –Objectives, Uses, infrastructure and computerization**	**3**
15	**Nutrition Education – Need and scope, importance, theories,**	**3**
16	**Nutrition education programmes – formulations, Implementation and Evaluation**	**3**
17	**Introduction , Definition of community nutrition, Identification of problem**	**2**
18	**Nutritional assessment**	**2**
19	**Analysis of cause , Resources , Constraints**	**2**
20	**Selection of interventions , Setting a strategy , Implementations**	**2**
21	**Evaluation of the programme**	**2**
22	**Nutrition Programmes in developing and developed countries**	**4**
23	**National & International Agencies: Introduction, mission, vision, objectives, functions, policies of CFTRI ,NIN, FAO, NIPCCD, CARE, WHO, UNICEF, ICMR, ICAR, CSIR**	**10**

NO.OF UNITS	**05**	**TOTAL HOURS**	**60**

LESSON PLAN

Name of the Lecturer: MS. S. DIVYA BHANU

Department: MSC FOOD SCIENCE AND NUTRITION

Paper: PROGRAMME PLANNING IN PUBLIC HEALTH NUTRITION (PRACTICAL)

Class: NMFSN **Year: 2nd Year**

Semester: 3

Serial No:	Topic Allotted	No of Hrs.
1	Development and sale/ exhibition of nutritious food supplements for the following vulnerable segments of population.	5
a	Infant – weaning mix	1
b	Preschool child	1
c	Pregnant Woman	1
d	Lactating woman	1
e	Geriatrics	1
2	Develop a schedule to assess the nutritional status in the following communities	10
a	Orphanage	2
b	Old age home	2
c	Social welfare hostels	2
d	Missionaries	2
e	Gurukulas –where students are given vedic education or schools with propagate holy education for their community	2
3	Assessment of nutritional status using the prepared schedule in different communities and Report writing	6
a	Balwadis	2
b	Anganwadi	2
c	PHC	2

4	**Field visits to ongoing public health nutrition programmes and Report writing**	**9**
a	**ICDS centers**	**2**
b	**Midday meal programmes**	**2**
c	**Canteens**	**2**
d	**Concessional food canteens for workers**	**3**

TOTAL HOURS	**30**

LESSON PLAN

Name of the Lecturer: Mrs.Ananda Mary
Department: Food Science and Nutrition.
Paper: Nutrition for health and fitness
Class: 2 Year/IV Semester **Year: 2020-2021** **Semester: IV**

Serial No:	Topic Allotted	No of Hrs.
1	Carbohydrates Classification functions sources digestion and absorption	3
2	Regulation of blood glucose concentration	1
3	Dietary fibre	1
4	Resistant starch	1
5	Glycemic index	1
6	Proteins: classification food sources functions	2
7	Proteins : digestion absorption and transport and nutritional requirements	2
8	Fats types functions sources nutritional requirements	2
9	Fats: diseases excessive fat intake	2
10	Water and electrolyte balance	2
11	Vitamins and minerals: types, sources & functions	2
12	Vitamins and minerals: requirements deficiency toxicity & preventive measures	2
13	Food components other than essential nutrients: Functional foods, bioactive substances from protein foods	3
14	Non glycerides in edible oils	2
15	Probiotics and prebiotics	1
16	Polyphenols	1
17	Phytoestrogens	1
18	Other dietary factors with antinutritional effects like: Protease inhibitors	2
19	Amylase inhibitor	1
20	Saponins	1

21	**Lectins or haemagglutinins**	**1**
22	**Phytates and their health benefits**	**1**
23	**Nutrition during different stages of life cycle**	**2**
24	**Sports nutrition : concepts and techniques of measuring body composition , work capacity and physical fitness**	**2**
25	**Nutrition demands of sports and dietary recommendations**	**2**
26	**Ergogenic aids**	**1**
27	**Holistic approach to the management of fitness and health**	**2**
28	**Energy input and output**	**2**
29	**Diet and exercise**	**2**
30	**Effects of specific nutrients on work performance and physical fitness**	**2**
31	**Nutrition , exercise, physical fitness and health inter-relationship**	**2**
32 **33**	**Review of different energy system for endurance and power activity** **Fuels and nutrients to support physical activity**	**2** **2**
34	**Shifts in carbohydrate and fat metabolism**	**2**
35	**Mobilization of fat stores during exercise**	**2**
	No of Units : 5 Total Hrs :	**60**

LESSON PLAN

Name of the Lecturer:Mrs.Ananda Mary
Department: Food Science and Nutrition.
Paper: Nutrition Communication For Health Promotion
Class:2Year/IV Semester **Year: 2020-2021** **Semester: IV**

Serial No:	Topic Allotted	No of Hrs.
1	Dietary guidelines for nutrition and health related concerns	2
2	National and international guidelines and their role in nutrition promotion	2
3	Critical appraisal of the current guidelines	2
4	Nutrition and behavior interrelationship	2
5	Food and health behavior	2
6	Models and theories of health behavior	3
7	Food choices, strategies for intervention at the ecological and individual level	3
8	Behavior change communication for nutrition and health promotion	2
9	Concepts and objectives of communication for behavior change	2
10	Implementing behavior change communication intervention: overview	2
11	Evaluation of communication for behavior change programmes	2
12	Planning of communication strategies for bcc	2
13	Communication need analysis and stake holders in nutrition promotion	2
14	Developing a nutrition education plan	2
15	Identifying communication strategies and approaches for nutrition and health promotion	2
16	Designing nutrition and health messages and selecting communication channels	2

17	**Developing and field testing of communication materials**	**2**
18	**Ethics in nutrition and health communication**	**2**
19	**designing training strategy for trainers and building capacity**	**2**
20	**Nutrition advocacy Role in policy formulation and execution**	**2**
21	**Theory of advocacy advocacy vs Bcc**	**2**
22	**Analysis of the policy environment**	**1**
23	**Preparation of policy briefs**	**1**
24	**Monitoring and evaluation of policy related activities and outcomes**	**2**
	No of Units : 4 **Total Hrs :**	**60**

LESSON PLAN

Name of the Lecturer: MS. S. DIVYA BHANU
Department: MSC.FOOD SCIENCE AND NUTRITION.
Paper: NUTRITION COMMUNICATION AND DIET COUNSELING

Class: NMFSN **Year: II** **Semester: IV**

Serial No:	Topic Allotted	No of Hrs.
1	Nutrition and Behaviour Inter-relationship	2
2	Food and health behaviour	2
3	Models/theories of health behaviour	2
4	Food choice, strategies for intervention at the ecological and individual level	2
5	Behaviour Change Communication for nutrition and health promotion	2
6	Concept and objectives of communication for behaviour change	2
7	Implementing behaviour change communication intervention : overview	2
8	Evaluation of communication for behaviour change programmes	2
9	Planning of communication strategies for behaviour change programme Communication needs analysis, stakeholders in nutrition promotion, developing nutrition education plan, identifying communication strategies and approaches for nutrition and health promotion (e.g. social marketing)	4
10	Designing nutrition and health messages, selecting communication channels, developing and field testing of communication materials, designing training strategy for trainers and building capacity.	4
11	Ethics in nutrition and health communication	2
12	Dietitian as part of the Medical Team and Outreach Services.	2
13	Clinical Information - Medical History and Patient Profile Techniques of obtaining relevant information, Retrospective information, Dietary Diagnosis, Assessing food and nutrient intakes, Lifestyles, Physical activity, Stress, Nutritional Status.	4

14	**Correlating Relevant Information and identifying areas of need.**	**2**
15	**The Care Process - Setting goals and objectives short term and long term, Counselling and Patient Education, Dietary Prescription.**	**2**
16	**Motivating Patients**	**2**
17	**Working with - Hospitalized patients (adults, pediatric, elderly, and handicapped), adjusting and adopting to individual needs.**	**3**
18	**Outpatients (adults, pediatric, elderly, handicapped), patients' education, techniques and modes.**	**3**
19	**Follow up, Monitoring and Evaluation of outcome, Home visits.**	**2**

TOTAL HOURS	**46**

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: M.Sc. Food Technology & Management

Class & Section: AMFT

Course Code: MFT19102

Name of the Faculty Member: K. Tejaeswini

Course Title: Technology of Food Processing Preservation

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction & High Temperature Processing** Food preservation and processing – Scope, historical developments, principles Processing and preservation by heat blanching, pasteurization, sterilization and UHT processing canning, extrusion cooking, dielectric heating Microwave heating, baking, roasting and frying, etc.	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on different processing and preservation techniques and their working principles.	Quiz, video presentation on extrusion, dielectric heating, microwave heating.
II.	**Low Temperature Processing** Processing and preservation by low-temperature-refrigeration, freezing, dehydro freezing CA, MA Processing and preservation by Drying– Types of dryers - suitability for different food products. Concentration, evaporation Crystallization	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on low temp processing, Advanced packaging technique, Driers, evaporators, concentration and crystallization.	Quiz, experimental learning using different techniques of drying.
III.	**Food Additives** Preservation by Food additives: types and functions Permissible limits and safety aspects. Use and application of; Enzymes & Microorganisms in processing and preservation of foods	Lecture Method using ICT Tools and chalk and talk	To learn about different types of food additives and their permissible limits, application of different enzymes and micro organisms used in food industry.	Quiz, assignments.

IV.	**Membrane Technology** Membrane technology - Introduction to pressure activated membrane processes: micro- filtration, UF,NF ,RO Industrial applications of Membrane technology	Lecture Method using ICT Tools and chalk and talk	To learn about different membrane technologies and their industrial applications in food industry.	Experimental learning using different membranes techniques on different food products.
V.	**New Techniques of Preservation** New techniques in food processing Processing and preservation by non-thermal methods Irradiation high pressure, high intensity light, pulsed electric field, ohmic heating IR heating, inductive heating pulsed X-rays Hurdle technology Nanotechnology: Principles and applications in foods	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on different advanced techniques and their working principles used in food industry.	Quiz, Video presentation on advanced techniques.

List of References (Book / ICT / Weblinks):

1. Arsdel WB, Copley MJ & Morgan AI. 1973. Food Dehydration. 2nd Ed.Vols. I, II. AVI Publ.
2. Desrosier NW & James N.1977. Technology of Food Preservation. 4th Ed.AVI. Publ.
3. Fellows PJ. 2005. Food Processing Technology: Principle and Practice. 2 nd Ed. CRC.
4. Jelen P. 1985. Introduction to Food Processing. Prentice Hall.
5. Potter NN & Hotchkiss 1997. Food Science. 5th Ed. CBS.
6. Potty VH & Mulky MJ. 1993. Food Processing. Oxford & IBH.
7. Ramaswamy H & Marcotte M. 2006. Food Processing: Principles and Applications. Taylor & Francis.

https://youtu.be/D9_2qtD8flo?si=sflTBPFWqP7Y2vt8
https://youtu.be/ljNxtStJnVQ?si=Unf3V0LUbAA1NUIf
https://youtu.be/skv4xILxm4E?si=ArMIMOkcO4TNofsz

Name of the faculty member & Signature: K. Tejaeswini

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: M.Sc. Food Technology & Management **Class & Section:** AMFT **Course Code:** MFT13103

Name of the Faculty Member: Dr. A. Ravinder **Course Title:** Food Process Engineering 1

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Material Balance & Energy Balance** Material Balances: Basic Principles Problems in: Dilution Concentration Dehydration Blending of Food Ingredients	Lecture Method using ICT Tools and chalk and talk	To understand the principles of food science and the properties of components associated with it.	Quiz, experiments on dehydration.
II.	**Energy Balance** Energy Balances: Basic Principles – Energy terms Heat properties of saturated and super heated steam Problems & Examples in Heat balances	Lecture Method using ICT Tools and chalk and talk	To understand the principles of Energy Balances, Heat properties of saturated and super heated steam.	Quiz, solving problems based on heart and mass transfer.
III.	**Gases and vapors-I** Gases and vapors: definition-equation of state for an ideal and real gases Ideal gas equation - P.V.T relationship for ideal gases-gas mixture Thermodynamics: thermodynamic variables-define enthalpy The relationship between C_p and C_v for gases	Lecture Method using ICT Tools and chalk and talk	To understand the principles of thermodynamics: thermodynamic variables-define enthalpy.	Quiz, solving problems based on thermodynamic.
IV.	Gases and vapors-II P.V.T relationship for ideal gases in thermodynamic process	Lecture Method using ICT Tools	To understand about the Gases and vapors-II, P.V.T relationship for ideal gases in	Quiz, Quiz, solving problems based on topics.

	Changes in thermodynamic properties Work and Heat associated with thermodynamic processes	and chalk and talk	thermodynamic process.	
V.	Rheological & Colligative properties Rheological properties of food materials: Rheology – Viscosity – effect of temperature on viscosity Viscosity of gases – brook field viscometer. Colligative properties and surface tension Boiling point elevation- freezing point depression surface tension Cohesion, adhesion and spreading	Lecture Method using ICT Tools and chalk and talk	To understand Rheological & Colligative properties Rheological properties of food materials.	Quiz, assignment, and industrial visit for enhancing skill of students.

List of References (Book / ICT / Weblinks):

1. Basics of Food Engineering, Romeo Toledo
2. Brennan JG, Butter JR, Corell ND & Lilly AVE. 1990. *Food Engineering Operations*. Elsevier.
3. Charm SE, McCabe WL, Smith JC & Harriott P.1993. *Unit Operations of Chemical Engineering*. McGraw Hills.
4. Earle RL. 1985. *Unit Operations in Food Processing*. Pergamon Press.
5. Fellows P. 1988. *Food Processing Technology*. VCH Ellis Horwood.
6. Heldman DR & Singh RP.1995. *Food Process Engineering*. AVI Publ.
7. McCabe WL & and Smith JC. 1971. *Fundamental of Food Engineering*. AVI Publ.
8. Sahay KM & Singh KK. 1994. *Unit Operation of Agricultural Processing*. Vikas Publ. House.
9. Singh RP & Heldman DR. 1993. *Introduction to Food Engineering*. Academic Press.

Name of the faculty member & Signature: (Dr. A. Ravinder)

Approved by Head of the Department: Kiran Kumari

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: M.Sc. Food Technology & Management **Class & Section:** AMFT **Course Code:** MFT13104

Name of the Faculty Member: S. Jemmy Evangeline **Course Title:** Technology of Animal Foods

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Avian Foods** Avian Foods: Egg & Poultry industry in India classification, composition, nutritive value, grading, Processing, packaging microbiology, storage, quality characteristics and spoilage factors Lay-out and design of poultry processing plants, operations, equipment & Plant sanitation, Poultry by-products	Lecture Method using ICT Tools and chalk and talk	To learn about the Processing and preservation technologies employed for perishable products obtained from Avian foods.	Quiz, Experimental Learning.
II.	**Meat** Livestock: Meat production from different sources in India muscle structure, chemistry and compositions ante mortem and post-mortem handling, Meat tenderization Grading, Processing, preservation, packaging, microbiology, storage safety, quality characteristics and spoilage factors Meat products – Moisture, IM and dried foods offal handling and inspection; inedible by-product, Modern abattoirs and design of facilities - typical layout and features	Lecture Method using ICT Tools and chalk and talk.	To Learn about the Processing techniques employed in meat industry and the biochemical changes involved in maintaining meat quality.	Quiz, Case studies.
III.	**Sea Foods** Sea Food: Grading, postharvest freshness Biochemistry, Microbiology, preservation of Fish ,Transportation of fish and other sea foods Preparation of fish protein concentrate, fish oil and other by products Commercially important marine products from India product export and its sustenance	Lecture Method using ICT Tools and chalk and talk	To learn about the technologies involved in Processing of Fish and its By products	Quiz, Video presentation on harvesting methods of fish Quiz, Experimental Learning. across the globe.

IV.	**Dairy Processing** Dairy: Present status of milk & milk products in Indian market Milk – Composition, chemistry procurement, transportation processing, Packaging, storage Quality evaluation and testing of milk	Lecture Method using ICT Tools and chalk and talk	To learn about the range of sectors involved in processing, preservation, packaging and supply of Milk and to equip students with knowledge and skills needed to work in dairy industry.	test to identify quality of milk.
V.	**Dairy products** Definition, classification, composition, Physiochemical properties Methods of manufacture, packaging, storage,Quality evaluation and defects of milk Special milks - Condensed milk, dried milk powder (instantiation) Cream, Butter, Ice cream,Cheese, Indigenous milk products	Lecture Method using ICT Tools and chalk and talk	To learn about rheological behavior exhibited by dairy products, microbial and safety parameters involved in proper storage and preservation of milk products	Quiz, Processing of milk based products-Experimentation.

List of References (Book/ICT/ Weblinks):

1. Hilton Deeth and Phil Kelly,MDPI, Processing and technology of Dairy Products.
2. Dairy Science and Technology, D. Sukumar.
3. Forrest JC. Principles of Meat Science. Freeman.
4. Govindan TK. 1985. Fish Processing Technology. Oxford & IBH.
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6. Kerry J. et al. 2002. Meat Processing. Woodhead Publ. CRC Press.
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8. https://www.youtube.com/watch?v=WFbx29s4gDk
9. https://www.youtube.com/watch?v=nt329P3Y00I
10. https://www.youtube.com/watch?v=KqtXuzoZlE8
11. https://www.youtube.com/watch?v=0-4PT4THy7k
12. https://www.youtube.com/watch?v=h1Xp7p1taW0
13. https://www.youtube.com/watch?v=7GIljbUZ7xI

Name of the faculty member & Signature: S Empchy (S. Jemmy Evangeline)

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: M.Sc. Food Technology **Class & Section:** AMFT **Course Code:** MFT13105

Name of the Faculty Member: Dr. Sukh Veer Singh **Course Title:** Advances in Food Chemistry

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Major food constituents** **Carbohydrates:** Definition and importance classification, Physico- chemical properties, functional properties, Structural correlations. Interactions among food components- Effect on sensory and processing quality; Effect of processing on nutritional quality **Proteins:** Definition and importance, classification, Physico- chemical properties, functional properties, Structural correlations. Interactions among food components- Effect on sensory and processing quality; Effect of processing on nutritional quality	Lecture Method using ICT Tools and chalk and talk	To understand and learn about the classification of food constituents and their physio-chemical properties.	Quiz, hands on learning on protein determination in food sample.
II.	**Major Food constituents** **Lipids:** Definition and importance, classification, physico- chemical properties, functional properties, Structural correlations. Interactions among food components- Effect on sensory and processing quality Effect of processing on nutritional quality **Water:** Role in food Relationships in foods: water activity and its relevance to deteriorative processes in foods (chemical, enzymatic, physical and microbial changes).	Lecture Method using ICT Tools and chalk and talk	To understand and learn about the Effect of processing on nutritional quality of fats and oils.	Quiz, hands on learning on fat determination in food sample.

III.	**Minor Food constituents and Enzymes** **Minor food constituents:** Minerals, vitamins, Pigments, allergens, toxins and anti-nutritional compounds - Properties; Interaction in food Systems Changes during storage and processing. **Enzymes:** Definition, importance, classification and properties, Interactions among food-chemistry mechanisms of action	Lecture Method using ICT Tools and chalk and talk	To understand and learn about the changes during processing vitamins, minerals and pigments.	Quiz, hands on learning on Beta-carotene determination in food sample.
IV.	**Food Additives & Toxicology** **Food Additives:** Definition, importance, classification and properties Interactions among food- chemistry and mechanisms of action Toxicology - evaluation techniques and uses. Manufacturing and applications of fibres from food sources	Lecture Method using ICT Tools and chalk and talk	To understand and learn about the interactions among food- chemistry and mechanisms of action Toxicology- evaluation techniques and uses.	Quiz, case study on toxicology evaluation of food additives.
V.	**Food & Nutrition** Food groups: Typical composition Essential nutrients: sources, deficiency diseases; requirements and recommended dietary allowancesDigestion, absorption, transport and metabolism of nutrients in human system.	Lecture Method using ICT Tools and chalk and talk	To understand and learn about the digestion, absorption, transport and metabolism of nutrients in human system.	Quiz, video presentation on digestive system.

List of References (Book/ICT/Weblinks):

1. Fennema OR.1996. *Food Chemistry*. Marcel Dekker.
2. Meyer LH. 1987. *Food Chemistry*. CBS.
3. Belitz HD.1999. *Food Chemistry*. Springer Verlag.
4. DeMan JM. 1976. *Principles of Food Chemistry*. AVI.
5. Bamji MS, Rao NA & Reddy V. 2003. *Textbook of Human Nutrition*.Oxford & IBH.
6. Swaminathan M. 1974. *Essentials of Foods and Nutrition*. Vol. II. Ganesh & Co.

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: M.Sc. Food Technology & Management **Class & Section: AMFT** **Course Code: MFT13106**

Name of the Faculty Member: Dr. P. Kiran Kumari **Course Title: Food Microbiology**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Microbiology-** Introduction to microbiology; Microorganisms – Definition, Classification, Foods as ecological niches- Relevant microbial groups Microbial growth in food: Intrinsic, extrinsic and implicit factors, survival of microorganisms in foods Effect of injury on growth or survival. Biochemical changes - fermentation, putrefaction and lipolysis, Antagonism and synergism in microorganisms.	Lecture Method using ICT Tools (ppt and videos) and chalk and talk	To Learn about the world of microorganisms, how they are classified, and various factors and biochemical changes that affect their growth in food	Quiz, Group Discussions, weekly assessment.
II.	**Microbiology of Foods Health & Hygiene** Contamination and spoilage of foods: Milk & Milk products Fruits & vegetables – Products Grains and oilseeds meat and poultry	Lecture Method using ICT Tools (PPT kinesthetic and Videos)and chalk and talk	To gain knowledge on How contamination and spoilage occur in various foods along with their preventive measures	Quiz, Group Discussions, weekly assessment.
III.	**Health & Hygiene** Food poisoning, food borne infections Microbial toxins Food hygiene and sanitation control: Methods to control microorganisms (Physical, Chemical, Thermal and Non- Thermal methods)	Lecture Method using ICT Tools(PPT, kinesthetic and Videos) and chalk and talk	To get awareness about food poising, infections and toxins from microbes, to understand various methods to control along with practical application	Quiz, Group Discussions, weekly assessment.

IV.	**Detection of Microbes** Methods for qualitative and quantitative assay for Presence of microbes Characterization of microbes Rapid methods in detection of microorganisms Microbes as Test organisms Indicator organisms Sensors.	Lecture Method using ICT Tools (PPT ,kinesthetic and Videos) chalk and talk	To acquire knowledge on various techniques and assays for the estimation and characterization of microbes and also practical application	Quiz, Group Discussions, weekly assessment.
V.	**Microbial Fermentation & Industry** Fermentation – Principles, systems, applications Modern methods of cell culture: synchronous and co- cell culture continuous cell culture in liquid and solid media Production of microbial proteins, lipids, polysaccharides, vitamins Cell immobilization and applications Pre and probiotics cultures; Utilization and disposal of industrial wastes through microorganisms; use of genetically modified microorganisms in food processing	Lecture Method using ICT Tools and (PPT ,kinesthetic and Videos) chalk and talk	To grasp about fermentation principle and apply practically in foods	Quiz, Group Discussions, weekly assessment.

List of References (Book / ICT / Weblinks):

1. Banawart GJ. 1989. *Basic Food Microbiology*. 2nd Ed. AVI Publ.
2. Frazier J & Westhoff DC. 1988. *Food Microbiology*. 4th Ed. McGraw Hill.
3. Garbutt J. 1997. *Essentials of Food Microbiology*. Arnold Heinemann.
4. Jay JM, Loessner MJ & Golden DA. 2005. *Modern Food Microbiology* 7 Ed.Springer.
5. Ray B. 2004. *Fundamentals of Food Microbiology*.3rd Ed. CRC.
6. Robinson RK. (Ed.). 1983. *Dairy Microbiology*. Applied Science.
7. Steinkraus KS. 1996. *Handbook of Indigenous Fermented Foods*. Marcel Dekker.
8. https://youtu.be/lQ9OX1xmcpI?si=FxdJR8035BKB8Qgf
9. https://youtu.be/PjDhr8ntMIc?si=HfV7WNhbNsW8N8Uz

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Approved by Head of the Department: Kiran Kumari

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: M.Sc. Food Technology & Management **Class & Section:** AMFT **Course Code:** MFT24107

Name of the Faculty Member: Dr. Sukh Veer Singh **Course Title:** Advanced Food Chemistry Lab

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Importance of sampling and techniques of sampling Proximate analysis of foods Estimation of Calorific value of foods Estimation of Total solids; P_H; Acidity Estimation of browning intensity Determination of beta – carotene Estimation of sugars, TSS in Degree Brix Estimation of anti nutritional factors in foods Estimation of Ash and acid insoluble ash Estimation of starches, amino acids, Estimation of Crude fibre in foods. Determination of minerals-calcium, phosphorus, iron, Estimation of vitamins-ascorbic acid, carotene, thiamine. Analysis of lipids-saponification value, acid value, peroxide and iodine value. Determination of starch and pectic substances using different methods.	Lecture Method using ICT Tools and chalk and talk	To understand and learn through chemical assays about the physio-chemical properties of foods during processing.	Hands on practices on different instruments handling and chemical analysis.

List of References (Book / ICT / Weblinks):

1. Meyer LH. 1987. Food Chemistry. CBS.
2. Belitz HD.1999. Food Chemistry. Springer Verlag.
3. DeMan JM. 1976. Principles of Food Chemistry. AVI.
4.

Name of the faculty member & Signature: Dr. Sukh Veer Singh

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: M.Sc. Food Technology & Management **Class & Section:** AMFT **Course Code:** MFT13108

Name of the Faculty Member: Dr. A. Ravinder **Course Title:** Food Microbiology Lab

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Microscopy and micrometry. Preparation of nutrient media, Sterilization and inoculation techniques, Isolation of pure culture, Use of chemicals in preservation of foods Microscopic examination of bacteria, and yeast and molds Standard plate count Yeast and mould count Spore count Detection and enumeration of pathogenic and indicator organisms in food MPN of coli forms; Enumeration of physiological groups- psychrophile, thermodurics, osmophiles and halophiles. Microbial examination of processed and natural food products	Lecture Method using ICT Tools and chalk and talk	To gain practical knowledge in different techniques used for identification of different pathogens and its properties. Understand the quality aspects of food and water.	Quiz, experiments on microbial examination of processed and natural food products. Detection and enumeration of pathogenic and indicator organisms in food.

List of References (Book / ICT / Weblinks):

1. Ray B. 2004. *Fundamentals of Food Microbiology*.3rd Ed. CRC.
2. Robinson RK. (Ed.). 1983. *Dairy Microbiology*. Applied Science.
3. Steinkraus KS. 1996. *Handbook of Indigenous Fermented Foods*. Marcel Dekker.

Name of the faculty member & Signature: (Dr. Ravinder)

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: M.Sc. Food Technology & Management **Class & Section: AMFT** **Course Code:**

Name of the Faculty Member: Dr. P. Kiran Kumari **Course Title:** Post Harvest Technology of Plantation Crops

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Coffee: Production, processing of coffee;** - drying, fermentation, roasting and brewing of coffee; Types: decaffeinated coffee, coffee brew concentrate Standards and specifications of coffee products Chicory: technology of chicory powder and use in coffee products	Lecture Method using ICT Tools(PPT& Video) and chalk and talk	Will gain knowledge on coffee processing and their standards and specification	Group discussion, quiz,flowsheets preparations weekly assessment.
II.	Tea: Production, composition and manufacturing Types of tea Tea products such as soluble tea, tea concentrate Instant tea, decaffeinated and flavored tea Quality evaluation and grading of tea	Lecture Method using ICT Tools(PPT& Video) and chalk and talk	Will understand the composition, processing, and types of tea, and also practical approch to evaluate their quality	Group discussion, quiz, flow sheets preparations and weekly assessment.
III.	Cocoa: processing and analysis of cocoa beans Changes taking place during fermentation of cocoa bean Processing of cocoa products: cocoa powder, cocoa liquor manufacture, cocoa butter Chocolates: types and technology of chocolate manufacturing	Lecture Method using ICT Tools (PPT, Kinesthetic & Video) and chalk and talk.	To grasp processing, analysis of Cocoa and its products along with practical hands on expatriation on manufacturing products	Group discussion, quiz, flow sheets preparations and weekly assessment.
IV.	Spices, condiments, seasonings and culinary herbs Classification and beneficial properties of spices processing and manufacturing of major Indian spice	Lecture Method using ICT Tools (PPT& Video) and chalk and talk.	To Understand the classification of various spices and their benefits	Group discussion, quiz, flow sheets preparations and weekly assessment.

	- Pepper, cardamom, ginger, chili and turmeric, clove, garlic, Cumin, coriander, cinnamon mint and vanilla			
V.	Oleoresins and essential oils: method of manufacture; chemistry of the volatiles Enzymatic synthesis of flavor identical Adulteration problem in spices Packaging of spices	Lecture Method using ICT Tools (PPT& Video) and chalk and talk.	To acquire knowledge on chemistry, methods to prepare essential oils and also about adulteration and packaging of spices	Group discussion, quiz, flow sheets preparations and weekly assessment.

List of References (Book / ICT / Weblinks):

1. Kenneth T. Farrell (1985). Spices, condiments and seasonings. The AVI Pub. Company.
2. Banerjee B. 2002. *Tea Production and Processing*. Oxford Univ. ress.
3. Kenji Hirasa and Mitsno Takemasa(1998). Spice Science and Technology, Marcell Dekker, Inc.
4. Minifie BW. 1999. *Chocolate, Cocoa and Confectionery Technology*. 3rd ed. Aspen Publ.
5. NIIR. 2004. *Handbook on Spices*. National Institute of Industrial Research Board, Asia Pacific Business Press Inc.
6. Sivetz M & Foote HE. 1963. *Coffee Processing Technology*. AVI Publ.
7. https://youtu.be/l9Pf9_iub38?si=rsaLbQ4WG0c2eSu5
8. https://youtu.be/evCf7YYZk3w

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: M.Sc. Food Technology & Management **Class & Section:** AMFT **Course Code:** MFT19203

Name of the Faculty Member: S. Jemmy Evangeline **Course Title:** Research Methodology

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition of research – meaning – nature – scope and objectives of research basic research terms – types of research research problem defined – necessity factors to be considered while defining research problem procedure and pre-requisites for undertaking research.	Lecture Method using ICT Tools and chalk and talk	To identify and discuss the role and importance of research in the Food sciences and to understand the complex issues inherent in selecting a research problem, selecting an appropriate research design, and implementing a research project.	Quiz, Identifying research problems through case studies.
II.	Hypothesis and related terms – formation of hypothesis characteristics of good Hypothesis Fundamentals of Research Design Significance – features – steps in Research Design Types of research design Review of literature – operational definitions	Lecture Method using ICT Tools and chalk and talk	To identify and discuss the complex issues inherent in selecting a research problem, selecting an appropriate research design, and implementing a research project.	Quiz, Designing Hypothesis for research topics in food technology.
III.	Data collection and measurement – definition and characteristics of data primary data - characteristics – advantages and disadvantages secondary data – characteristics – advantages and disadvantages Sources of data – methods of data collection observation method personal interview forms, schedules and questionnaire method Documented sources of data case study method.	Lecture Method using ICT Tools and chalk and talk	To identify and understand systematic approach for gathering data pertaining to research design.	Quiz, Surveys on RTE products (Data Collection)

IV.	Sampling and sampling design-Definition variables methods of sampling: Probability sampling methods-Simple random sampling, stratified sampling, systematic sampling, multistage sampling. Non probability sampling-Judgmental sampling, convenience sampling, quota sampling, hit or accidental sampling. size of sampleSize of sample determination of sample size-determination of sample size Sampling and non sampling errors	Lecture Method using ICT Tools and chalk and talk	To identify and discuss the concepts and procedures of sampling, data collection, analysis and reporting.	Quiz, Case study activities
V.	Attitude measurements and scales- definition important concept of scale. Classification of skills attitude scale , Thurston scale likerts scale, Guttman's scale, radio scale opinion scale. Basic statistical tools Data processing editing codification and classification of data report writing and presentation definition of purpose synopsis synopsis types of report characteristics of good report structure of good report writing and formatting of reports next	Lecture Method using ICT Tools and chalk and talk	To develop an insight into the process of research which helps in designing an appropriate and feasible study for the Dissertation	Quiz, Writing reviews for Food technology related topics.

List of References (Book / ICT / Weblinks):

1. Kothari, C.R. Research Methodology. 2013 print. New Delhi: Sage publications.
2. Swamy Krishna, R. and Ranganathan, M. 2008. Methodology of Research in Social Sciences
3. Sachdeva, J.K. 2008. Business Research Methodology.

Name of the faculty member & Signature: Evangely (S. Jemmy Evangeline)

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: M.Sc. Food Technology & Management

Class & Section: AMFT

Course Code: MFT13204

Name of the Faculty Member: Dr. A. Ravinder

Course Title: Food Process Engineering II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Fluid Dynamics Newtonian and Non-Newtonian fluids Transportation of Fluids- Continuity principle Bernoulli equation- Reynolds number Flow measuring instruments: Orifice meter- Venturimeter-Rotometer Problems	Lecture Method using ICT Tools and chalk and talk	To understand the newtonian and non-Newtonian fluids Transportation of Fluids.	Quiz
II.	**Psychrometry; Drying & Extraction** Mass transfer - Psychometry Heat and Mass transfer in dehydration Stage of drying- prediction of drying from drying rate data Dehydration- water activity Types of driers – problems Extraction- types- principles- systems- problems.	Lecture Method using ICT Tools and chalk and talk	To understand and learn about the psychometry.	Quiz, problem solving based on heat and mass transfer in dehydration.
III.	Heat transfer- types- estimation of thermal conductivity of food products, local heat transfer coefficients Fourier's law of heat transfer- temperature profile of unidirectional heat transfer through conduction Heat transfer by convention- heat transfer by radiation Kirchhoff's law- Stephan- boltz man- plank's distribution law, Wein's displacements law, microwave and direct electric heating Temperature measuring devices- various thermometers-	Lecture Method using ICT Tools and chalk and talk	To understand the principles of different laws. Fourier's law of heat transfer, Kirchhoff's law-Stephan- boltz man- plank's distribution law, Wein's displacements law, microwave and direct electric heating.	Quiz, problem solving based on Kirchhoff's law- Stephan- boltz man- plank's distribution law.

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: M.Sc. Food Technology & Management

Class & Section: AMFT

Course Code: MFT13204

Name of the Faculty Member: Dr. A. Ravinder

Course Title: Food Process Engineering II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Fluid Dynamics Newtonian and Non-Newtonian fluids Transportation of Fluids- Continuity principle Bernoulli equation- Reynolds number Flow measuring instruments: Orifice meter- Venturimeter-Rotometer Problems	Lecture Method using ICT Tools and chalk and talk	To understand the newtonian and non-Newtonian fluids Transportation of Fluids.	Quiz
II.	**Psychrometry; Drying & Extraction** Mass transfer - Psychometry Heat and Mass transfer in dehydration Stage of drying- prediction of drying from drying rate data Dehydration- water activity Types of driers – problems Extraction- types- principles- systems- problems.	Lecture Method using ICT Tools and chalk and talk	To understand and learn about the psychometry.	Quiz, problem solving based on heat and mass transfer in dehydration.
III.	Heat transfer- types- estimation of thermal conductivity of food products, local heat transfer coefficients Fourier's law of heat transfer- temperature profile of unidirectional heat transfer through conduction Heat transfer by convention- heat transfer by radiation Kirchhoff's law- Stephan- boltz man- plank's distribution law, Wein's displacements law, microwave and direct electric heating Temperature measuring devices- various thermometers-	Lecture Method using ICT Tools and chalk and talk	To understand the principles of different laws. Fourier's law of heat transfer, Kirchhoff's law-Stephan- boltz man- plank's distribution law, Wein's displacements law, microwave and direct electric heating.	Quiz, problem solving based on Kirchhoff's law- Stephan- boltz man- plank's distribution law.

	Examples Steady state heat transfer- calculation			
IV.	Heat exchanger equipment- types; importance of counter current flow equation- heat transfer to non-Newtonian fluids in laminar flow- examples unsteady state heat transfer – Fourier number – Biot number -heisler and gurney, Lurie charts- calculations evaporation – single effect evaporators, improving the economy of evaporators, essence recovery – problems	Lecture Method using ICT Tools and chalk and talk	To understand and learn about Lurie charts- calculations evaporation – single effect evaporators, improving the economy of evaporators, essence recovery – problems.	Quiz, assignment on some topics.
V.	Physical separation process: Filtration ▪ filtrate flow through filter cake ▪ constant pressure filtration ▪ optimization of filtration cycles- types of filtrations Reverse osmosis sieving- gravity separation material handling equipment Problems	Lecture Method using ICT Tools and chalk and talk	To understand the principles of Physical separation process in food technology.	Quiz, and industrial visit made more clarity to students over the processes.

List of References (Book / ICT / Weblinks):

1. Basics of Food Engineering, Romeo Toledo
2. Brennan JG, Butter JR, Corell ND & Lilly AVE. 1990. *Food Engineering Operations*. Elsevier.
3. Charm SE, McCabe WL, Smith JC & Harriott P.1993. *Unit Operations of Chemical Engineering*. McGraw Hills.
4. Earle RL. 1985. *Unit Operations in Food Processing*. Pergamon Press.
5. Fellows P. 1988. *Food Processing Technology*. VCH Ellis Horwood.
6. Heldman DR & Singh RP.1995. *Food Process Engineering*. AVI Publ.
7. McCabe WL & and Smith JC. 1971. *Fundamental of Food Engineering*. AVI Publ.
8. Sahay KM & Singh KK. 1994. *Unit Operation of Agricultural Processing*. Vikas Publ. House.
8. Singh RP & Heldman DR. 1993. *Introduction to Food Engineering*. Academic Press.

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: M.Sc. Food Technology & Management

Class & Section: AMFT

Course Code: MFT13205

Name of the Faculty Member: Dr. P. Kiran Kumari & Dr. Sukh Veer Singh

Course Title: Instrumental methods of food Analysis

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Food Analysis** Review of basic chemistry concepts Introduction to food analysis Sampling techniques Water activity, its measurements Significance in food quality Calibration and standardization of different instruments	Lecture Method using ICT Tools and chalk and talk	To understand standardization and calibration of Instruments used in biochemical analysis.	Quiz, studied theoretically to develop understanding about the instruments.
II.	**Spectroscopy** Basic principles of spectroscopy Spectroscopic techniques- UV/Vis, fluorescence IR,FTIR, NIR NMR Atomic absorption spectroscopy	Lecture Method using ICT Tools and chalk and talk	To understand principle and applications of various Instruments used in biochemical analysis.	Quiz, studied theoretically to develop understanding about the principle, mechanism and application of instruments.
III.	**Refractometry & Microscopic Techniques** ICP Polarimetry Refractometry Microscopic techniques in food analysis Light microscopy SEM TEM,XRD Particle size analysis,Image analysis	Lecture Method using ICT Tools and chalk and talk	To understand principle and applications of various Instruments used in biochemical analysis.	Quiz, video presentation of different instruments.

IV.	**Chromotographic techniques:** Chromatographic techniques: Adsorption chromatography Column chromatography Partition chromatography Affinity chromatography Ion exchange chromatography Size exclusion chromatography GC GLC HPLC HPTLC GCMS LCMS	Lecture Method using ICT Tools and chalk and talk	To understand principle and applications of various chromatographic techniques used in biochemical analysis.	Quiz, video presentation of different instruments.
V.	**Separation Techniques** Separation techniques: Gel filtration, dialysis Electrophoresis, sedimentation Ultra filtration and ultra-centrifugation Solid phase extraction Supercritical fluid extraction Iso-electric focusing Isotopic techniques, Manometric techniques.	Lecture Method using ICT Tools and chalk and talk	To understand principle and applications of various separation techniques used in analysis.	Quiz, individual assignment and presentation on particular techniques.

List of References (Book / ICT / Weblinks):

1. AOAC International. 2003. *Official methods of analysis of AOAC International*. 17th Ed. Gaithersburg, MD, USA, Association of Analytical Communitie
2. Kirk RS & Sawyer R. 1991. *Pearson's Chemical Analysis of Foods*. 9th Ed. Longman Scientific & Technical.
3. Leo ML. 2004. *Handbook of Food Analysis*. 2nd Ed. Vols. I-III.
4. Linden G. 1996. *Analytical Techniques for Foods and Agricultural Products*. VCH.
5. Macleod AJ. 1973. *Instrumental Methods of Food Analysis*. Elek Sci. MarcelDekker.

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: M.Sc. Food Technology & Management **Class & Section:** AMFT **Course Code:** MFT19206

Name of the Faculty Member: K. Tejaeswini **Course Title:** Technology of Cereals & Milling

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Structure and chemical Chemical composition of wheat grain Criteria of wheat quality-physical and chemical factor; wheat type Weight milling-general principles and operations, cleaning, conditioning and roller milling system; wheat milling-products and by products Flour extraction rates and various flour grade and types, flour improvers and bleaching agents Criteria of flour quality, Dough rheology and its measurements	Lecture Method using ICT Tools and chalk and talk	To learn about structure, composition, milling, flour quality and dough rheology.	Quiz, experimental learning on wheat analysis and their rheological properties.
II.	Structure and composition of corn grain, different types of corns Wet and dry milling of corn Products of wet and dry milling of corn Cornstarch and corn sweeteners (high Fructose corn syrup)	Lecture Method using ICT Tools and chalk and talk	To learn about structure, composition, types of corn and different methods of milling and products and by products obtained during milling.	Quiz, Experimental learning on corn analysis and video presentation of corn syrup.
III.	Structure and chemical composition of rice bran Modern Rice milling unit operation- dehusking; paddy separation, polishing and grading Factors affecting rice yield during milling; aging of rice Rice bran as rice milling by products Rice parboiling Technology, different parboiling methods, CFTRI process of parboiling changes during parboiling	Lecture Method using ICT Tools and chalk and talk	To learn about structure, composition, parboiling methods, milling of rice and their products and byproduct, and cooking quality and factors	Quiz, assignments, experimental analysis on rice and products made from rice

	Dimensional and cooking quality characteristics of rice and factors affecting the cooking behavior of rice grains		effecting cooking behavior of rice	flour.
IV.	Pulses-introduction, production, utilization trends Structure, composition, anti nutritional factors Processing and storage Manufacturing of protein concentrates Processing of oats, Sorghum and millets	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on pulses production and utilization trends, structure, composition, processing and storage, anti nutritional factors in pulses, processing of protein concentrates, oats, sorghum and millets.	Quiz, Video presentation on processing on oats, sorghum and millets.
V.	Rice convenience foods: pre cooked rice, canned rice, expanded rice, rice-based infant food formulation Pasta Product and various process cereal based foods, Quality consideration and parameters Barley malting process: steeping, germination and drying Different types of malt and their food applications Barley beta glucans and their food functionalities	Lecture Method using ICT Tools and chalk and talk	To learn about different foods manufactured using rice, pasta products and various cereal based foods and their quality considerations. Barley malting process and different malts and their applications. Beta glucans and their food functionalities.	Quiz, experimental learning on processing various cereal based foods and infant foods.

List of References (Book / ICT / Weblinks):

1. Samuel, A.M.(1996) " The Chemistry and Technology of Cereals as Food and Feed ", CBS Publisher & Distribution, New Delhi.
2. Pomeranz, Y.(1998) " Wheat : Chemistry and Technology", Vol 1,3" Am. Assoc. Cereal Chemists. St. Paul, MN, USA.
3. Honeney, R.C.(1986) " Principles of Cereal Science and Technology", Am. Assoc. Cereal Chemists, St. Paul, MN, USA.
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Name of the faculty member & Signature:
K Tejaeswini

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: M.Sc. Food Technology & Management

Class & Section: AMFT

Course Code: MFT13207

Name of the Faculty Member: Dr. A. Ravinder

Course Title: Food Process Engineering Lab

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Determination of viscosity of Newtonian fluid and Non Newtonian fluids Design of pumping systems Determination of thermal properties of foods - thermal conductivity, thermal diffusivity, calorific value and specific heat Calculation of freezing time for some typical foods Study of different types of freezers Calculation of thermal process time in canning of some foods Determination of 'U' for PHE Determination of 'U' for SSHE Study of blast freezer Visit to Food Processing Plants.	Lecture Method using ICT Tools and chalk and talk	To have practical knowledge & understanding about the principles of food science and the properties of components associated with it.	Quiz, Calculation of thermal process time in canning of some foods. Calculation of freezing time for some typical foods.

List of References (Book / ICT / Weblinks):

1. Fundamentals of food process engineering by Romeo T. Toledo 2nd edition, CBS publishers, New Delhi.
2. Unit operations of chemical engineering by W.L. McCabe, Julian Smith 1993, McGraw Hill.
3. Experiments in food process engineering by H. Pandey, First edition, 2004. CBS Publisher, Delhi.
4. Experiments in food process Engineering by R. Paul Sing.

Name of the faculty member & Signature: (Dr. A. Ravinder)

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-II

Department: M.Sc. Food Technology & Management

Class & Section: AMFT

Course Code: MFT19208

Name of the Faculty Member: K. Tejaeswini

Course Title: Technology of cereals & Milling Lab

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Determination of dough relaxation constants and their interpretation Effects of mixing method on the quality of baked products Effects of mixing time on the rheological characteristics of dough Effects of mixing time on the crispness and firmness of biscuits Effects of additives on the quality and textural characteristics of bakery products Development and quality evaluation of bakery products based on composite flour Preparation of quality evaluation of cakes, croissant, doughnuts, and pizza base Preparations and quality evaluation of confectionary products Preparation of chocolates Quality evaluation of chocolate products	Lecture Method using ICT Tools and chalk and talk	To Learn about physico- chemical properties performing different analysis on grains, flour, and different products are processed using different cereal, pulses and millet flours.	Quiz, Experiments on quality of different cereal and millet based foods, New product development , preparation of baked foods and their analysis. Industrial visit to bakery industries for clear understanding of the manufacturing processes.

	Visit to bakery industries Visit to confectionery industries			

List of References (Book / ICT / Weblinks):

1. Samuel, A.M.(1996) " The Chemistry and Technology of Cereals as Food and Feed ", CBS Publisher & Distribution, New Delhi.
2. Pomeranz, Y.(1998) " Wheat : Chemistry and Technology", Vol 1,3" Am. Assoc. Cereal Chemists. St. Paul, MN, USA.
3. Honeney, R.C.(1986) " Principles of Cereal Science and Technology", Am. Assoc. Cereal Chemists, St. Paul, MN, USA.
4. Pomeranz, Y. (1976) " Advances in Cereal Science and Technology", Am. Assoc. Cereal Chemists St.Paul, MN, USA.
5. Juliano, B.O.(1685). " Rice Chemistry and Technology", Am. Assoc. Cereal Chemists, St. Paul, MN,US.

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K Tejaeswini

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT13302A

Name of the Faculty Member: Dr. A. Ravinder **Course Title:** Technology of food fermentation

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Fermented Foods** Fermentation Fermented foods – sauerkraut, cucumber pickles, olive pickles. Oriental fermented foods – soy sauce, tofu, miso, tempeh, ontjons, hamanatto, natto. Traditional fermented foods – idli, dosa, etc., fermented meat and milk products.	Lecture Method using ICT Tools and chalk and talk	To gain understanding about the levels of fermentation and its impact on food development.	Quiz
II.	**Introduction to Beverages & Water** Beverages – Classification, Types, Scope and importance. status of beverage industry in India Packaged drinking water- definition, types, manufacturing processes of raw and processed water Quality evaluation of raw and processed water methods of water treatment BIS quality standards (for bottled water; mineral water, natural spring water, flavoured water, carbonated water).	Lecture Method using ICT Tools and chalk and talk	To gain understanding about status of beverage industry in India, Packaged drinking water.	Quiz, case studies
III.	**Fruit & Speciality Beverages** Fruits Beverages – Types, Definitions Manufacturing process and technology Packaging, storage quality evaluation Recent advances in juice processing technology Equipments& tools for juice extraction Note on Specialty beverages based on	Lecture Method using ICT Tools and chalk and talk	To gain understanding about Recent advances in juice processing technology, Equipments& tools for juice extraction, Note on Specialty beverages based on tea, coffee cocoa, spices.	Quiz, industrial visit

	tea, coffee cocoa, spices Plant extracts, herbs, nuts dairy and imitation dairy-based beverages			
IV.	**Synthetic Beverages** Synthetic beverages – technology of; Still & carbonated beverages Low-calorie and dry beverages Isotonic and sports drinks Role of various ingredients of soft drinks Carbonation of soft drinks Storage and quality characteristics	Lecture Method using ICT Tools and chalk and talk	To gain understanding about Synthetic beverages– technology. Distil & carbonated beverages, Low-calorie and dry beverages.	Quiz, assignment on particular topics.
V.	**Fermented Beverages** Fermented Beverages & distilled spirits Types, manufacturing processes Quality evaluation Role of yeast in technology of brewing process Equipments used for brewing and distillation	Lecture Method using ICT Tools and chalk and talk	To gain understanding about equipments used for brewing and distillation.	Quiz, video presentation for better understanding

List of References (Book / ICT / Weblinks):

1. Ravinder, A. Srinivas Maloo and Dr.Emmanuel, S.J. 2013. **Hand Book of Fermented foods and Beverages**, 1st edition. Mumbai: Himalaya Books Publishing House.
2. Priest, F.G. and Stewart, G.G. 2006. **Handbook of Brewing**. 2nd edition. New Delhi: CRC Publication.
3. Richard, P. 1981. **Commercial Wine Making - Processing and Controls**. New Delhi: AVI Publication.
4. Prescott, S.C. and Dunn, C.G. 1959. **Industrial Microbiology**. 6th edition. New Delhi: Tata McGraw Hill.
5. Varnam, A.H.and Sutherland, J.P. 1994. **Beverages: Technology, Chemistry and Microbiology**. Scotland: Chapman & Hall.
6. Woodroof, J.G.and Phillips, G.F.1974. **Beverages: Carbonated and Non Carbonated**. New Delhi: AVI Publication.

Name of the faculty member & Signature: Dr. A. Ravinder

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT13302 B

Name of the Faculty Member: Dr. P. Kiran Kumari **Course Title:** Technology of sugar confectionery & chocolate processing.

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Confectionery Industry** Raw Materials for Confectionery Manufacture Important properties – Sugar, glucose syrup, Dried milk products, cocoa, Speciality fats, Emulsifiers, Nut kernels, Alcoholic ingredients and other minor ingredients. General technical aspects of industrial sugar confectionery manufacture. Confectionery – composition, structure Quality aspects	Lecture Method using ICT Tools and chalk and talk	To understand the properties of all the raw materials used in Confectionery Manufacture along with their quality aspects	Quiz, flow charts, weekly assignments, and group discussions
II.	**Manufacture of Confectionery I** Flour confectionery Ingredients importance of the consistency Indian flour confections:ingredients Flour specification Manufacturing process of flour Sugar Confectionery manufacture High boiled sweets– Ingredients, Methods of manufacture– Product types.	Lecture Method using ICT Tools and chalk and talk	To acquire knowledge on flour confectionery and its manufacturing process	Quiz, flow charts, weekly assignments, and group discussions
III.	**Manufacture of Confectionery II** Manufacture of Caramel, Manufacture of Toffee and fudge Manufacture of Liquorices paste, Manufacture of Count Lines, Manufacture of Aerated confectionery	Lecture Method using ICT Tools and chalk and talk	To understand how various manufacturing conditions are present for different products	Quiz, flow charts, weekly assignments, and group discussions

IV.	**Manufacture of Confectionery III** Manufacture of Fruit confections Manufacture of sugar panned sweets Manufacture of gums & jellies Chewing gum Technology Manufacture of Lozenges	Lecture Method using ICT Tools and chalk and talk	To understand how various manufacturing conditions are present for different products	Quiz, flow charts, weekly assignments, and group discussions
V.	**Chocolate Processing** Chocolate Processing Technology: Cocoa bean – harvesting, processing production of cocoa liquor cocoa butter processing cocoa butter substitutes. Manufacture of chocolate Tempering technology Enrobing technology Dark, milk and white chocolate - manufacturing processes.	Lecture Method using ICT Tools and chalk and talk	To understand how various manufacturing conditions are present for different chocolate products	Quiz, flow charts, weekly assignments, and group discussions

List of References (Book / ICT / Weblinks):

1. Jackson, E.B.1999. **Sugar Confectionery Manufacture**. 2nd Edition. New york: Aspen Publication.
2. Junk, W.R. and Pancost, H.M. 1973. **Hand Book of Sugars for Processors**. Chemists and Technologists. New Delhi: AVI Publications.
3. Francis, F.J. 2000. **Wiley Encyclopaedia of Food Science & Technology**. India: John Wiley & Sons.
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Name of the faculty member & Signature:

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT13303

Name of the Faculty Member : K. Tejaeswini **Course Title:** Extrusion Technology

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	INTRODUCTION TO EXTRUDERS Definition, History and traditional products Extruders in the food industry – History, uses, principles and types Chemical and nutritional changes in food during extrusion. Single screw extruder Principle of working, net flow Factors affecting extrusion process Co-kneaders	Lecture Method using ICT Tools and chalk and talk	To Learn about the Introduction,History, uses, principles of extruders and chemical changes in food during extrusion, factors affecting extrusion. Co- kneaders.	Quiz
II.	TWIN SCREW EXTRUDER : Introduction, working principle counter rotating and co-rotating twin screw extruder. Process characteristics of the twin screw extruder Heat transfer and energy balances. Problems associated with twin screw extruder. Interpreted flight expanders/ extruders, dry extruders.	Lecture Method using ICT Tools and chalk and talk	To learn about different types of extruders, their process characteristics and problems associated applications. Heat transfer and energy balances in extruders.	Quiz, video presentation on different types of extruders.
III.	Pre Conditioning &Practical considerations : introduction Pre-conditioning of raw materials used in extrusion process Pre-conditioning operations benefits of pre-conditioning Practical considerations in extrusion processing pre-extrusion processes Extrusion cooking technology post extrusion processes	Lecture Method using ICT Tools and chalk and talk	To learn about preconditioning in extrusion and post extrusion process and their benefits.	Quiz, Assignments, Group discussions.

IV.	BREAKFAST CEREALS& TEXTURIZED VEGETABLE PROTEINS Breakfast cereals Introduction Texturized vegetable proteins Introduction, Definition, classification, Formulation and processing technology Types of processes: traditional and extrusion methods.	Lecture Method using ICT Tools and chalk and talk	To learn about different breakfast cereals & Texturizaed vegetable protein manufacturing.	Quiz, Experiments on manufacturing of different breakfast cereals.
V.	Snack Food Extrusion Direct expanded (DX) Third generation (3G) Snacks: types, available brands, Co- extruded snack Indirect-expanded products Direct expanded (DX)	Lecture method using ICT Tools and chalk and talk.	To gain knowledge on different snack foods products and brands available in the market.	Quiz, Assignment on different brands of different extruded products.

List of References (Book /ICT/ Weblinks):

1. Frame, N.D .1994.The Technology of Extrusion Cooking. London: Blackie Academic Publication.
2. Gordon, B.R.1990. Snack Food. 1 st edition. New York: AVI Publication.
3. Samuel AM.1976. Snack Food Technology. 3 rd edition. New York: AVI Publication.

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT13304

Name of the Faculty Member: Dr. Sukh Veer Singh **Course Title:** Advanced Food Packaging

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Packaging Technology** Packaging – Definition, objectives and functions Packaging requirements and selection of packaging materials Types of packaging materials and their properties Food packaging systems: Forms of packaging and different packaging systems for foods Packaging equipment and machinery Antimicrobial food packaging: system construction Factors affecting the effectiveness of antimicrobial packaging	Lecture Method using ICT Tools and chalk and talk	To Learn about the importance of packaging and understand different packaging materials and their properties.	Quiz, machine handling in lab.
II.	**Packaging Techniques** Active and intelligent packaging – packaging techniques Current use of novel packaging techniques, Oxygen, ethylene and other scavengers and scavenging technology Non-migratory bioactive polymers (NMBP) in food packaging Advantages, limitations inherently bioactive synthetic polymers: types and applications Polymers with immobilized bioactive compounds	Lecture Method using ICT Tools and chalk and talk	To Learn about the importance of packaging and understand different antimicrobial techniques involved in packing foods and its role in preservation and shelf life of foods.	Quiz, video presentation on NMBP
III.	**Package Interactions & Novel Applications** Packaging-flavor interactions; Factors affecting flavor absorption role of the food matrix; role of differing packaging materials Active packaging – Novel applications Time-temperature indicators (TTIs), Definitions, classification, Requirements	Lecture Method using ICT Tools and chalk and talk	To Learn about the importance of packaging and understand different novel techniques and freshness monitoring	Quiz, Experimental Learning.

	Development – Current TTI systems – effectiveness and utilization		techniques.	
IV.	**Modern packaging systems** Modern packaging systems: Green plastics for food packaging Developing novel biodegradable materials Legislative issues, Current applications Integrating intelligent packaging Creating integrated packaging, storage and distribution Role of packaging in the supply chain	Lecture Method using ICT Tools and chalk and talk	To Learn about the importance of packaging and understand biodegradability of packaging material and its legislative concern.	Quiz, Case study
V.	**Shelf Life Studies** Shelf life of foods, processed and packaged foods Factors influencing the shelf life of a product Labelling and label regulations shelf life study determination of shelf life – direct methods, indirect methods Accelerated studies; Challenge testing; Extended shelf life foods	Lecture Method using ICT Tools and chalk and talk	To Learn about the importance of packaging and understand determination of shelf life – direct methods, indirect methods and accelerated studies.	Quiz, Assignment presentation on topics.

List of References (Book / ICT / Weblinks):

1. Crosby, N.T. 1981. **Food Packaging: Aspects of Analysis and Migration Contaminants**. London: Applied Science Pubications.
2. Kadoya, T.1990. **Food Packaging**. London: Academic Press.
3. Mahadeviah, M. and Gowramma, R.V. 1996. **Food Packaging Materials**. New Delhi: Tata McGraw Hill.
4. Palling, S.J. 1980. **Developments in Food Packaging**. London: Applied Science Pubications.
5. Painy, F.A. 1992. **A Handbook of Food Packaging**. London: Blackie Academic Publication.
6. Sacharow, S. and Griffin, R.C. 1980. **Principles of Food Packaging**. New York: AVI Publications.
7. Stanley, S. and Roger, C.G.1970. **Food Packaging**. New York: AVI Publications.

Name of the faculty member & Signature: Dr. Sukhveer Singh

Approved by Head of the Department: Kiran Kumari

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT13305

Name of the Faculty Member: Dr. P. Kiran Kumari **Course Title:** Food Quality Systems & Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Quality Control** Concept of quality: Quality attributes- physical, chemical nutritional, microbial– their measurement and evaluation Instrumental methods for testing quality of milk fruits, vegetables, grains and oilseeds, meat and poultry beverages, ready-to-eat and convenience foods other processed and packaged food products	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on quality and quality attributes along with various instrumental methods for testing different raw materials and products	Quiz, Solving Problems using the basic computer instruction.
II.	**Sensory Analysis & Statistical Control** Sensory analysis: Introduction, general testing conditions Requirements of sensory laboratory Factors influencing sensory measurements Sensory quality parameters – Selection of sensory panelists Detection, threshold and dilution tests Sensory evaluation tests: discrimination, descriptive, affective Flavor profile tests; Computer-aided sensory evaluation of food & beverage Satistical analysis of sensory data	Lecture Method using ICT Tools and chalk and talk	To understand and implement various sensory analysis parameters and interpretation of obtained data	Quiz, Group Discussions, weekly assessment and flow sheets.
III.	**Concepts of QC, QA & Quality Management** Quality control and Quality assurance Objectives, importance and functions Concepts of quality management Quality management systems in India Total Quality Management GMP/GHP; GLP, GAP	Lecture Method using ICT Tools and chalk and talk	To understand the concepts of quality control, quality assurance and the necessity of total quality management	Quiz, Group Discussions, weekly assessment and flow sheets.

	Sanitary and hygienic practices HACCP FSMS (ISO 22000)			
IV.	**Organizations & Regulations for Quality Management** Organizations dealing with inspection, traceability and authentication certification and quality assurance FSSAI, AGMARK, BIS, Domestic regulations Laboratory quality procedures: sampling plans and techniques Assessment of laboratory performance	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on what are the various organizations and regulations working in the field of food technology to maintain the quality	Quiz, Group Discussions, weekly assessment and flow sheets.
V.	**Global Food Safety Standards** Global Food safety Initiative Quality manuals, International quality systems and standards ISO and Food Codex; Export import policy, export documentation Food adulteration and food safety documentation and audits Labelling issues: International scenario International food standards	Lecture Method using ICT Tools and chalk and talk	To understand the role of various global food safety standards manuals ,documents, and labelling issues	Quiz, Group Discussions, weekly assessment and flow sheets.

List of References (Book / ICT / Weblinks):

1. Amerine, M.A. Pangborn, R.M. and Rosslos, E.B. 1965. **Principles of Sensory Evaluation of Food**. London: Academic Press.
2. Early, R.1995. **Guide to Quality Management Systems for Food Industries**. London: Blackie Academic publications.
3. Krammer, A. and Twigg, B.A. 1973. **Quality Control in Food Industry**. Volume: I and II. New York: AVI Publications.
4. Macrae, R. Roloson, R. and Sadlu, M.J. 1994. **Encyclopedia of Food Science & Technology & Nutrition**. Volume: XVI. London: Academic Press.
5. Ranganna, S. 2001. **Handbook of Analysis and Quality Control for Fruit and Vegetable Products**. 2nd edition. New Deihi: Tata-McGraw-Hill.

Name of the faculty member & Signature:

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: M.Sc. Food Technology & Management

Class & Section: NMFT

Course Code: MFT13306

Name of the Faculty Member: Mrs. S. Jemmy Evangeline

Course Title: Energy Conservation & Auditing

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Energy Conservation** Basic principles & fundamentals of energy conservation thermodynamic laws opportunities of energy conservation in food processing industries Status of energy utilization for food processing in India and abroad	Lecture Method using ICT Tools and chalk and talk	To learn about the energy usage and conservation techniques employed in food industries.	Quiz
II.	Energy conservation in thermal utilities fuel & combustion boilers, steam system furnaces, insulation & refrigeration FBC boilers Cogeneration principles waste heat recovery	Lecture Method using ICT Tools and chalk and talk	To learn about the working principles of major thermal utilities of food industries and its energy conservation opportunities.	Quiz, Case studies, video presentations.
III.	Energy management & auditing ISO:14000; EMS Energy auditing methodology Reporting format Understanding energy costs	Lecture Method using ICT Tools and chalk and talk	To gain knowledge about the energy conservation pattern in food industry and learn the measures taken to conserve energy from being wasted to provide it for future industrial growth.	Quiz, Group discussions.

IV.	**Energy management & auditing** Benchmarking & energy performance matching energy usage to requirements maximizing system efficiency fuel and energy substitution	Lecture Method using ICT Tools and chalk and talk	To understand the importance of selection appropriate conservation methods for the long run of an industry.	Quiz, case studies
V.	Energy audit instruments material & energy balance energy action planning financial management Carbon Credits energy monitoring and targeting	Lecture Method using ICT Tools and chalk and talk	To gain knowledge about various aids used in the auditing of working efficiency of utilities in food industry and its importance in prevention of Global warming	Quiz.

List of References (Book / ICT / Weblinks):

1. Kreit, F. and Goswami, D.Y. 2008. Energy Management and Conservation Hand Book..
2. Murphy, W.R and Mckay, G. 1982. Energy Management. New Delhi: BS Publications.
3. Patrick, D.R. 1982. Energy Management and Conservation. Netherlands.

Name of the faculty member & Signature: Evgely (S. Jemmy Evangeline)

S. Jemmy Evangeline

Approved by Head of the Department: Kumar Kumar.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT13307

Name of the Faculty Member: Mrs. S. Jemmy Evangeline **Course Title:** Advanced food packaging Lab

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Identification and testing of packaging materials Testing of lacquered tin plate sheets Measurement of tin coating weight by Clarke's method Sulphide stain test and ferricyanide paper test for porosity Determination of equilibrium moisture content, Grading of glass bottles Determination of water vapour transmission rate of packaging material To perform vacuum packaging of food sample and carry out its storage study Testing the compression strength of the boxes Packaging the food material in seal and shrink, packaging machine and study its shelf life Testing the strength of glass containers by thermal shock test Testing the strength of filled pouches by drop tester Industrial visit to packaging industry	Lecture Method using ICT Tools and chalk and talk.	To Learn about Identification and testing of packaging materials Testing of lacquered tin plate sheets and tests related to packaging. Measurement of tin coating weight by Clarke's method.	Handling of instrument and its applications. Case study on different packages available in the market and industrial visit.

List of References (Book / ICT / Weblinks):

1. Crosby, N.T. 1981. Food Packaging: Aspects of Analysis and Migration Contaminants. London: Applied Science Pubications.
2. Kadoya, T.1990. Food Packaging. London: Academic Press.
3. Mahadeviah, M. and Gowramma, R.V. 1996. Food Packaging Materials. New Delhi: Tata McGraw Hill.
4. Palling, S.J. 1980. Developments in Food Packaging. London: Applied Science Pubications.
5. Painy, F.A. 1992. A Handbook of Food Packaging. London: Blackie Academic Publication.

Name of the faculty member & Signature: (S. Jemmy Evangeline)

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT13305

Name of the Faculty Member: K. Tejaeswini **Course Title:** Food quality systems and Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Testing and evaluation of quality attributes of raw and processed foods Sensory evaluation of foods Quality assurance procedure, GMP, GAP documentation Preparation of quality policy & documentation Application of HACCP to products Preparation of HACCP chart, Preparation of documentation & records Visit to Units with ISO systems, Visit to Units with HACCP certification, Visit to Units implementing GMP, GAP. Mini-project on preparation of a model laboratory manual.	Lecture Method using ICT Tools and chalk and talk.	To Learn about the Quality evaluation and documentation of the products in the food industry.	Quiz, Evaluation of all the parameters in the food, Documentation, Visit to food industries to get better understanding on quality assurance and documentation , record keeping.

List of References (Book / ICT / Weblinks):

1. Amerine, M.A. Pangborn, R.M. and Rosslos, E.B. 1965. Principles of Sensory Evaluation of Food. London: Academic Press.
2. Early, R.1995. Guide to Quality Management Systems for Food Industries. London: Blackie Academic publications.
3. Krammer, A. and Twigg, B.A. 1973. Quality Control in Food Industry. Volume: I and II. New York: AVI Publications.
4. Macrae, R. Roloson, R. and Sadlu, M.J. 1994. Encyclopedia of Food Science & Technology & Nutrition. Volume: XVI. London: Academic Press.
5. Ranganna, S. 2001. Handbook of Analysis and Quality Control for Fruit and Vegetable Products. 2 nd edition. New Deihi: Tata-McGraw-Hill.

Name of the faculty member & Signature: **K Tejaeswini**

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT19401

Name of the Faculty Member: Dr. Sukh Veer Singh **Course Title:** Technology of Baking Science

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Bakery industry : Introduction, recent trends, Present status of Bakery Industry in India. Raw materials used in bakery industry and their properties Quality parameters in bakery Industry.	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on raw materials used in bakery industry and their properties. Quality parameters in bakery Industry.	Quiz
II.	Wheat milling - products and by-products Manufacture of whole wheat *Atta* Methods of dough mixing Dough development Dough chemistry	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on principles of milling and baking science, dough chemistry.	Quiz, experiment using wheat milling machine.
III.	Rheological testing of dough: Farinograph, Mixograph, Extensograph, Amylograph/Alveo consistograph, Rapid Visco Analyzer, Falling number, Hosney's dough, stickiness tester and interpretation of the data Factors affecting quality parameters; physical, chemical and rheological tests on wheat flour.	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on principles of rheological tests on wheat flour.	Quiz, showing video presentations on instruments.

IV.	Effect of Functional foods on Immune system Antioxidant system of the human organism Cardiovascular diseases Types of cancer Osteoporosis, Psoriasis and Ulcers	Lecture method using ICT Tools and chalk and talk	To understand and learn about Antioxidant system of the human organism, Cardiovascular diseases Types of cancer	Quiz, video presentation on particular action.
V.	Vegetables, Cereals, milk and dairy products as Functional foods Use of proanthocyanidins, grape products, flaxseed oil as Nutraceuticals Glucosamine, Lycopene and Melatonin Health effects of common beans, *Capsicum,* mustards, Ginseng, Health effects of garlic, grape, citrus fruits, fish oils, and sea foods	Lecture method using ICT Tools and chalk and talk	To understand and learn about Use of proanthocyanidins, grape products, flaxseed oil as Nutraceuticals Glucosamine, Lycopene and Melatonin.	Quiz, Assignment and ppt presentation on topics.

List of References (Book / ICT / Weblinks):

1. Aluko, Rotimi E. ***Functional Foods and Nutraceuticals*** 2012. University of Manitoba, Winnipeg, Canada.
2. Robert, E.C. ***Handbook of Nutraceuticals and Functional Foods*** (Modern Nutrition) 1st Edition, Kindle Edition
3. Casimir C. Akoh ***Functional Foods and Nutraceuticals*** *The University of Georgia, Athens, USA CRC Press*

Name of the faculty member & Signature: Dr. Sukh Veer Singh Ssingh

Approved by Head of the Department: Kiran Kumari.

2023-2024

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT13402 B

Name of the Faculty Member: K. Tejaeswini **Course Title:** Technology of Food Processing & Preservation

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction & high temperature Processing Food preservation and processing – scope historical developments, principles Processing and preservation by heat : (1) Blanching, pasteurization, sterilization, and UHT processing (2) Canning, extrusion, cooking , dielectric heating (3) Microwave heating, baking, roasting and drying	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on different processing and preservation techniques and their working principles.	Quiz, video presentation on extrusion, dielectric heating, microwave heating.
II.	Low Temperature Processing Processing and preservation by low temperature; Refrigeration, freezing CA (controlled atmosphere), MA (modified atmosphere), Dehydro freezing Processing and Preservation By Drying- types of dryers- suitability for different food products, Concentration, evaporation, Crystallization	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on low temp processing, Advanced packaging technique, Driers, evaporators, concentration and crystallization.	Qui z, experimental learning using different techniques of drying.
III.	Membrane Technology Membrane Technology: introduction to pressure activated Membrane process: Micro-filtration UF NF Ro Industrial application of Membrane Technology	Lecture Method using ICT Tools and chalk and talk	To learn about different types of food additives and their permissible limits, application of different enzymes and micro organisms used in food industry.	Quiz, assignments.

IV.	Food Additives & Fermentation Preservation by food additives: types and functions Permissible limits and safety aspects Use and application of; Enzymes in processing and preservation of food Microorganisms in processing and preservation of foods Food fermentations	Lecture Method using ICT Tools and chalk and talk	To learn about different membrane technologies and their industrial applications in food industry.	Experimental learning using different membranes techniques on different food products.
V.	New techniques preservation New techniques in food processing Processing and preservation by non- thermal methods Irradiation High pressure, high intensity light Pulsed electric field Ohmic heating IR hating, inductive heating Pulsed X-rays Hurdle technology Nanotechnology: principles and applications in foods	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on different advanced techniques and their working principles used in food industry.	Quiz, Video presentation on advanced techniques.

List of References (Book / ICT / Weblinks):

1. Arsdel, W.B. Copley, M.J. and Morgan, A.I. 1973. Food Dehydration. 2 nd Edition. Volume: I and II. New York: AVI Publications.
2. Desrosier, N.W and James, N. 1977. Technology of Food Preservation. 4 th Edition. New York: AVI Publications.
3. Fellows, P.J. 2005. Food Processing Technology: Principle and Practice. 2 nd edition. New York: CRC publications.
4. Ramaswamy, H. and Marcotte, M. 2006. Food Processing: Principles and Applications. Florida: CRC publications.

Name of the faculty member & Signature:
K. Tejaeswini

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT19403 A

Name of the Faculty Member: Dr. Sukh Veer Singh **Course Title:** Nutraceuticals & Functional Foods

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Functional foods and Nutraceuticals terminology Historical perspective and classification of functional foods and Nutraceuticals The food industry's role in promoting functional foods The role of marketing Communication in the introduction of functional foods to the consumer Sources of functional foods and Nutraceuticals	Lecture Method using ICT Tools and chalk and talk	To know about major nutraceuticals and functional foods and its classification.	Quiz.
II.	Relation of functional foods & Nutraceutical (FFN) to foods & drugs Applications of herbs to functional foods. Functional foods and Nutraceuticals remedies for common disorders like Arthritis, Bronchitis, circulatory problems, hypoglycemia Nephrological disorders, Liver disorder Probiotics and prebiotics Polyunsaturated fatty acids, lecithin	Lecture Method using ICT Tools and chalk and talk	To understand and learn about functional foods and Nutraceuticals remedies for common disorders and its interaction to foods and drug.	Quiz, displaying the sign of different disorder.
III.	Brief idea about some Nutraceutical rich supplements Soy proteins and soy isoflavones in human health Bee pollen, Caffeine, Green tea, Lecithin, Mushroom extract, Chlorophyll, Kelp and *Spirulina* Role of Dietary fibers in disease prevention	Lecture method using ICT Tools and chalk and talk	To understand and learn about soy proteins and soy isoflavones in human health, Bee pollen, Caffeine, Green tea, Lecithin, Mushroom extract, Chlorophyll.	Quiz

IV.	Effect of Functional foods on Immune system Antioxidant system of the human organism Cardiovascular diseases Types of cancer Osteoporosis, Psoriasis and Ulcers	Lecture method using ICT Tools and chalk and talk	To understand and learn about Antioxidant system of the human organism, Cardiovascular diseases Types of cancer	Quiz, video presentation on particular action.
V.	Vegetables, Cereals, milk and dairy products as Functional foods Use of proanthocyanidins, grape products, flaxseed oil as Nutraceuticals Glucosamine, Lycopene and Melatonin Health effects of common beans, *Capsicum,* mustards, Ginseng, Health effects of garlic, grape, citrus fruits, fish oils, and sea foods	Lecture method using ICT Tools and chalk and talk	To understand and learn about Use of proanthocyanidins, grape products, flaxseed oil as Nutraceuticals Glucosamine, Lycopene and Melatonin.	Quiz, Assignment and ppt presentation on topics.

List of References (Book / ICT / Weblinks):

1. Aluko, Rotimi E. ***Functional Foods and Nutraceuticals*** 2012. University of Manitoba, Winnipeg, Canada.
2. Robert, E.C. ***Handbook of Nutraceuticals and Functional Foods*** (Modern Nutrition) 1st Edition, Kindle Edition
3. Casimir C. Akoh ***Functional Foods and Nutraceuticals*** *The University of Georgia, Athens, USA CRC Press*

Name of the faculty member & Signature: Dr. Sukh Veer Singh, VSingh

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: M.Sc. Food Technology & Management **Class & Section:** NMFT **Course Code:** MFT13403 B

Name of the Faculty Member: Dr. P. Kiran Kumari **Course Title:** Food Toxicology & Allergens

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition and need for understanding food toxicology. Hazards - Microbiological, nutritional and environmental. Basics of immune resources - humoral and cell media resources. Allergen and mechanism of allergic resources	Lecture Method using ICT Tools and chalk and talk	To Learn about the food toxicology, various hazards, different immune responses	Quiz, group discussions, and weekly Assessment
II.	Food allergy and sensitivity: Chemistry of food allergens. Celiac disease. Food disorders associated with metabolism. Lactose intolerance. Asthma.	Lecture Method using ICT Tools and chalk and talk	To understand the types of hypersensitivity and food allergies, metabolic disorders and diseases associated with allergy	Quiz
III.	Principles of toxicology: Natural food toxicants: toxicity of mushroom alkaloids seafood, vegetables & fruits, pulses, antinutritional compounds. Biological factors that influence toxicity, toxin absorption in the G.I.track Industrial microflora, storage and excretion of toxins	Lecture Method using ICT Tools and chalk and talk	To gain knowledge on natural toxins and its absorption phenomenon in host	weekly Assessment

IV.	Quantitative and qualitative analysis of toxicants in foods Biological determination of toxicants Assessment of food safety: Risk assessment and risk benefit indices of human exposure, Acute toxicity, Mutagen city and carcinogenicity, Reproductive and developmental toxicity, Neurotoxicity and behavioural effect. Immunotoxicity.	Lecture Method using ICT Tools and chalk and talk	To understand various qualitative and quantitative analysis of various food toxicants and various biological methods to determine them.	Group discussions,
V.	Toxicants formed during food processing: ntional direct additives, preservatives, nitrate, nitrite, and N- nitroso compound flavor enhancers, food colours, indirect additives, residues and contaminants, heavy metals, other organic residues and packaging materials. Toxicity of heated and processed foods, Food carcinogens and mutagens Polycyclic aromatic hydrocarbons, N - nitrosamines, Acrylamide and their mode of action	Lecture Method using ICT Tools and chalk and talk	To understand the various toxicants that are formed during the processing and packaging of foods and the impact of different compounds to show toxic effects formed during various food processing and packaging.	Quiz, group discussions, and weekly Assessment

List of References (Book / ICT / Weblinks):

1. Helferich, William and Carl, K. 2001. **Food Toxicology.** New York: CRC Publications.
2. Shibamoto, Taka yuki and Leonard, F. 2009. **Introduction to Food Toxicology.** 2nd edition. Cambridge, USA: Academic Press.
3. Maleki, Soheila J. A.Wesley Burks, and Ricki M.Helm. 2006. **Food Allergy.** Washington DC: ASM Press.
   Cliver, Dean, O. and Hans, P. 2002. **Food Borne Diseases.** 2nd edition. Cambridge, USA: Academic Press/Elsevier.
4. Hans, P. and Dean, O. **Food Borne Infections and Intoxications.** 3rd edition. Cambridge, USA: Academic Press/Elsevier.
5. https://youtu.be/UdrJovyqcKE
6. https://youtu.be/zvqQ7oh5olo?si=zteUtCS7fr3DV-up

Name of the faculty member & Signature:

Dr. P. Kiran Kumari Kiran Kumari.

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: M.Sc. Food Technology & Management **Class & Section: NMFT** **Course Code:** MFT13404

Name of the Faculty Member: Mrs. S. Jemmy Evangeline

Course Title: Food Supply & Cold Chain Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction, scope and importance of cold chain in food processing industry retail chain, components of cold chain and integration Products going in cold chain temperature and humidity requirements packaging needs and their compatibility in cold chain Stages and points of control in cold storages and structures	Lecture Method using ICT Tools and chalk and talk	To Understand the rationale behind and fundamental principles of supply chain management.	Quiz, Online surveys about the functioning of different food supply chain practices.
II.	Functions in cold storages, pallet layout and stacking options flexibility storage systems cold chain transportation in land export, retail & supermarket cold chain & display systems internet auctions, e-market electronic business process optimization	Lecture Method using ICT Tools and chalk and talk	To Understand the necessary changes and transformations required for the successful implementation of the integrated supply chain perspectives.	Quiz, Group discussions.
III.	Temperature recording devices used during transport documentation and traceability Risk management problem diagnosis cost benefit studies for type of transport loading & unloading, storage duration	Lecture Method using ICT Tools and chalk and talk	To understand the process involving in assessing and prioritizing risks associated with supply chain.	Quiz, literature survey on supply of different perishable food products and its handling.

IV.	Building blocks of supply chain network performance measures decisions in supply world and models Supply chain inventory management economic order quantity models recorder point models multi echelon inventory systems	Lecture Method using ICT Tools and chalk and talk	To dentify the main drivers of supply chain links and recognize the managerial benefits and potential challenges of the supply chain practices.	Quiz, group discussion.
V.	Use of stochastic models and combinatorial optimization in; SC planning, layout capacity planning inventory optimization dynamic routing and scheduling Internet technologies and electronic commerce in SCM related to; ERP Q-procurement, e-logistics	Lecture Method using ICT Tools and chalk and talk	Knowledge of all aspects of the supply of goods and services, including procurement, transformation operations, transport/distribution, and the management of information in these areas.	Quiz, Classroom activities- group discussion, debates.

List of References (Book / ICT / Weblinks):

1. Chopra, S. and Meindel, P. 2002. Supply Chain Management: Strategy, Planning and Operation.
2. Handfield, R.B. and Nochols, E.L. 1999. Introduction to Supply Chain Management.
3. Levi, D.S. Kaminsky, P. and Levi, E.S. 2000. Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies.
4. Crosby, N.T. 1981. Food Packaging: Aspects of Analysis and Migration Contaminants.

Name of the faculty member & Signature:
S. Jemmy Evangeline
T.

Approved by Head of the Department: Kiran Kumari.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

IV SEMESTER

Department: B.com Marketing **Class: NCM** **Course Code CP23404**

Name of the Faculty Member: Srivatsa G **Course Title: Applied Public Relations**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I	Public Public relations – Definition, nature, scope, Public opinion, PR – qualities, Functions-introduction to segmentation of Public – community PR Financial PR Customer PR Employee PR, PR in an organization	Audio visual presentation.	Apply basic Public Relations theories and principles to practice.	Apply basic Public Relations theories and principles to practice..
II.	PR Management PR as a tool of Modern management Role of public relations as a management function, PR tools, Anticipatory PR- action in crisis, Corporate image, corporate identify, House journals, internal & external E-Public Relations, Corporate Social Responsibility	Explanation through live document n chalk n board method.	Prepare effective presentations to work teams, clients, and publics.	Prepare effective presentations to work teams, clients, and publics.

III.	PR Campaign PR process- Four key stages, Press release, press conference, PR campaign, Role of PR in mass media, PR consultancy, role of PR in Rural development training of PR	Audio visual presentation.	Select broader liberal arts knowledge with the principles of Public Relations in order to create effective public relations campaigns.	Select broader liberal arts knowledge with the principles of Public Relations in order to create effective public relations campaigns.
IV.	Corporate Publications Format & Layout for Corporate Publications Manual, Handouts, Annual reports, folder, brochures, employee newsletter, Production of internal & external house journal-its design, Cover, illustration Case studies House journals in India	Explanation through live document n chalk n board method.	Compose written Public Relations materials in a logical, coherent, concise, and appropriate format.	Model preparation
V.	PR Institutions, DIPR, PIB, IIMC RNI, PRSI, Event management- role of event management types, Event management firms, Training in event management, Planning, directing and coordinating and controlling events Budget for event management	Audio visual presentation.	Create and conduct ethically sound and socially responsible Public Relations strategies and campaigns.	Presentations by students

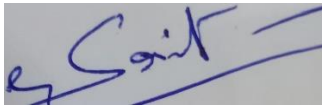
List of References (Book/ICT/ Weblinks):

1 Balan, K.R. 2011. "**Applied Public Relation and Communication**". Re-print, New Delhi: S Chand & Son.

2 Balan. & Rayudu. 2012. '**Principles of Public Relations'.** Mumbai: Himalaya Publisher.

3 Jetkins, Frank. 1982. '**Introduction to Marketing, advertising & Public Relation**', London: Mac Millian Press.
4 Reddy, Narasimha. 2015. '**Public Relations & Communication Hand book'**. Published by Hyderabad: CVNPR Foundation.
5 Centre H Allen. & Jackson, Patrick. 2013. '**Public Relations practices- Managerial case studies & problems**'. (6th edition) New Delhi: PHI Publishing House.
6 **Vidura**. New Delhi: Journal of Press Institute of India.

Name of the faculty member &Signature Srivatsa G



Approved by the Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

III SEMESTER

Department: B.com (Marketing) **Class & Section: NCM** **Course Code:**

Name of the Faculty Member: K. Rajesh **Course Title: Business Statistics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Statistics, Meaning, definition, functions, limitations of statistics, Collection of data Types of classification of data, simple and complex tables Sampling design and sampling techniques, Introduction, universe or population, sampling, types of sampling, census versus sample enumeration, sampling and non-sampling errors, limitations of sampling	Lecture Method using ICT Tools	To understand the basic definitions of Statistics, function, limitations and sampling techniques	Understanding the objectives of Statistics and Sampling Design.
II.	Diagrams and graphs, simple bar diagrams, Subdivided bar diagram, multiple bar diagram, Percentage bar diagram, pie-diagram, Histogram, Frequency polygon, frequency curve and Ogives	Lecture method with practical application	To show the diagrams and graphs	Understanding the diagrammatic presentations and graphical presentations
III.	Measures of central tendency, mean-merits and demerits Median –merits and demerits Mode – merits and demerits Geometric mean-merits and demerits, Harmonic mean merits and demerits Measures of dispersion, range -	Lecture method with practical application	To identify the central value using different statistical techniques	Group Discussion

	merits and demerits, quartile deviation- merits and demerits Standard deviation-merits and demerits, variance-merits and demerits Lorenz curve			
IV.	Measures of relation, Correlation, types of correlation Methods of correlation, scatter diagram, Karl pearson's coefficient of correlation, Spearman's Rank correlation coefficient, Regression analysis, Definition, uses, differences between correlation and regression, Regression equations of y on x and x on y deviations taken from mean and assumed mean, Properties of regression coefficients	Lecture method with practical application	To identify the relation between two variables and estimate future values using regression	Weekly Test
V.	Analysis of time series, Definition, uses components of time series, Mathematical models in time series analysis, Measurement of trend- Free hand method, Method of semi-averages, moving averages, Method of least squares – Straight line trend, Index numbers, Definition, uses, problems in the construction of index numbers, Classification of index numbers, Un-weighted index numbers-simple average of price relative method, Weighted index numbers, Tests of consistency, Chain base index numbers, Fixed base index numbers, Consumer price index numbers.	Lecture Method using ICT Tools and practical application	To learn about the Assessment Procedure.	Assessment procedure.

List of References (Book / ICT / Weblinks):

1. Gupta, S. P. 2008. Business Statistics. 36th revised edition. New Delhi: Sultan Chand & Sons
2. Agarwal, B. M. Business Statistics. 3rd edition. Mumbai: Himalaya Publishers.
3. Gupta, S. C. Business Statistics. 6th edition. Mumbai: Himalaya Publishers.

Name of the faculty member & Signature: K. Rajesh

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER : V

Department: B.Com. Marketing **Class & Section: DCM** **Course Code: CP18505**

Name of the Faculty Member: Josephin Bharathi Vege **Course Title: Multimedia – I (Practical)**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
Photoshop	**Introduction to Multimedia** – Concepts – Multimedia application in the field of advertising & Sales promotion – Software – Introduction to Graphic Design – Types of graphics – Vector & Raster **Working with Vector Image Software :** Working with Tool Box – Property Bar options – Menu options – Working With Color – Working With Paragraph Text – Special Effects – Layouts and Layers –Special Page Layouts – Arranging Objects – Adding Pages – Working With Transforming Objects– Styles and Templates – Advanced Effects – Creating Visiting Cards – Pamphlets – Brochures. **Working with Raster Image Software :** Using Tool Box – What is Pallet and Knowing about Color Pallet – Layers Pallet and sub pallets in these pallets – Using Menus – Knowing the Shortcut keys – Applying Layers Styles to the objects and text – Modifying the Photos – Converting B&W Photo to	• Introduction • Hands-On Projects • Tool Mastery • Workflow Techniques • Advanced Features • Industry-Relevant Skills • Collaborative Projects • Assessment and Feedback This aims to equip students with practical skills and industry insights for effective use of Adobe Photoshop.	Upon completing a Photoshop course, students will gain a strong foundation in navigating the interface and utilizing tools effectively. They will master essential image editing skills, including cropping, resizing, and color adjustments, while becoming proficient in non-destructive layer management. Students will apply graphic design principles, optimize images for various outputs, and enhance workflow efficiency. Through collaborative projects, students will improve teamwork and communication.	**Activity :** • Photo Retouching • Creating Digital Art • Designing Social Media Graphics • Photo Manipulation and Compositing • Designing a Poster or Flyer

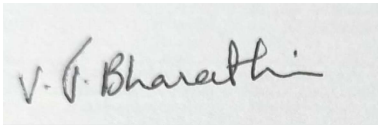
	Color – Understanding Filter Effects – Applying Filters to text and objects – Creating Designs using Tools – Working with Color & Gradient Color – Crop, Brush, Pen, Blur, Text etc., – Tools and Filter Menu – Doing Action & Animation in Photoshop – Creating Banners – Photo Corrections.			
Animate	**2D Animation :** Introduction to 2D Animation Software – Using Tool Box options – Using motion tweening to create Animation – Using shape tweening to create Animation – Creating masking effects – Frame by Frame Animation – Cell Animation – Creating a movie clip – Creating graphic – Working with Text Animation – Understanding Text types : Input, Static, Dynamic – Applying Morphing effect to the objects – Creating button – Applying controls to the button using Action Script – Writing basic Action Script – Character Drawing – Backdrop – Tracing – Creating Site in Flash.	Introduction to Interface Basic Animation Concepts Hands-On Projects Interactive Elements Character Animation Storytelling Through Animation Motion Graphics and Effects Web and Mobile Animation Collaborative Projects Assessment and Feedback	Learning Animate equips students to create engaging animations and interactive content for various platforms, allowing you to develop captivating multimedia projects using a blend of graphics, audio, and interactivity. It empowers you to bring ideas to life, mastering animation techniques and coding skills to produce dynamic and visually compelling digital experiences.	**Activity :** • Character Animation • Interactive Web Banners • Animating Logos • Creating Animated GIFs • Educational Animations
Dreamweaver	**Web Design :** Planning the Site – Site Structure – Introducing Dreamweaver – Start Page – The Interface – Document Views – Working with HTML in Dreamweaver – HTML Fundamentals – Code Reference – Hand Coding in Dreamweaver – Adding Text in Dreamweaver – Inserting vs. Importing Text – Character and Paragraph Formatting – Creating Lists – Inserting Special Characters – Finding and Replacing – Checking Spelling – Introduction: Cascading Style Sheets in Dreamweaver – Content vs. Presentation – Adding Text and images – Creating Links – Building Tables – OLE	Live demonstrations using Dreamweaver to show its interface and features. Interactive Dreamweaver projects for hands-on learning. Video tutorials and screen recordings to guide through tasks. Sample website templates to help students get started. Real-world case studies of websites created with	Upon learning a Dreamweaver students will be able to design and develop functional websites, create and manage web content, and troubleshoot common web design issues using Adobe Dreamweaver.	**Activity :** • Designing Website • Peer collaboration for project development and problem-solving. • Quizzes or assessments to evaluate students' Dreamweaver proficiency. • Classroom discussions for sharing tips and best practices.

	Concepts – Frames and Framesets – Site Management – Positioning Page Content in Dreamweaver – Building Forms in Dreamweaver – Inserting Form Objects – Check Boxes – Radio Buttons/Groups/Lists/Menu – Image and File Fields – Inserting Buttons – Field Sets.	Dreamweaver. Troubleshooting guides for common issues and errors.		

List of References (Book/ICT/ Weblinks):

1. Adobe Photoshop CC Classroom in a Book, by Adobe Creative Team, Published by Adobe Press, U.S.
2. "Adobe Dreamweaver CC Classroom in a Book" by Jim Maivald
3. https://www.youtube.com/watch?v=3cAriTRxVB8&list=PLD8AMy73ZVxUy_NB970zMFoexit7Tfj2r

Name of the faculty member & Signature : Josephin Bharathi Vege



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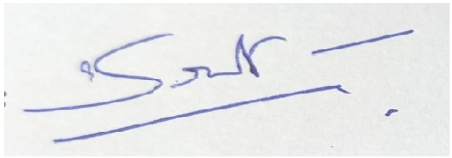


LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -IV

Department: B.com Marketing **Class: NCM** **Course Code CP23401**

Name of the Faculty Member: YAnjani kumari **Course Title: Direct Taxes**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Indian Taxation System – Over view of Direct Taxes & Constitutional provisions Income Tax: Basic Concepts: Income, Person, Assesses, Assessment year Previous year, Income, Casual income, PAN, Gross total income Agricultural income and its assessment (Theory only) Capital and Revenue, Residential status and incidence of tax of an individual	Audio visual presentation.	Analyzing the Indian taxation Structure	Analyzing the Indian taxation Structure
II.	Salary Meaning, Allowances, Perquisites, Profits in lieu of salary – treatment of various items of allowances, perquisites in computation of salary income Deductions from salary income, Qualified savings and Provident funds (Including simple problems) Meaning, Annual value, Let-out house, Self-occupied house, Deemed	Explanation through live document n chalk n board method.	Analyzing computation of salary and house property .	Solving problems

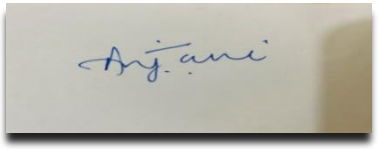
	to let-out house. Deductions from annual value, Deemed ownership, Unrealized rent Computation of income from house property (Including simple problem)			
III.	Chargeability, Deductions expressly allowed and disallowed General deductions, computation of profits and gains from business and profession Depreciation (Including simple problems) **Capital Gains** Capital assets meaning, Types, Cost of inflation index, Transfer types Transfer not regarded as transfer, Cost of acquisition of various assets, Deductions from capital gains Exemptions U/S 54. Computation of taxable capital Gains (Including simple problems)	Explanation through live document n chalk n board method.	To Analyze the financial position of non trading concern Learning the valuation of capital gains . **12hrs**	Model preparation
IV.	Interest on securities, Bond washing transaction, Dividends on shares, casual income, family pension Gifts received & other general incomes including deductions, Deemed income simple problems Deductions from gross total income and Rebates, aggregation of incomes, Set off and carry forward of losses	Audio visual presentation.	Evaluate the different situation of securities .	Model preparation

	Computation of total income and tax liability of Individual Assesses			
V.	Filing of returns & Advance Tax, Tax deducted at source (Theory Only) Types of Assessment-Self assessment, Regular assessment, Best judgment assessment, assessment procedure, Income tax authorities Assessment of Hindu - Undivided family (problems only).	Audio visual presentation.	Explain types of Assessment	Presentations by students

Listof References (Book/ICT/ Weblinks):

1.Mukherjee, A and Haneef, M. Modern Accountancy– Volume I. 2 nd edition, Tata McGraw Hill Publication.
2. Jain, S.P. and Narang, K.L. 2012. Corporate Accounting. 11 th edition. New Delhi:
Kalyani Publishers.

Name of the faculty member &Signature: YAnjani kumari



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -IV

Department: B.com Marketing **Class: NCM** **Course Code CP23402**

Name of the Faculty Member: YAnjani kumari

Course Title: Direct Taxes (Practicals)

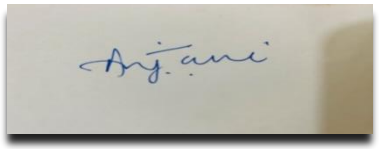
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Required documents for PAN (Form 49A) Statement of Perquisites Certificate form of TDS	Audio visual presentation.	Analyzing the forms of PAN , Perquisites and TDS	Analyzing the forms of PAN , Perquisites and TDS
II.	Simple problem on Residential status (individual,) Allowances and perquisites	Explanation through live document n chalk n board method.	Analyzing computation of residential status	Solving problems
III.	Simple problems on profits in lieu of salary	Explanation through live document n chalk n board method.	Analyzing the Simple problems on profits in lieu of salary	Solving problems
IV.	Computation of gross salary and Net income	Audio visual presentation.	Analyzing computation of salary	Model preparation

V.	Form filling 12BA, Form 280 challan.	Audio visual presentation.	Explain filling of the forms	Presentations by students

Listof References (Book/ICT/ Weblinks):

1.Mukherjee, A and Haneef, M. Modern Accountancy– Volume I. 2 nd edition, Tata McGraw Hill Publication.
2. Jain, S.P. and Narang, K.L. 2012. Corporate Accounting. 11 th edition. New Delhi:
Kalyani Publishers.

Name of the faculty member &Signature: YAnjani kumari



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024 SEMESTER

Department: ACM\ACSF\ACBA **Course Code: BE 23101**

Class & Section: ACM\ACSF\ACBA

Name of the Faculty Member: G.R.Nikitha **Course Title: BUSINESS ENGLISH**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Structure and Layout of Letters, Quotations, Orders & Tenders (9Hrs)** Elements, forms and style of letters (3) Inviting and sending quotations (4) Placing orders (2)	Lecture Method	1. Students will be to identify elements, forms and style of letters. 2.They will be to write quotations related to inviting, sending and placing orders.	Practicing different types of Business Letter and Quotations
II.	**Sales Letters (9Hrs)** Qualities and Functions of a Sales letter (2) Format of a Sales letter (3) Specimen Sales letter (4)	Lecture Method	1.Students will be to identify qualities and functions of a Sales Letter. 2.Students will be to write the format of a Sales Letter.	Practicing situational questions
III.	**Memorandum, Notices, Agenda and Minutes (9Hrs)** Functions and structure of a memorandum (1) Types of memorandum (1) Specimen memorandum (1) Format of Notice, Agenda and Minutes (3)	Lecture Method	1.They will also be able to understand and write the functions, structure and types of Memorandum. 2.Students will be to understand and write the format of notice, agenda and minutes	Revising the concepts related to different types of memo, notice, agenda and minutes.

IV.	**Telephone Etiquettes in Business Communication (9 Hrs)** Telephone Etiquettes in Customer Service (4) Texting Etiquettes (2) E-mail Etiquettes (3)	Lecture Method	They will be able to understand the guidelines for answering and making effective telephone calls.	Assignment on do's and dont's of telephone and texting etiquettes
V.	**Reading Comprehension (9Hrs)** Strategies for reading comprehension (2) Aspects of efficient reading (1) Speed, accuracy skimming, scanning and proof reading (1) Factual comprehension (1) Specimen comprehension (1) Commonly confused/misused words (3)	Lecture Method	1.Students will use the strategies for reading comprehension and understand the aspects of efficient training. 2.They will also have a better understanding of scanning and proof reading of comprehension.	Practicing specimen comprehension

List of References (Book / ICT / Weblinks):

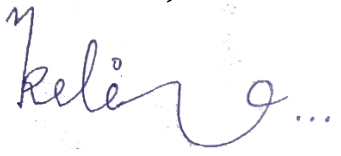
ESSENTIAL READING:

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.

SUGGESTED READING:

1. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.
2. Gruscendorf, Marion. 2007. **English for Presentations**. U.K: Oxford Publication Oxford.
3. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.
4. Rai, Urmila., and Rai, S.M. 2002. **Business Communication**. Mumbai: Himalaya Publishing House.

Name of the faculty member & Signature:
G.R.Nikitha,



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-IV

Department: Environmental Science **Class: NCM** **Course Code:ES23401**

Name of FacultyMember:S.BALACHANDAR **Course Title: EVS&GS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable & Non Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of naturalresources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earth quakes, and Cyclones**	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge onsolid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	**Rain-Water Harvesting, Water-shed Management** **Global Warming Ozone depletion, and Acid rains Environmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	Lecture Method using ICT Tools and Board	Apply the environmental science knowledge to improve the resources Evaluate and understand the sustainable environmental conditions and control methods.	Oral question and answers To understand the environmental policies and regulations

IV.	**Why should we study gender issues?** **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	Lecture Method using ICT Tools and Board	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	Oral question and answers To develop students' sensibility with regard to issues of gender in contemporary India
V.	**Sexual harassment** **Say no eve teasing** **The caste based violence** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act(2005)**	Lecture Method using ICT Tools and Board	Understand the gender problems and ways of addressing them, including interactionsacross local to global scales in communities and overcome inequalities with legislation	Oral question and answers To expose the students to debate on the politics and economic works and on gender violence

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition.Chennai: Oxford University Press.

Dr D K Asthana and Dr Meera Asthana. 2014.

2.**A Textbook of EnvironmentalStudies** Revised Edition. New Delhi: S. Chand & Company

3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomen in the Telangana People's Struggle**. New Delhi: Kali for Women.

4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.** Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for theAcademicYear2023–2024

SEMESTER

Department: B.com Marketing **Class : ACM** **Course Code: BC22002**

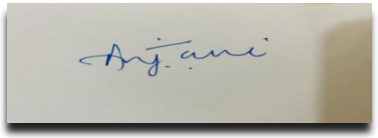
Nameof the Faculty Member: Anjani Kumari **Course Title: Financial Accounting {Practical }**

S.No	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Computerized accounting: Meaning and features – advantages and disadvantages of computerized accounting: creating an organization – grouping of accounts – creation of accounts – creation of inventory – creation of stock groups – stock categories, units of measurement – stock items – entering of financial transactions – types of vouchers – voucher entry – editing and deleting of voucher numbering – customization of vouchers.	Lecture Method using ICT Tools ---PPT	Learning the practical approach of the concept by using Tally.	Learning the practical approach of the concept by using Tally.
II.	Preparation of sales register, purchase register, journal proper, debit note register, credit note register and different cash books including interest and discount transactions using computers.	Lecture Method using ICT Tools ---PPT	Explain about subdivision of journal in Tally software	Explain about subdivision of journal in Tally software
III.	work: Preparation of trial balance, trading, profit and loss account and balance sheet using computers.	Lecture Method using ICT Tools ---PPT	Analyze the financial position of an organization in Tally software	Analyze the financial position of an organization in Tally software

IV.	Rectification of errors using computers.	Lecture Method using ICT Tools ---PPT	Identify the mistakes in books of accounts and helps in correcting them through tally	Identify the mistakes in books of accounts and helps in correcting them through tally	
V.	Preparation of bank reconciliation statement using computers.	Lecture Method using ICT Tools (PPT)	Preparation of bank reconciliation statement using computers	Preparation of bank reconciliation statement using computers	

(Soft ware-Tally)

Name of the faculty member&Signature: Y. Anjani kumari



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for theAcademicYear2023–2024

SEMESTER -II

Department: B.Com Marketing **Class : ACM** **Course Code: BC22007**

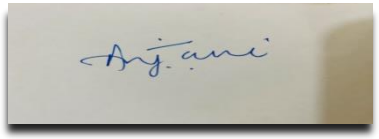
Name of the Faculty Member: Anjani Kumari **Course Title: Financial Accounting -II**

z	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Legal provisions in the absence of a partnership deed ,Fixed and fluctuating capitals Preparation of final accounts with adjustments Profit and loss appropriation account – methods of calculating good will – treatment of Good will's Calculation of sacrificing, new profit sharing ratio and admission of a partner	Lecture Method using ICT Tools ---PPT	Describe the need and importance of Partnershipdeed and legal provision	Model preparation
II.	Treatment of good will Methods of calculating good will Calculation of gaining ratio, new profit sharing ratio Retirement of a partner Death of a partner . Including joint life policy	Explanation through live document n chalk n board method	Explain about Goodwill and methods	Explain about Goodwill and methods
III.	Dissolution of partnership Insolvency of a partner Insolvency of firm excluding sale to firm, company and amalgamation	Explanation through live document n chalk n board method	Compare the insolvency of a partner , Firm and Amalgamation	Presentations by students

IV.	Single Entry- Features -Books and Accounts maintained Preparation of Statement of affairs- Difference between statement of affairs and Balance Sheet Recording of transactions- Ascertainment of profits under Single entry system (Statement of affairs method) -	Explanation through live document n chalk n board method	Analyze the financial position of an organization through statement of affairs	Analyze the financial position of an organization through statement of affairs
V.	Consignment-Meaning -Features -Proforma Invoice -Account sales Del crede recommission- Accounting Treatment in the books of the Consigner and the Consignee . Valuation of Consignment stock- Treatment of Normal and Abnormal Loss Invoice of goods at a higher price than the cost price	Lecture Method using ICT Tools (PPT)	Identify the consignment , delcrede commission ,and consignment stock .	Identify the consignment , delcrede commission ,and consignment stock .

Listof References (Book/ICT/ Weblinks): 1. Jain, S.P. and Narang, Part-1. 11th Revised edition Kalyani Publishers, New Delhi.
2. Gupta, R.L. and Radha Swamy. 2001. Advanced Accountancy – Volume-I. 10th edition Sultan Chand & Sons. , New Delhi.

Name of the faculty member &Signature: Y. Anjani kumari



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for theAcademicYear2023–2024

SEMESTER -II

Department: B.Com Marketing **Class : ACM** **Course Code: BC22009**

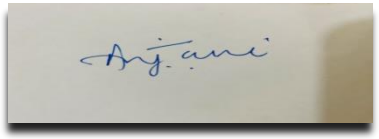
Name of the Faculty Member: Anjani Kumari **Course Title: Financial Accounting -II (Practicals)**

z	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Preparation of final accounts with adjustments Profit and loss appropriation account – methods of calculating good will – treatment of Good will's	Lecture Method using ICT Tools ---PPT	Model Preparation	Model preparation
II.	Calculation of sacrificing, new profit sharing ratio and admission of a partner Treatment of good will Methods of calculating good will Calculation of gaining ratio, new profit sharing ratio Retirement of a partner Death of a partner . Including joint life policy	Explanation through live document n chalk n board method	Learning and evaluating the admission of a partner through soft ware Tally .	Learning and evaluating the admission of a partner through soft ware Tally .
III.	Calculation of gaining ratio, new profit sharing ratio Retirement of a partner	Explanation through live document n chalk n board method	Learning and evaluating the retirement of a partner through soft ware Tally .	Learning and evaluating the retirement of a partner through soft ware Tally .

	Death of a partner . Including joint life policy			
IV.	Dissolution of partnership Insolvency of a partner Insolvency of firm excluding sale to firm, company and amalgamation	Explanation through live document n chalk n board method	Learning and evaluating the insolvency of a partner through soft ware Tally .	Learning and evaluating the insolvency of a partner through soft ware Tally .
V.	Consignment-Meaning -Features -Proforma Invoice -Account sales Del crede recommission- Accounting Treatment in the books of the Consigner and the Consignee . Valuation of Consignment stock-Treatment of Normal and Abnormal Loss Invoice of goods at a higher price than the cost price	Lecture Method using ICT Tools (PPT)	Identify the consignment , delcrede commission ,and consignment stock .	Identify the consignment , delcrede commission ,and consignment stock .

Listof References (Book/ICT/ Weblinks): 1. Jain, S.P. and Narang, Part-1. 11th Revised edition Kalyani Publishers, New Delhi.
2. Gupta, R.L. and Radha Swamy. 2001. Advanced Accountancy – Volume-I. 10th edition Sultan Chand & Sons. , New Delhi.

Name of the faculty member &Signature: Y. Anjani kumari



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-4

Department:NCM(B.com Marketing) **Class&Section:NCM** **Course Code:**

Name of the Faculty Member: ASWINI KUMAR MANDADAPU

Course Title: NCM(Fundamentals of Information technology)

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT-Introduction to Computers** Definition - Characteristics and limitations of computers Block diagram of a computer, CPUPrimary and secondary storage. Input and output devices	Lecture Method using ICT Tools,ppts	To Learn about- Characteristics and limitations of computers Block diagram of a computer	Debate in advantages and disadvantages of computer
II.	**UNIT – II** **Operating Systems:** meaning, definition, Functions Types of operating systems: Desktop OS, Server OS, Mainframe OS, Hand-held OS & Embedded OSMulti Tasking and Multi-threading Miscellaneous tasks Batch Processing systems Real time systems, Time sharing systems **User Interfaces:** GUI, Pen based, Touch Screen & Conversational interfacesCommon Operating Systems: DOS, Windows 95/98 and UNIX	Chalk and board method	Types of operating systems: Desktop OS, Server OS, Mainframe OS, Hand-held OS & Embedded OSMulti Tasking and Multi threading	Assignment on operating system and its types

III.	**UNIT – III** **Applications of Information Technology** Application programs Horizontal Market Applications, Vertical Market Applications Customs Applications, Shareware and Public domain software **IT in Business and Industry** – Home and at play, Education and Training, Entertainment and Arts, Science, Engineering and Math, computers in hiding	Chalk and board method	Transaction Processing IT in Business and Industry	Interaction section on transaction process
IV.	**UNIT-IV** **Systems Development**: The six phases of Systems Analysis & Design **The challenges of Digital Age:** Security issues: Threats to Computers &Communications Security: Safeguarding Computers & Communications Quality of Life Issues The ethics of using databases: concerns about accuracy & privacy Five generations of programming languages	Chalk and board method	Systems Development The challenges of Digital Age	Group discussion on the challenges of digital age
V.	**UNIT-V** **Modern Communications:** Communications, FAX Voice Mail and Information Services, Email **Group Communications:** News groups, Mailing lists, IRC, Network games Video conferencing File exchange, bandwidth Modem, Network topologies Network Types – LAN, MAN and WAN Dail up access	Lecture Method using ICT Tools, flow charts	Network topologies Network Types – LAN, MAN and WAN Dail up access	Conducted written test on topologies and types of network

List of References (Book/ICT/ Web links):

1. Curtin Dennis, P. and Foley Kim. 2000. Information Technology - The Breaking Wave. 7 edition. New Delhi: Tata McGraw Hill Publications.
2. Sinha Pradeep, K. and SinhaPreeti. 2007. Computer Fundamentals, Concepts Systems and Applications.4° edition. New Delhi: BPB Publications
3. https://www.youtube,com/@education4uofficial

Name of the faculty member &Signature: Aswini kumar mandadapu

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM [MARKETING] **Class & Section: ACM** **Course Code: CP22201**

Name of the Faculty Member: **Course Title: BUSINESS LAWS**

B.ANNE SUMALATHA **Total Hrs. : 75**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**INTRODUCTION TO INDIAN CONTRACT ACT** Agreement and Contract- Definition, Meaning - Essentials of a Valid Contract - Types of Contracts. Offer and Acceptance – Definition Essentials of a Valid Offer and Acceptance – Communication and revocation of offer and acceptance. Consideration – Definition and Importance – Essentials of a Valid Consideration – Doctrine of Stranger to Contract – No Consideration – No Contract. Capacity to Contract – Special rules regarding minors agreements. Consent – Free Consent – Laws – Coercion – Undue Influence – Fraud-Misrepresentation and Mistake. **[15 HRS]**	Lecture Method using ICT Tools	Demonstrate an understanding of the legal environment of the business.	Case Studies – General & Exhibited cases. Live Business PPTs- Seminars-Assignments.
II.	**CONCEPTS ON DISCHARGE OF CONTRACT** Legality of object and Consideration-	Lecture Method using ICT Tools	Explains legality of object and consideration, discharge of a contract and remedies available.	Case Studies – General & Exhibited cases. Live Business PPTs- Seminars-

	Illegal and Immoral agreements – Agreements opposed to public policy. Agreement expressly declared to be void – Wagering agreements and Contingent Contracts. Discharge of a Contract – Various modes of discharge of a contract - Breach of Contract – Types – Remedies for breach of a contract. **[15 HRS]**			Assignments.
III.	**SALE OF GOODS ACT** Contract of Sale: Definition-Features – Definition of the term goods – Types of property in goods. Differences between sale and agreement to sell – Rights of an Unpaid Seller. Conditions and Warranties – Meaning and Distinction – Express and Implied conditions and warranties – Sale by non-owners – Auction sale. **[15 HRS]**	Lecture Method using ICT Tools	Identify the recognition of transactions involving the sales of goods act.	Case Studies – General & Exhibited cases. Live Business PPTs- Seminars-Assignments.
IV.	**CONSUMER PROTECTION ACT** Definition of the term Consumer – Structure of Consumer Protection Act 1986 – Unfair Trade Practices – Restrictive Trade Practices and Complaints. Rights of Consumers – Consumer Protection Councils. Consumer Redressal Agencies – Penalties for Violation. **[15 HRS]**	Lecture Method using ICT Tools	Dramatize the application of consumer protection act.	Case Studies – General & Exhibited cases. Live Business PPTs- Seminars-Assignments.
V.	**COMPANY LAW** Memorandum of Association – Contents – Alteration Doctrine of Ultra Vires and its Effects.	Lecture Method using ICT Tools	Enable knowledge about company laws, rules, regulations and practices.	Case Studies – General & Exhibited cases. Live Business PPTs- Seminars-Assignments.

	Articles of Association- Doctrine of Constructive Notice – Doctrine of Indoor Management- Exceptions. Management of Companies – Directors – Qualifications – Disqualifications – Appointment- Removal rights and Duties- Company Meetings and Resolutions - Appointment of a Company Secretary. **[15 HRS]**			

List of References (Book / ICT / Weblinks):

1. Garg K.C. Shareen,V.K., Sharma Mukesh and Chawla R.c.. 2010. Business Laws, 7th Revised Edition, 2013. New Delhi, Kalyan Publishers.
2. Kapoor, N.D, Elements of Mercantile Law-2011, 5th Revised Edition, New Delhi; Sultan Chand & Co.
3. Maheshwari, S.N. and Maheshwari,S.K., A Manual on Business Law-2011, Mumbai, Himalaya Publishers.

https://www.sultanchandandsons.com

Videos – Case Studies- Links.

Name of the faculty member & Signature: **Approved by Head of the Department:**

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM [MARKETING] **Class & Section: NCM** **Course Code: BC23105**

Name of the Faculty Member:
B.ANNE SUMALATHA

Course Title: CORPORATE ACCOUNTING

Total HRS. : 75

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**COMPANY FINAL ACCOUNTS AND PROFITS PRIOR TO INCORPORATION** (A) Introduction to Company Final Accounts Format of Profit & Loss A/c and Balance Sheet Treatment/Provisions relating to the preparation of Final Accounts Statement of Profits and Balance Sheet (Problems) (B) Profits prior to Incorporation-Meaning and Methods of computing Profits prior to Incorporation (Problems). **[15 HRS]**	Lecture Method using ICT Tools	Understanding the various types of capital structures of the company and their representation in the balance sheet, preparation of financial statements with profits before incorporation.	Accounting Terminology test Assignments on AS-Formats & Schedules Practical exposures through practicing problems.
II.	**VALUATION OF GOODWILL AND SHARES** (A) Need and Methods of Valuing Goodwill Average Profit Method Super Profit Method	Lecture Method using ICT Tools	Explanation about the valuation of shares and goodwill.	Accounting Terminology test Assignments on AS-Formats & Schedules Practical exposures through practicing problems.

	Capitalization Method (Problems) (B) Need for Valuation – Methods of Valuation Net Assets Method Yield Basis Method Fair Value Method (Problems) **[15 HRS]**			
III.	**AMALGAMATION AND INTERNAL RECONSTRUCTION** (A) Amalgamation: Meaning-Definition- Features- Types of Amalgamation Amalgamation in the nature of merger and purchase Calculation of Purchase Consideration Treatment in the books of Transferor and Transferee Problems on Amalgamation in the nature of merger and purchase (As per Accounting Standard 14, Excluding inter-company holdings) (B) Internal Reconstruction: Meaning of Internal reconstruction Capital Reduction and Reconstruction Accounting Treatment in Internal Reconstruction Preparation of post reconstruction Final Statements Problems on Internal Reconstruction. **[15 HRS]**	Lecture Method using ICT Tools	Analyze amalgamation in the nature of merger and purchase and accounting treatment for internal reconstruction.	Accounting Terminology test Assignments on AS-Formats & Schedules Practical exposures through practicing problems.
IV.	**BANK ACCOUNTS** Accounting System of a banking company Registers to be maintained by banks Slip System of posting Rebate on bills discounted Advances classification of Bank	Lecture Method using ICT Tools	Demonstrate the accounting systems of a banking company under the guidance of RBI.	Accounting Terminology test Assignments on AS-Formats & Schedules Practical exposures through practicing problems.

	Advances Non-Performing Assets Legal provisions and guidelines for preparation of Form A and Form B Problems on banking companies **[15 HRS]**			
V.	**ACCOUNTS OF INSURANCE COMPANIES** (A) LIFE INSURANCE COMPANIES: Meaning of Life Insurance Legal provisions relating to Preparation of Revenue Account Profit and Loss Account and Balance Sheet Valuation Balance Sheet Problems on Life Insurance (B) GENERAL INSURANCE: Meaning of General Insurance Legal provision regarding preparation of Final Accounts of GIC Revenue A/C, Profit and Loss A/C Balance Sheet with special reference to Fire & Marine Insurance only) Problems on GIC. **[15 HRS]**	Lecture Method using ICT Tools	Help to prepare insurance accounts as per IRDAI guidelines.	Accounting Terminology test Assignments on AS-Formats & Schedules Practical exposures through practicing problems.

List of References (Book / ICT / Weblinks):

1. Jain, S.P. and Narang, K.L., Corporate Accounting, 11th & 13th Revised Editions, New Delhi; Kalyan Publishers.
2. Jain, S.P.and Narang, K.L., Accountancy – III, (2012) New Delhi: Kalyan Publishers.

Name of the faculty member & Signature: **Approved by Head of the Department:**

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM [MARKETING] **Class & Section: DCM** **Course Code: BC18023**

Name of the Faculty Member:
B.ANNE SUMALATHA

Course Title: ENTREPRENEURSHIP DEVELOPMENT

Total HRS. : 60

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I	**INTRODUCTION TO ENTREPRENEURSHIP** Entrepreneurship – Meaning – Definition of Entrepreneur Entrepreneur – Characteristics Classification of Entrepreneurs Functions of an Entrepreneur Entrepreneurs VS Entrepreneurship Entrepreneurial Environment Women Entrepreneurs – Concept Support and Assistance – Problems Measures Role of Entrepreneur in Economics Development. **[12 HRS]**	Lecture Method using ICT Tools	Understand the nature and basic concept of entrepreneur and entrepreneurship.	Success and Failure entrepreneurs Profile -Case Studies – General & Exhibited cases. Live Business PPTs- Seminars-Assignments. *[Related to the lecture topic]
II.	**ENTREPRENEURSHIP DEVELOPMENT IN TRAINING** Entrepreneurial Development and Training – Meaning Need and Objectives of EDP	Lecture Method using ICT Tools	Demonstrate the knowledge of entrepreneurship development programmes.	Success and Failure entrepreneurs Profile -Case Studies – General & Exhibited cases. Live Business PPTs- Seminars-Assignments.

	Entrepreneurial Training – Meaning – Importance – Objectives and Methods Institutions assisting to entrepreneurs Financial assistance to entrepreneur Types and Sources of Finance. **[12 HRS]**			
III.	**PROJECT IDENTIFICATION AND REPORT** Project – Meaning – Definition Project Classification Project Identification and its Importance Project Formulation – Concept – Need and Significance Project Feasibility and its aspects – Contents – Reason for Project Report Failure Review Techniques – PERT and CPM Method. **[12 HRS]**	Lecture Method using ICT Tools	Recognize the need for project report and analyze the concepts of project formulation.	Success and Failure entrepreneurs Profile -Case Studies – General & Exhibited cases. Live Business PPTs- Seminars-Assignments.
IV.	**FACTORY DESIGN AND STANDARDIZATION** Factory Design and Layout – Meaning – importance and Factors affecting Factory Design Factory Layout – Meaning – Considerations in factory layout Standardization –Meaning – Objectives –Importance Types and Advantages Quality Control – Meaning and Importance. **[12 HRS]**	Lecture Method using ICT Tools	Interpret factory design and factory layout and identify the importance of standardization and quality control.	Success and Failure entrepreneurs Profile -Case Studies – General & Exhibited cases. Live Business PPTs- Seminars-Assignments.
V.	**SMALL SCALE INDUSTRY** Small Scale Industries – Concept – Meaning – Definition Classification and Characteristics	Lecture Method using ICT Tools	Differentiate small and large scale industries and identify the reasons for sickness of small scale industries.	Success and Failure entrepreneurs Profile -Case Studies – General & Exhibited cases. Live Business PPTs- Seminars-Assignments.

	Difference between large scale and small scale industries Financial Schemes and Policies for SSI Problems of SSI Sickness of small scale industries Reasons and Remedies. **[12 HRS]**			

List of References (Book / ICT / Weblinks):

1. Desai, Vasant, The Dynamics of Entrepreneurial Development & Management. Edition, 2010, Himalaya Publishers.
2. Dr. S. Kanka, Entrepreneurial Development, Edition , 2015, Sultan Chand & Co. New Delhi.
3.Gordon & Natrajan, Entrepreneurship Development, Edition, Himalaya Publishers.

Internet Sources, News Paper Articles, Profiles –Videos
MSME Project Reports.

Name of the faculty member & Signature: **Approved by Head of the Department:**

LESSON PLAN

Name of the Lecturer: Dr. G.Srujan Kumar

Department: IHC

Class: ACM **Year:2023-24** **Semester:Mid-Sem-1**

Subject: Indian Heritage and Culture

SI.No.	Topic Allotted	No. of Hours
Unit-I	Meaning of culture-Characteristics of Indian Culture and Caste system Indus Valley Civilization and Vedic/Aryan Culture Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas Development of the art and architecture -contributions of Buddhism and Jainism.	6 hours
Unit II	Cultural Development under the Delhi Sultanate and Mughals Sufi and Bakti Movement in Medieval period Cultural Achievements of Kakatiys and Qutubshahis Development of Art and Architecture during medieval India.	6 Hours
Unit-III	Influence of Western culture on Indian Society 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar Indian National Movement-Moderate, Extremist and Gandhian phases	6 hours
Unit-IV	Perceptions of all Major Religions-A critical analysis Rise of communalism in Indian Society Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	6 Hours
Unit-V	Fundamental Rights, Women, Children Rights and LGBTQ Tribal Culture and their Issues	6 Hours

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: B.Com Marketing **Class & Section: NCM** **Course Code: CP23403/CP18402**

Name of the Faculty:Dr.Sunitha Nair A **Course Title: Marketing Research**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition of marketing research, nature, scope, importance, need, limitations. Steps on marketing research, Types of marketing research. Research Design	Lecture Method using ICT Tools	To understand and interpret the basic meaning of marketing research, to define the marketing research problems at hand and construct procedure for undertaking research	Quiz, presentations, role plays
II.	Types of data Primary data-types, sources, advantages, limitations, Case study, content analysis, interview, survey, panel, experimental, observational-its advantages and disadvantages, structural and non structural, disguised and non disguised methods of communication Secondary - types, sources, advantages, limitations Primary vs secondary	Lecture Method using ICT Tools	To classify the different sources of data and analyze the various methods of data collection	Quiz, presentations
III.	Sampling procedure-basic sampling terms,census vs sampling, advantages and disadvantages of both, sampling process, types of sample designs- probability and non probability methods,advantages and disadvantages of both,sample size determination, weighting of sample data	Lecture Method using ICT Tools	To understand the development of the most appropriate sample design and sample size and also to understand about the sampling and non sampling errors	Quiz, presentations

IV.	Scaling techniques- concepts, attitude, classification, types of scales and its qualities, selected attitude scale- paired comparison, Thurston scale, summated rating scale, semantic differential scale, constant sum scale, mutide=imensional scale. Limitations of attitude measurements	Lecture Method using ICT Tools	To learn about the classification of various types of attitude measurement scales and application of principles and format of report writing	Quiz, presentations
V.	Marketing research application areas,segmentation research, production research, price research, distribution research, advertising research, sales promotion research, social and financial research	Lecture Method using ICT Tools	To evaluate the application of marketing research in different marketing segments	Quiz, presentations

List of References (Book / ICT / Weblinks):

1. Chunawala, Reddy& Appannaiah 2010 **An introduction to advertising and marketing research**
2. Majumdar & Ramanuj 1998. **Marketing Research**
3. Beri G.C.2011- **Marketing Research**

Name of the faculty member & Signature:

Dr.Sunitha Nair A.

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: B.Com. Marketing **Class: ACM** **Course Code:23101**

Name of the Faculty Member:Dr.Srujan Kumar. G **Course Title: Indian Heritage and Culture**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian Customs and Traditions	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval Indian history and medieval Culture	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about historical, Social, religious and political issues of the nation.	Group presentation
IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions and democratic system of India	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about human Rights, tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr. Srujan Kumar G

Approved by Head of the Department:

Mrs. Srivasta G

LESSON PLAN

Name of the Lecturer : Dr. B. ANNE SUMALATHA

Department: COMMERCE AND BUSINESS STUDIES

Class: NCM - II B.Com Marketing **Year:**2022-2023 **Semester:** 4

Subject: CORPORATE ACCOUNTING **Code**: CP18405

Sl. No.	Topic Allotted	No. of Hours (75)Hrs.
UNIT-1	**Company Final Accounts and profits prior to incorporation** **Company final accounts:** **Introduction to Company Final Accounts.** Format of Profit & Loss A/c and Balance Sheet Treatment/Provisions relating to preparation of Final Accounts-Statement of Profits and Balance Sheet (problems) **Profits prior to incorporation** • Profits prior to incorporation- Meaning and Methods of computing Profits prior to incorporation (Problems)	**15 HRS**
UNIT-2	**Valuation of Goodwill and Shares:** **Valuation of goodwill** Need and Methods of Valuing Goodwill- Average profit method- Super profit method Capitalization method (Problems) **Valuation of shares** Need for valuation- Methods of valuation Net assets method. Yield Basis Method Fair Value Method (Problems)	**15 HRS**
UNIT-3	**Amalgamation and Internal Reconstruction** **Amalgamation of Companies Amalgamation:** Meaning, Definition, Features-Types of Amalgamation • Amalgamation in merger and purchase Calculation of Purchase Consideration -Treatment in the books of	**15 HRS**

	Transferor and Transferee Problems on Amalgamation in merger and purchase (As per accounting Standard 14, Excluding inter- company Internal Reconstruction of Companies holdings) **Internal Reconstruction**: Meaning of Internal reconstruction. Capital Reduction and Reconstruction • Accounting Treatment in Internal reconstruction. Preparation of post reconstruction Final statements Problems on Internal Reconstruction.	
UNIT-4	**Bank Accounts** Accounting system of a banking company Registers to be maintained by banks. • Slip system of posting Rebate on bills discounted Advances classification of Bank advances Non-Performing Assets Legal provisions and guidelines for preparation of Form A and Form B Problems on banking companies (final accounts)	**15 HRS**
UNIT-5	**Accounts of Insurance Companies** **Life Insurance Companies:** • Meaning of Life Insurance Legal provisions relating to Preparation of Revenue Account Profit and loss Account Balance Sheet and Valuation Balance Sheet Problems on Life insurance General Insurance: **Meaning of General Insurance** Legal provision regarding preparation of Final Accounts of GIC • Revenue A/C, P&L A/c, and Balance Sheet with special reference to (Fire & Marine insurance only) Problems on GIC	**15 HRS**

LESSON PLAN

Name of the Lecturer : Dr. B. ANNE SUMALATHA

Department: COMMERCE AND BUSINESS STUDIES

Class: NCM - II B.Com [Marketing] **Year:**2022-2023 **Semester:** 4

Subject: CORPORATE ACCOUNTING – LAB WORK **Code**: CP18409

Sl. No.	Topic Allotted	No. of Hours (30) Hrs.
UNIT-1	**Preparation of final accounts using computers**	**10**
	Acquisition of business and profits prior to incorporation	
	Accounting Treatment	
	Problems to Practice	
	Problems to Practice.	
UNIT-2	**Recording of transactions**	**08**
	Transactions relating to mergers using computers	
	Internal Reconstruction	
	Accounting Treatment	
	Problems to Practice	
	Problems to Practice.	
	Preparation of final statements after reconstruction.	
UNIT-3	**Internal Reconstruction**	**06**
	Recording of transactions relating to Internal Reconstruction	
	Problems to Practice	
	Problems to Practice.	
UNIT-4	**Final Accounts using computers**	**06**
	Preparation of bank final accounts using computers	
	Problems to Practice	
	Problems to Practice.	

LESSON PLAN

Name of the Lecturer : Dr. B. ANNE SUMALATHA

Department: COMMERCE AND BUSINESS STUDIES

Class: DCM - III B.Com Marketing **Year:**2022-2023 **Semester:** 6

Subject: ENTREPRENEURSHIP DEVELOPMENT **Code**: BC18023

Sl. No.	Topic Allotted	No. of Hours (60)Hrs.
UNIT-1	**INTRODUCTION TO ENTREPRENEURSHIP**	**12**
	Entrepreneurship Meaning, Definition of entrepreneur	
	Entrepreneurship Characteristics	
	Classification of entrepreneur	
	Functions of entrepreneur	
	Entrepreneur Vs Entrepreneurship	
	Entrepreneurial environment	
UNIT-2	**ENTREPRENEURSHIP DEVELOPMENT IN TRAINING**	**12**
	Entrepreneurial Development & Training – Meaning, Need of EDP	
	Objectives of EDP	
	Entrepreneurial Training – Meaning, Importance	
	Objectives and Methods of Entrepreneurial Training	
	Institutions assisting entrepreneurs	
	Financial assistance to entrepreneurs	
	Types and Sources of Finance	
UNIT-3	**PROJECT IDENTIFICATION AND REPORT**	**12**
	Project – Meaning and Definition	
	Project Classification	
	Project Identification and its importance	
	Project Formulation – Concept, Need and Significance	
	Project Feasibility and its aspects	
	Contents, Reasons for Project Report - failure of a project	

	Review Techniques – PERT and CPM Method	
UNIT-4	**FACTORY DESIGN AND STANDARDIZATION**	**12**
	Factor design and layout – Meaning, Importance	
	Factors affecting factory design	
	Factory Layout – Meaning, Considerations in factory layout	
	Standardization – Meaning, Objectives	
	Types, advantages and Importance of standardization	
	Quality Control - Meaning and Importance	
UNIT-5	**SMALL SCALE INDUSTRY**	**12**
	Small scale industries – Concept, Meaning and Definition	
	Classification and Characteristics of SSIs	
	Difference between large scale and small-scale industries	
	Financial Schemes and Policies for SSI	
	Problems of SSI	
	Sickness of SSIs – Reasons and Remedies	

LESSON PLAN

Name of the Lecturer : Dr. B. ANNE SUMALATHA

Department: COMMERCE AND BUSINESS STUDIES

Class: DIAF - III B.Com [International Finance] **Year:**2022-2023 **Semester:** 6

Subject: CORPORATE REPORTING **Code**: IF18601

Sl. No.	Topic Allotted	No. of Hours (75)Hrs.
UNIT-1	**FINANCIAL REPORTING FRAMEWORK**	**15**
	The professional and ethical duty of the accountant and Financial Reporting framework	3
	Professional Behaviour and compliance with accounting standards	3
	Ethical requirements of corporate reporting and the consequences of unethical behaviour and social responsibility	4
	The applications, strengths and weaknesses of an accounting framework	3
	Critical evaluation of principles and practices. • Case Studies	2
UNIT-2	**REPORTING THE FINANCIAL PERFORMANCE OF ENTITIES**	**15**
	Introduction to Reporting the financial performance of entities	2
	Performance reporting – Non-Current assets – Financial instruments – Leases . Segment reporting – Employee benefits	5
	Income taxes – Provisions, Contingencies and events after the reporting date. Related parties – Share- based payment	4
	Reporting requirements of small and medium- sized entities (SMEs) • Case Studies	4

UNIT-3	**FINANCIAL STATEMENTS OF GROUPS OF ENTITIES**	**15**
	Financial statements of groups of entities, specialized entities and specialized transactions	3
	Group accounting including statements of cash flows	3
	Continuing and discontinuing interests- Changes in group structures	3
	Foreign transactions and entities	2
	Financial reporting in specialized – not-for-profit and public sector entities	2
	Entity Reconstructions. • Case Studies	2
UNIT-4	**APPRAISAL OF FINANCIAL PERFORMANCE**	**15**
	Implications of changes in accounting regulation on financial reporting And Appraisal of financial performance	4
	The effect of changes in accounting standards on accounting systems	3
	Proposed changes to accounting standards – The creation of suitable Accounting policies	4
	Analysis and interpretation of financial information and Measurement of performance • Case Studies	4
UNIT-5	**CURRENT DEVELOPMENTS**	**15**
	Environmental and social reporting	5
	Convergence between national and international reporting standards	5
	Current reporting issues. • Case Studies	5

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 1

Department: B Com Marketing **Class & Section: ACM** **Course Code:CP22102**

Name of the Faculty Member: G Srivatsa **Course Title: Fundamentals of Advertising & Media**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition-advertising, meaning, Advertising objectives, Benefits and criticism of advertising, Role of advertising in marketing, Advertising and other communication methods Advertising and publicity Advertising and Public relations Evolution of Indian advertising.	Lecture Method	Apply basic advertising theories and principles to practice	Quiz
II.	Advertising Media - Types of media a) Print Media:-Newspapers, Magazines Rate structures, b) Broadcast Media: - Radio, Television, Cinema, Video, Cable Networks Performances, Advantages, c) Out-door media: - forms, Advantages, Limitations, Transit Advertising, Aerial Advertising, Forms of Aerial advertising, d) Direct Mail: - Advertising Literature or Circular advertising,	Lecture Method 2hilw using ICT	Identify arts knowledge with the principles of advertising in order to create effective advertising campaigns.	Group Discussion

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	Uses of direct mail characteristics a direct mail production programme, e) Point of Purchase: - forms of POP, Advertising, Advantages, Limitations, Designing, POP material, Indian media scene, posters, Bill boards, f) Internet advertising: Importance, advantages meaning limitations. g) Introduction to Digital Advertising, Forms of Digital Advertising, Products of different forms of digital advertising			
III.	Types of Advertising – product service, Institutional, Corporate, Non-profit, public Service, Financial, Global Industrial. Advertising to the consumer market, National trade, retail/local, Wholesale, Direct response, professional advertising.	Lecture Method 2hilw using ICT	Analyze the expanding environment of Mass media and communication techniques.	Debate

IV.	Advertising Agency – Evolution of advertising agency in India, Selection of advertising agency Client servicing, Account planning Creative department, Copy department Art department, Production department, Media-planning department	Lecture methods while using ICT	Evaluate how current industry trends and issues impact the future of advertising	Group Presentation
V.	ADVERTISING process for print media Communication objectives, Creative objectives, Advertising objectives persuasion, personal influence, Diffusion, DAGMAR approach.	Lecture methods while using ICT	Develop creative solutions to address advertising and challenges.	Showing newspaper clippings and TV ads

List of References (Book / ICT / Weblinks):

1. Amita, Shankar. 2008. **Essentials of Advertising.** Mumbai: Sheth Publsihers PVT LTD
2. S.C. Chunawalla. & K.C. Sethia. 2015. **Foundations of Advertising Theory & Practice.** (8th edition) Mumbai: Himalaya Publishing House.
3. David, Batra and Myers. 2002. **Advertising Management.** (5th edition) Noida: Pearson Education.

Name of the faculty member & Signature:  **G Srivatsa**

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 3

Department: B Com Marketing | **Class & Section: NCM** | **Course Code: CP23304**

Name of the Faculty Member: G Srivatsa | **Course Title: Creativity in Advertising**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Planning an Advertising Campaign Meaning of Advertising campaign, planning of Advertising Importance - Stages in the process of advertising planning. Analysis of the market determining, advertising Objectives, Establishing the budget, developing advertising strategy. Media creativity, Co-ordination with other activities. Evaluation of results, social campaign, case studies.	Lecture Method	Develop creative strategies for advertising	Quiz
II.	**Media Selection & Planning** Media Selection, 2 Planning scheduling & strategy - their reach frequency, 2 Impact - cost and other factors influencing choice of media,	Lecture Method while using ICT	Create and conduct ethically sound and socially responsible advertising strategies and campaigns	Group Discussion

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	2 Media planning process, design, 2 Media plan strategy, 1 Media-mix, 2 Media scheduling.			
III.	Creative Visualization Meaning, importance of creativity in advertising, Creative visualization, Steps in the creative visualization process, Methods of stimulating creativity, Brain Storming. Taskforce, Qualities of creative person.	Lecture Method 2hilw using ICT	Judge the strengths, weaknesses, opportunities, and threats (SWOT) of different kinds of promotional campaigns.	Debate
IV.	Evaluation of Advertising effectiveness Advertising Research, Pact principles, DAGMAR Approach, Types of advertising evaluation. A) Pre-testing of media, messages,	Lecture methods while using ICT	Interpret the importance of market segmentation, position and action objectives to the development of an advertising and promotion program.	Group Presentation

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	markets budgeting, scheduling, different methods of tests. B) Post-testing of media, messages, markets, and over-all results, different methods of tests			
V.	Research in Advertising Need for Research, Advertising research defined, the research process, Consumer research-What is a market, Market-segmentation, definition, Techniques of market segmentation, Consumer markets, Content analysis, Case study.	Lecture methods while using ICT	Analyze media strategy, scheduling, and vehicle selection.	Showing newspaper clippings and TV ads

List of References (Book / ICT / Weblinks):

1. Amita, Shankar. 2008. **Essentials of Advertising**. Mumbai: Sheth Publsihers PVT LTD
2. S.C. Chunawalla. & K.C. Sethia. 2015. **Foundations of Advertising Theory & Practice.** (8th edition) Mumbai: Himalaya Publishing House.
3. David, Batra and Myers. 2002. **Advertising Management**. (5th edition) Noida: Pearson Education.

Name of the faculty member & Signature:  **G Srivatsa**

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER 5

Department: B Com Marketing **Class & Section: DCM** **Course Code:CP22102**

Name of the Faculty Member: G Srivatsa **Course Title: Fundamentals of Advertising & Media**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	BASICS OF TV PRODUCTION & SCRIPTING Scripting for TV commercial, Story Board, script layout, Technical terms - Shots, placements of camera movements, Video tape editing, major short-comings of video - editing, super and special effects, Non-Linear, on-line and off-line editing, video compression, revolutionary editing.	Lecture Method	Develop creative strategies for Electronic Media advertising	Quiz
II.	INTERNET ADVERTISING Understanding basics of Ad words and online advertising, Hands-on experience of running a campaign with pre-allotted advertising budget, Consumer behavior towards online	Lecture Method while using ICT	Plan and implement basic research and interpret research results as they apply to broadcast advertising campaigns	Group Discussion

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.	internet advertising, understanding CPC (Cost-per-click) and CPM (Cost-per-impression), Introduction to other online advertising products.			
III.	**INTER-CULTURAL AND INTERNATIONAL ADVERTISING** • Inter-Cultural advertising - culture and advertising, growing internet, cultural advertising. • Inter national Advertising, Global branding, positioning & Advertising, message tactics – Media strategy Organizing.	Lecture Method 2hilw using ICT	Analyze the expanding environment of Television media, Internet advertising and communication techniques.	Debate
IV.	RURAL ADVERTISING Characteristics of Rural population, the Market, Consumption Pattern, media for Rural Communication. – TV, Radio, Traditional media, outdoor media for rural consumers.	Lecture methods while using ICT	Apply digital intelligence across a broad range of business functions	Group Presentation
V.	ADVERTISING THEORIES & MODELS David Ogilvy - the brand image, Rosser Reeves - the USP, Stimulus Response model, Maslow's hierarchy of needs, DAGMAR Model. Selection of Ad Agencies & Consultants –	Lecture methods while using ICT	Develop creative solutions to address advertising and challenges.	Showing newspaper clippings and TV ads

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	factors to be considered by the client, Services, client – Agency - consultant relationship.			

List of References (Book / ICT / Weblinks):

1. Amita, Shankar. 1999. **Essentials of Advertising.** Sheth Publsihers PVT LTD: Mumbai
2. S.C. Chunawalla. & K.C. Sethia. 2002. **Foundations of Advertising Theory & Practice.** (5th edition) Himalaya Publishing House: Mumbai.
3. David, Batra and Myers. 2002. **Advertising Management.** (5th edition) Pearson Education: Noida.
4. George & Belch Michael A Belch. **Advertising and Sales Promotion.** Tata MC Graw Hills Education Private LTD: New Delhi **Name of the faculty member &**

Signature:  **G Srivatsa**

Approved by Head of the Department:

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Teaching PlanfortheAcademicYear2023–2024

VI SEMESTER

Department: B.com Marketing **Class: DCM** **Course Code CP18602**

Name of the Faculty Member: YAnjani kumari **Course Title: Marketing communication**

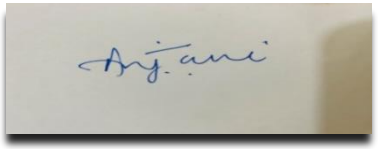
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I	Definitions, Nature, Importance of Communication,The Communication process,Elements of communication, Types of communication-Verbal, Nonverbal, intrapersonal & Interpersonal, Group and Mass Communication- Two –Step Theory, Multi –Step theory of Communication,Application of Communication process in Marketing, Introducing to Mass media	Audio visual presentation.	Demonstrate ability in oral communication. Demonstrate competency in written communication.	Demonstrate ability in oral communication. Demonstrate competency in written communication.
II.	Barriers to effective communication,overcoming barriers to Marketing Communication, Strategies for effective Marketing Communication, Methods of Marketing Communication, Marketing Communication through Product, Price Place and Promotion	Explanation through live document n chalk n board method.	Develop creative solutions to address advertising and marketing communications challenges	Develop creative solutions to address advertising and marketing communications challenges
III.	Determination of communication objectives through response Hierarchy Models- AIDA Model, Hierarchy of effects Models,	Explanation through live document n chalk n board method.	Evaluate the effectiveness of integrated advertising and marketing communications initiatives. And	Evaluate the effectiveness of integrated advertising and marketing communications initiatives. And

	Innovation Adoption Model, Communication model technologies breakthrough(Computer, Fax machines,Cellular phones, Pagers, Mobile services, Wireless service, Internet) its impact on MarketingCommunication ,Marketing information system.		models	Model Preparation
IV.	Communication budget and factors affecting Marketing Communication Promotional Mix:Nature, Importance and distinctive characteristics for advertising & Personal selling. Sales promotion, Public Relations, Publicity, Direct Marketing	Audio visual presentation.	Develop creative solutions to address advertising and marketing communications challenge in marketing Mix	Model preparation
V.	Setting of Targets:Segmentation, selecting target Market; Types of Marketing Strategies price Differentiation Strategies. Marketing Communication in Rural Markets, Market Segmentation in rural Marketing,Integrated Communication Marketing.	Audio visual presentation.	Evaluate how current industry trends and issues impact the future of advertising and marketing communications in rural Markets	Presentations by students

Listof References (Book/ICT/ Weblinks):

1.Mukherjee, A and Haneef, M. Modern Accountancy– Volume I. 2 nd edition, Tata McGraw Hill Publication.
2. Jain, S.P. and Narang, K.L. 2012. Corporate Accounting. 11 th edition. New Delhi:
Kalyani Publishers.

Name of the faculty member &Signature: YAnjani kumari



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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: B. Com Marketing **Class & Section: ACM** **Course Code:** CP22103

Name of the Faculty Member: **Course Title:**

Mr. P. Bala Praveen **Marketing management**

No of Hours taken: 63

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Marketing Management – Definition – Nature & Scope, Core concepts – Product concept – Selling concept – Marketing concept, Societal marketing concept, Marketing tasks selling vs. marketing, Marketing orientation vs. Production orientation	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To explain the concept of marketing and marketing environment	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
II.	Definition of product – level of product – classification of product, Product line decisions, Product mix decisions, Brand decision – packing and labeling, new product development – product life cycle, Concept – definition – setting the Price and types of pricing,	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To classify the market and identifies the various market segments	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)

III.	Channels functions – flows – channel levels – channel design decisions, analyzing customers desired service output levels, establishing objectives and constraints – Identifying major channel alternatives. Evaluating the major alternatives – channel dynamics VMS – HMS, Multi-channel marketing systems – conflict, co-operation and competition. Legal and ethical issues in channel relations	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To point out the marketing mix and the channels of distribution	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
IV.	Michael porters five forces determining segment structural attractiveness. Designing competitive intelligence system Selecting competitors to attack and to avoid, Designing competitive strategies – market leader strategies, Market challenger strategies – market follower strategies – Niche strategies	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To analyze the promotion, mix and the channels of distribution	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
V.	Social criticism of marketing – impact of marketing on individual consumers, society & other businesses, Environmentalism, Public actions to regulate marketing, Business actions towards socially responsible marketing, Enlightened marketing – Marketing consumers, society & other businesses Ethics.	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To explain service marketing mix and to point out the importance of direct and online marketing	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)

List of References (Book / ICT / Weblinks):

1. Phillip Kotler, Grey, Armstrong, Profulla, Y Agnihotri. & Ehsan, UI Haque, 2011. "Principles of Marketing" (13th edition.)
2. Dr. K. Karunakaran 2012. "Marketing management" (3rd revised edition) Himalayan publications

Name of the faculty member & Signature:
Mr. P. Bala Praveen

Approved by Head of the Department:

LESSON PLAN

DEPARTMENT: B.Com Marketing **CLASS:** NCM

III Semester **PAPER:** Business Statistics

LECTURER NAME: K. Rajesh

S.NO	TOPIC ALLOTTED	NO. OF HOURS
	UNIT – I	
1.	Introduction to Statistics, Meaning, definition, functions, limitations of statistics, Collection of data	3
2.	Types of classification of data, simple and complex tables	3
3.	Sampling design and sampling techniques, Introduction, universe or population, sampling, types of sampling, census versus sample enumeration, sampling and non-sampling errors, limitations of sampling	6
	UNIT – II	
4.	Diagrams and graphs, simple bar diagrams	2
5.	Subdivided bar diagram, multiple bar diagram	2
6.	Percentage bar diagram, pie-diagram	2
7.	Histogram	2
8.	Frequency polygon, frequency curve	2
9.	Ogives	2
	UNIT – III	
10.	Measures of central tendency, mean-merits and demerits	2
11.	Median –merits and demerits	2
12.	Mode – merits and demerits	2
13.	Geometric mean-merits and demerits, Harmonic mean merits and demerits	1
14.	Measures of dispersion, range - merits and demerits, quartile deviation- merits and demerits	2
15.	Standard deviation-merits and demerits, variance-merits and demerits	2
16.	Lorenz curve	1
	UNIT – IV	

17.	Measures of relation, Correlation, types of correlation	1
18.	Methods of correlation, scatter diagram, Karl pearson's coefficient of correlation	3
19.	Spearman's Rank correlation coefficient	2
20.	Regression analysis, Definition, uses, differences between correlation and regression	2
21.	Regression equations of y on x and x on y deviations taken from mean and assumed mean	3
22.	Properties of regression coefficients	1
UNIT – V		
23.	Analysis of time series, Definition, uses components of time series, Mathematical models in time series analysis	1
24.	Measurement of trend- Free hand method	1
25.	Method of semi-averages, moving averages	1
26.	Method of least squares – Straight line trend	1
27.	Index numbers, Definition, uses, problems in the construction of index numbers	1
28.	Classification of index numbers	1
29.	Un-weighted index numbers-simple average of price relative method	1
30.	Weighted index numbers	2
31.	Tests of consistency	1
32.	Chain base index numbers, Fixed base index numbers	1
33.	Consumer price index numbers	1

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- V

Department: B.Com Marketing	**Class & Section: DCM**	**Course Code:** CP18502
Name of the Faculty Member: **Dr S. Chiranjeevi**		**Course Title: PERSONAL SELLING AND SALESMANSHIP**

Unit	Topics to be Covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Personal Selling,Nature and importance of personal selling. Door-to-Door selling situations where personal selling is more effective than advertising Cost of Advertising Vs Cost of Personal Selling Role of Personal selling in promotion mix. Number & type of salespersons needed based on sales tasks as: Order Getters, Order takers Supporting Staff (Missionary sales people and Technical specialists). AIDCAS Model of selling, the types of Selling Methods, Status of Personal Selling in India. **(12 hours)**	Lecture Method and PPT	Analyze the importance and Role of Personal Selling	Conducted Quiz

II.	Buying motives & Types of markets Buying motives, Types of markets, Consumers and Industrial markets, their characteristics and implications for the selling function, Consumers assessment of Salespersons credibility. **(12 hours)**	Lecture Method and PPT	for the selling function Demonstrate Buying motives, Types of markets and implications	Conducted Seminar
III.	Process of effective selling, Prospecting, Pre-approach, Presentation Need satisfaction approach, Selling Formula approach Relative merits and demerits of different sales presentation's and its relevance too different selling situation Demonstration, Handling Objectives, Closing Sales, Post Sales Activities, Setting Sales Objectives. **(12 hours)**	Lecture Method and PPT	Understand the Process of effective selling and merits and demerits of different sales presentation's	Conducted Test
IV.	Selection and Training of Sales PersonsRole of clear and specification Job description, training regarding -Company Policies and Practices Product information Selling Techniques-Emphasis on Training to be Ongoing. Skills and qualities needed for successful sales person with particular reference to consumer services. Selling as a career, advantages and difficulties. Measures to be taken for making selling an attractive career, personal selling budgeting. Qualities of the successful sales personal with reference to	Lecture Method and PPT	Imports the Selection and Training of Sales Persons and explain the Skills and qualities for successful sales person	Conducted Test

	consumer services. **(12 hours)**			
V.	Distribution network, Relationship, Reports and Documents, Sale manual, Order back, Cash memo's dairy, Daily and Periodical reports. Other problems in personal selling. Personal selling and the law, integrated personal selling, Daily report, Sales reports, Sales manual, Sales Bulletin, The Art of Salesmanship', 'Psychology in Selling". "The Customer is Always right" Negotiation When to Negotiate, Negotiation skills and Negotiation strateg **(12 hours)**	Lecture Method and PPT	Describe Distribution network, Reports and Documents, Daily report, Sales reports, Sales manual and Sales Bulletin	Conducted Test

List of References (Book/ICT/ Web links):

. Burnett. Promotion Management.

2. Dr. Varma & Agarwal, Salesmanship.

3. Rustom S Davar, Sohrab R Davar. & Nusli R Davar. Salesmanship & Publicity.

4. Mathews, M. J. Sales Promotion & Sales Management

5. Stanten, and Buskirk Management of the Sales force (Richard D. Irwin).

Name of the faculty member & Signature: Dr.Salluri. Chiranjeevi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- V

Department: B.Com Business Marketing		**Course Code: G23CP1P**
Name of the Faculty Member: **Dr S. Chiranjeevi**	**Class & Section: DCBA & DBPM**	**Course Title: Principles of Marketing**

Unit	Topics to be Covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** Concept of Marketing-Evolution-Definitions -Nature & Scope of Marketing-Significance of Marketing --Marketing Concept Vs Selling Concept-Role of Marketing in Developing Economy- Marketing Environment - Meaning-Microenvironment-Macro Environment **(12 hours)**	Lecture Method and PPT	the students will learn the concept of marketing and sketches the marketing environment.	Conducted Quiz
II.	**Market Segmentation and Targeting** Identification of market segments-segmenting consumer markets -Segmentation basis-selecting target markets -Developing and communicating a positioning strategy **(12 hours)**	Lecture Method and PPT	Classify the market and identifies the various market segments.	Conducted Seminar
III.	**Product & Price** Product-definition-levels of product-classification of products-branding New product development–stages-product life cycle-stages involved Price-concept-importance of pricing-factors influencing pricing decisions. **(12 hours)**	Lecture Method and PPT	Point out the marketing mix with reference to product and price	Conducted Test

IV.	Place & Promotion Channels of Distribution-number of channel levels-channel design Promotion mixes variables-the communication process Advertising – designing effective advertising programs **(6 hours)**	Lecture Method and PPT	Analyze the promotion mix and the channels of distribution.	Conducted Test
V.	**Consumer Behavior & Services Marketing** Consumer behavior- definition-factors influencing consumer behavior Consumer buying roles-stages in buyer decision process Service marketing-concept-reasons for growth of services-role of services in economy **(6 hours)**	Lecture Method and PPT	. Explain service marketing mix and points out the importance of direct and online marketing.	Conducted Test

List of References (Book/ICT/ Web links):

1. Kotler Philip, Gary and Armstrong. **Principles of Management.** 13th Edition. New Delhi: Ehsanul Haque Publications.
2. Kotler Philip. 2007. **Marketing Management.** New Delhi: Pearson Publications.
3. Sherlekar, S.A. 2011. **Marketing Management.** 13th Revised Enlarged Edition. Mumbai: Himalaya Publications.
4. Karunakaran, K. **Marketing Management.** 3rd Revised and Enlarged Edition.

Name of the faculty member & Signature: Dr.Salluri. Chiranjeevi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

II SEMESTER

Department: B.com Marketing **Class: ACM** **Course Code CP22202**

Name of the Faculty Member: Srivatsa G **Course Title: Print Advertising**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I	Elements of Print Advertisement Advertising message - preparing an effective AD copy – Copy Writing - Elements of a print copy, head line , illustrations, Body text, Slogan, logo, seal of approval, qualities of good copy writer, qualities of effective copy, Types of copy, Institutional - Reason why, Human Interest, Educational - Suggestive & expository.	Audio visual presentation.	Develop creative strategies for Print advertising	Develop creative strategies for Print advertising
II.	Advertising Appeal : Types of Appeals - Rational, emotional, fear, positive, negative, moral, sex, direct, indirect appeals, Essentials of an advertising appeal, selling points and appeals, use of colour in advertisements, Designing a per, Qualities of an effective layout.	Explanation through live document n chalk n board method.	Plan and implement basic research and interpret research results as they apply to advertising campaigns	Plan and implement basic research and interpret research results as they apply to advertising campaigns

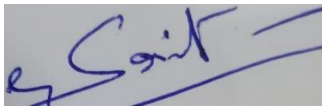
III.	Typography - Types - Roman – Gothic, Sans, Square, Series, Cursive/Script, ornamental/other types. Photography - Importance of light, colour - colour wheel, different colour and their effect, colour collection, Digital - DTP Quarter tones and half - Tones, Photography in Advertising Printing concepts, methods of printing. colour, paper consideration.	Audio visual presentation.	Analyze the expanding environment of Print media and communication techniques.	Analyze the expanding environment of Print media and communication techniques.
IV.	Layout - Types - Thumb nail sketch, Rough, finished, comprehensive working basic formats and compositions of layout, principles of Design - Balance, Rhythm, Emphasis, white space, unity, simplicity, proportion in a layout.	Explanation through live document n chalk n board method.	Apply digital intelligence across a broad range of business functions.	Model preparation
V.	Ethics in Advertising, control, ethics, self-central, control by consumers, Control by government, Deceptive Advertising, Harmful effects, Ambiguous, Forceful selling, Media misuse message problems, Life styles and values, public service Advertising,	Audio visual presentation.	Select creative solutions to address Print advertising and challenges.	Presentations by students

	False vulgar messages.			

Listof References (Book/ICT/ Weblinks):

1. Amita, Shankar. **Essentials of Advertising** -
2. S.C. Chunawalla. & K.C. Sethia. 1998. **Foundations of Advertising Theory & Practice.** (4th edition) Himalaya Publishing House: Mumbai**.**
3. David, Batra and Myers. **Advertising Management**. (5th edition) Pearson Education: Noida.
4. George & Belch Michael A Belch. **Advertising and Sales Promotion.** Tata MC Graw Hills Education Private LTD: New Delhi
5. Rathore, B.S. 1984. **Advertising Management.** Himalaya Publishing House: Mumbai. ISBN 8174934871, 9788174934871

Name of the faculty member &Signature Srivatsa G



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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

IV SEMESTER

Department: B.com Marketing **Class: NCM** **Course Code SECCP23401**

Name of the Faculty Member: Srivatsa G **Course Title: Social Media Marketing**

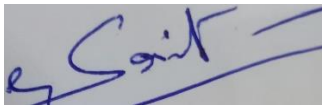
Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I	The Role of Social Media Marketing Goals and Strategies Identifying Target Audiences Rules of Engagement for SMM	Audio visual presentation.	Define social media marketing goal setting necessary to achieve successful online campaigns.	Define social media marketing goal setting necessary to achieve successful online campaigns.
II.	Social Media Platforms and Social Network Sites Micro blogging Content Creation and Sharing: Blogging, Streaming Video, Podcasts, and Webinars Video Marketing Marketing with Photos Sharing Sites	Explanation through live document n chalk n board method.	Describe the history of social media marketing, its rapidly evolving role in public relations, advertising, and marketing, as well as the merging of social media marketing with all facets of business.	Describe the history of social media marketing, its rapidly evolving role in public relations, advertising, and marketing, as well as the merging of social media marketing with all facets of business.
III.	Discussion, News, Social Bookmarking, and Q&A Sites Content Marketing: Publishing Articles, White Papers, and EBooks	Audio visual presentation.	Explain how to develop effective social media marketing strategies for various types of industries and businesses.	Explain how to develop effective social media marketing strategies for various types of industries and businesses.

IV.	Mobile Marketing on Social Networks Social Media Monitoring (Facebook, LinkedIn Twitter, Instagram, Pinterest and Youtube channel)	Explanation through live document n chalk n board method.	Define target markets for specific social media platforms.Use social media platforms (e.g., blogs, microblogs, social networks, bookmarking, social news, Q&A sites, photo & video sharing, and podcasting) to influence consumer and promote a company, brand, product, service or person.	Model preparation
V.	Tools for Managing the Social Media Marketing Effort Social Media Marketing Plan Appendix XYZ Coffee Company Social Media Marketing P	Audio visual presentation.	Track progress in achieving social media goals with a variety of powerful measurement tools, services, and metrics. Put it all together in a social media marketing plan.	Presentations by students

List of References (Book/ICT/ Weblinks):

1.Rogers M. Everett, **Communication Technology**: **The New Media Society**, The Free Press, Collier Macmillan Publisher, London, 1986.
2. Dizard Wilson Jr. Old Media, **New Mass Communication in the Information Age**, 2nd rd. Longman, New York, 1997.
3. Webster Frank, **Theories of the Information Society** Routledge, New York, 1995.
4. Michael Mandiberg, **The Social Media Reader (eBook)**
5. AnkitLal ,India Social, Hachette India 2017. 6. Tim Cigelske, **Analytics to Action: A Guide to Social Media Measurement**, Amazon Asia-Pacific Holdings Private Limited,2017.

Name of the faculty member &Signature Srivatsa G



Approved by the Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

V SEMESTER

Department: B.com (Marketing) **Class & Section: DCM** **Course Code:CP18501 (B)**

Name of the Faculty Member: K. Praveen Kumar **Course Title: Taxation**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Indian Taxation System – Over view of Direct Taxes. Income Tax: Basic Concepts: Income, Person. Assesses, Assessment year, Previous year, Income, Casual income, PAN, Gross total income, Agricultural income and its assessment, Capital and Revenue, Residential status and incidence of tax of an individual (only Theory).	Lecture Method using ICT Tools	To understand the basic definitions of Income Tax, Agricultural Income, Residential Status and Exempted Incomes.	Understanding the objectives of Taxation and tax slab rates.
II.	**Income from Salary:** Salary meaning, Allowances, Perquisites, Profits in lieu of salary and their treatment Deductions from salary income Computation of salary income, Qualified savings Provident funds (simple problems). **Income from House Property:** Meaning, Annual value, Let-out house, Self-occupied house, Deemed to be let-out house, Deductions from annual value Deemed ownership, Co-ownership, Unrealized rent.	Lecture method with practical application	To show the computation of income from the Head Salaries and House property as per IT act.	Understanding the calculation of Income from Salary and House Property
III.	**Income from Business and Profession:** Chargeability, Deductions expressly allowed and disallowed, General deductions, Computation of profits and gains from business and profession. Depreciation(simpleproblems). **Capital Gains:**	Lecture method with practical application	To identify the Income from Business, Profession and Capital Gains	Understanding the calculation of Income from Business

	Capital assets meaning, Types, Cost of inflation index, Transfer types, Transfer not regarded as transfer, Cost of acquisition of various assets, Deductions from capital gains. Exemptions U/S 54.			
IV.	**Income from Other Sources:** Interest on securities, Bond washing transaction Dividends on shares, casual income Family pension, Gifts received Other general incomes including deductions, Deemed income (simple problems). **Deductions from gross total income and Rebates** Aggregation of incomes, Set off and carry forward of losses. Computation of total income and tax liability of Individual Assesses (simple problems).	Lecture method with practical application	To identify the Income from other sources..	Understanding the calculation of Income from other sources.
V.	Direct Tax Assessment procedure, Filing of returns, Self assessment, Regular assessment, Best judgment assessment, Income tax authorities (Theory only).	Lecture Method using ICT Tools and practical application	To learn about the Assessment Procedure.	Assessment procedure.

List of References (Book / ICT / Weblinks):

1. Singhania. **Student guide to Income tax**. Taxman publications.
2. Mehrotra, H.C. **Income tax and accounts**. Sahitya Bhavan Publications.
3. Gaur and Narang. **Elements of Income tax**. Kalyani Publications.
4. Prem Raja, H. **Taxation**. Sri Hamsrala Publications.
5. Prem Raja, H. **Practicals in Taxation**. Sri Hamsrala Publications.

Name of the faculty member & Signature: Katha Praveen Kumar

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –2024

SEMESTER - III

Department:B.COM (HONS) STRATEGIC FINANCE Class & section: General Elective Course Code: G23FIT

Name of the Faculty Member: Ms. Thakur Satya Priya Course Title: Goods and services tax

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**INTRODUCTION TO INDIRECT TAXES:** -Meaning and types of indirect taxes , objectives and features of indirect taxes	- Lecture method - PPT presentation	-Students will be able to understand about indirect taxes before understanding the concept of GST	- Group discussions -Oral test on topics covered - Seminar by students
II.	**INTRODUCTION TO GOODS AND SERVICES TAX :** Objectives and basic schemes of GST , benefits of implementing GST in India , structure of GST dual model	- Lecture method - PPT presentation	- Students will be able to understand basic schemes of GST and its benefits	- Group discussions -Oral test on topics covered - Seminar by students
III.	**CGST AND SGST** Aggregate turnover , adjudicating authority , place of business , reverse charge , job work , input tax credit , business supply , export goods and services and imports of goods and services	-Lecture method - PPT presentation	-Students will be able to understand different types of GST and understand about Telangana state GST	-Group discussions .Oral test on topics covered - Seminar by students
IV.	**PROCEDURE AND LEVY UNDER GST :** Registration under GST ,	-Lecture method - PPT presentation	-Students will be able to understand about the registration procedure of GST	-Group discussions -Oral test on topics covered - Seminar by students

	compulsory registration , deemed registration , exempted goods and services under GST act and rates of GST		and which goods and services are exempted under the act	
V.	**ASSESSMENTS AND RETURNS :** Types of assessments , types of returns	-Lecture method .PPT presentation	-Students will be able to understand about the different types of assessments and how to file a return	-Group discussions -Oral test on topics covered - Seminar by students

ect taxes taxmann's

://cleartax.in/s/gst-returns

://www.indiafilings.com/

://taxguru.in/goods-and-service-tax/types-assessment-gst.html

Name of the faculty member & Signature:

Ms. Priya Thakur

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –

2024 SEMESTER – V

Department: B.COM (HONS) STRATEGIC FINANCE Class & Section: DCSF Course Code: SF18501

Name of the Faculty Member: Ms.Thakur Satya Priya Course Title: Banking Theory and practice

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** : - Origin and growth of banking of India - Kinds of banks -Unit Vs branch -Functions of commercial banks -Narasimham committee report - E banking : models for it , advantages and constraints of E banking	- Lecture method -PPT presentations to understand about electronic banking system	- Students understand when did the system of banking start in India - Students understand the new change in banking i.e., electronic banking system	- Group discussions - Test on the topics covered : oral / written
II.	**Banking and customer relationship:** - Definition of banker and customer - Special features of relationship -Opening of accounts -special types of customers - married women , companies , partnership firms , clubs and non trading institutions	- Lecture method .PPT presentations on different types of customers	-Students understand how does the banker and customer relation works - students understand the different types of customers in bank - students understand the method of opening an account in the bank	- Group discussions .Test on the topics covered : oral / written - students gets the practical knowledge by filling up the bank opening account form

III.	**loans and advances :** - meaning and definition of loans and advances - precautions to be taken while advancing loans against securities - goods : documents of title of goods - real estate - insurance policies - collateral securities banker's receipts	- Lecture method .PPT presentations on precautions	- students understand the different types of loans facilities available in the bank - students understand what precautions a banker will take before advancing the loans	- Group discussions . Test on the topics covered : oral / written
IV.	**types of banks :** - co operative banks - district co operative banks - land development banks - regional rural banks - national bank for agriculture and rural development and central bank : need and its importance - objectives and functions of central bank - critical crossing of central bank and its working	-Lecture method -PPT presentations	- students understand the different types of banks - students understand the functions and importance of central bank	-Group discussions . Test on the topics covered : oral / written - they were given an assignment to write on different banks - private and public
V.	**negotiable instruments :** - characteristics and types of negotiable instruments - promissory note and bill of exchange - cheques - crossing and types of crossing - endorsement : its types - duties and responsibilities of paying banker and collecting banker - consequences of wrongful dishonour mortgage - types	-Lecture method .PPT presentations	- students understand about the different types of negotiable instruments students understand about cheques and how to cross a cheque	- Group discussions - Test on the topics covered : oral / written - knowledge on crossing of cheques - knowledge on wrongful dishonour of cheque

References (Book / ICT / Weblinks):

. **financial services - banking and insurance** - mithani , d.m., and gordon 2013

banking theory and practice - 9th revised edition , dr. srivastava .p.k., 2003

https://www.newindianexpress.com/expressdeals/services/how-to-open-a-bank-account-in-india-online-and-offline/302.html#:~:text=You%20must%20complete%20the%20form,or%20Aadhar%20card%20is%20required.

https://www.bankbazaar.com/ifsc/list-of-merged-public-sector-banks-in-india-2021.ht

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –2024 SEMESTER – III

Department: B.COM (HONS) STRATEGIC FINANCE Class & Section: NCSF **Course Code: SF23301**

Name of the Faculty Member: Ms. Thakur Satya Priya **Course Title: Financial Reporting**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Financial statements :** - Income statements - statement of comprehensive income - statement of changes in equity - statement of cash flows	-Marker and white board - Lecture method	-Students will be able to prepare financial statements -Students will be able to understand the different types of statements	-Test on topics covered - oral and board test
II.	**Asset valuation :** - Fair value standards and measurements - Accounts receivable , inventory - Investment in marketable securities , property , plant and equipment - Depreciation methods - Impairment - Intangible assets - Deferred tax assets and leasehold assets	-Marker and white board - Lecture method	- Students will be able to understand how to value the asset - Students will be able to understand different types of depreciation	-Test on topics covered - oral and board test
III.	**Valuation of liabilities :** - Current liabilities - Contingencies - Long term liabilities	-Marker and white board - Lecture method	- Students will be able to understand different types of liabilities - Students will be able to	-Test on topics covered - oral and board test

	- Bonds payable - Warranties - Off balance sheet financing - Deferred tax liabilities , lease liabilities		develop conceptual understanding on off balance sheet financing	
IV.	**Equity transaction :** - paid in capital - retained earnings - accumulated other comprehensive income - stock dividends - stock splits - stock options	- Lecture method - group discussions	- students will be able to develop conceptual understanding on equity transactions - students understand about different types of stocks	-Test on topics covered - oral and board test -assignments on topics covered
V.	**revenue recognition :** - principles of revenue recognition - percentage of completion versus completed contract method - major difference between us gaap and ifrs	- Lecture method - group discussions	- students will be able to recognise revenue recognition principles - students will be able to understand how to prepare financial statements according to gaap and ifrs -	-Test on topics covered - oral and board test -assignments on topics covered

.ist of References (Book / ICT / Weblinks) :

cmexcel learning system part 1 : financial reporting , planning , performance and control

stripe.com/in/guides/introduction-to-revenue-recognition#:~:text=Revenue%20recognition%20is%20an%20aspect,is%2

ed%20(cash%20accounting).

corporatefinanceinstitute.com/resources/accounting/ifrs-vs-us-gaap/

Name of the faculty member & Signature:

Approved by Head of the Department:

OYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year

2023–2024 SEMESTER-I

Department: B.Sc.Computer Science&Cognitive systems **Class &Section:ASF** **CourseCode:BC22003**

Name of the Faculty Member: K Nandini **Course Title: Fundamentals of Information Technology**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Computers 1. Definition - Characteristics and limitations of computers 2. Block diagram of a computer, CPU 3. Primary and secondary storage 4. Input and output devices Data Representation and Storage 1. Data representation in computers, bits and bytes 2. Number systems (Binary, Octal and Hexadecimal) 3. Conversion from decimal to binary, octal, hexadecimal and vice versa 4. Secondary storage 5. Random Vs Sequential access, Tracks and Sectors 6. Storage characteristics 7. Increasing data storage capacity through compression (disk compression and file compression)	Lecture based using Power point presentations etc	Understand basic computer terminology and number systems.	Conducted Group Discussion on latest technologies,Applications and use of Technology in todays generation.

II.	Operating Systems 1. Meaning, Definition, Functions 2. Types of operating systems: Desktop OS, Server OS, Mainframe OS, Hand-held OS & Embedded OS 3. Multi Tasking and Multi threading 4. Multi User multi processor support 5. Miscellaneous tasks 6. Batch Processing systems 7. Real time systems, Time sharing systems User Interfaces 1.GUI, Pen based, Touch Screen & Conversational interfaces 2. Common Operating Systems: DOS, Windows 95/98 and UNIX	Collaborative Group work and used ICT tools	Learn about operating systems, and its types.	Conducted Computer based test
III.	Applications of Information Technology 1. Application programs 2. Horizontal Market Applications, Vertical Market Applications 3. Customs Applications, Shareware and Public domain software Transaction Processing 1. Centralized transaction processing 2. Client Server software, Distributed computing and Replication 3. Information tools for management control: DSS, EIS, GIS, OLAP 4. Data Warehousing and Data Mining IT in Business and Industry 1. Home and at play, Education and Training, Entertainment and Arts 2. Science, Engineering and Math, Computers in hiding IT Enabled Services	Lecture Method using ICT Tools	Learn about the applications of Information technology	Conducted Quiz

	1. BPO, KPO & Call centers			
IV.	Systems Development 1. The six phases of Systems Analysis & Design The challenges of Digital Age 1. Security issues: Threats to Computers & Communications 2. Security: Safeguarding Computers & Communications 3. Quality of Life Issues 4. The ethics of using databases: concerns about accuracy & privacy 5. Five generations of programming languages	Real world case studies	Importance of system development and the phases of SDLC	Conducted Seminars
V.	Modern Communications 1. Communications, FAX 2. Voice Mail and Information Services, Email Group Communications 1.News groups, Mailing lists, IRC, Network games 2. Video conferencing 3. File exchange, bandwidth 4. Modem, Network topologies 5. Network Types – LAN, MAN and WAN 6. Dialup Access	Interactive Multimedia Presentations	Use of modern means of communications, types of networks and topologies	Conducted Viva

List of References (Book/ICT/ Weblinks):

1. Computer Fundamentals, Concepts, Systems and Applications. 4 th edition. BPB Publications
2. Bharihoke Deepak. 2000. Fundamentals of Information Technology. 2 nd edition. Excel books

Name of the faculty member & Signature: K Nandini
Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER V

Department:CSF **Class&Section:DCSF** **CourseCode: SF18505**

Nameofthe FacultyMember: Bhanu sree S **CourseTitle: Database management systems**

Unit	Topics to be covered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction, data base applications ,ddl ,dml, database designs, entity relationship model, extended er,Constraints, attribute inheritance , chareteristics advantages	Oracle sql, ppts.flow charts, diagrams, ict tools	Represent logical database using ER and enhanced ER model, importance of ER in back ends	Quiz,SolvingProblemsusing sql, write and excueting queries
II.	Relational model, Reduction to schema,normalization 1NF,2NF,3NF,BCNF.set operators,aggregate functions,joins,views,relational algebra, modification of database, anomalies..	Sql, ppt ,real world examples of an application ,ict tools	Formulate database using relational algebra and organize relation using normalization	Assignment , joining the tables and organizing using sql.
III.	Introduction, programming , functions and procedures , triggers , cursors, roles, authorization on views, functions and application security , scalar functions , granting privileges	Ppt ,ict tools	Design sql, queries and implement PL/SQL	Group discussion on triggers and importance of authorization, developing codes using pl/sql
IV.	Physical storage media , magnetic disks, buffer manger , replacement policies, file organization ,hash function , dynamic hash function , comparison b , b+ trees	PPT, architecture of storage media , flow charts	Classify the storage and file structure , storage access , indexing and hashing techniques of the data base	Class activity on tree traversal, hash function and its working

Internal Quality Assurance Cell 2023-2024
2023-2024

V.	Transcations, serializabity recoverability, testing for serializability , concurrency control, lock based protocols, recovery system , storage structures, recovery and atomicity , log based recovery , check points , dead lock handling .	PPT, usage of transctions via upi apps	Explain the concept of transcations , recovery system and concurrency control	Presentations on concurrency control, viva voice on transcation concepts

Listof References (Book/ICT/ Weblinks):

1. Korth Henry, Database system concepts 6th edition
2. Bayross Ivan 2010 SQL, PL/SQL the programming language for Oracle
3. https://www.youtube.com/@education4uofficial

Nameofthefacultymember&Signature: S. Bhanu Sree

Approvedby HeadoftheDepartment: M. V. B Sailaja.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- V

Department: B.Com Honours Strategic Finance	**Class & Section: DCSF**	**Course Code: SF 18503**
Name of the Faculty Member: Dr K. Gopi Krishna		**Course Title: Entrepreneurial Development.**

Unit	Topics to be Covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Entrepreneurship** Entrepreneurship – Meaning, Definition of Entrepreneur- Entrepreneurship, Characteristics, Classification and Functions of an Entrepreneur- Entrepreneurs VS Entrepreneurship- Entrepreneurial Environment, Women Entrepreneurs- Concept, Support and assistance, Problems and measures- Role of Entrepreneur in Economic Development. **(12 hours)**	Lecture Method and PPT	To understand the basic concepts of Entrepreneurship and women entrepreneurs in India.	Activity conducted for Students to identify the problems in India and the ways to solve problems through entrepreneurship.
II.	**Entrepreneurship Development & Training** Entrepreneurial Development & Training- Meaning, Need and Objectives of EDP, Entrepreneurial Training- Meaning, Importance, Objectives and Methods, Institutions Assisting entrepreneurs, Financial assistance to entrepreneurs, Types and Sources of Finance **(12 hours)**	Lecture Method	To make the students to aware of various training programs offered in India and facilitate easy and smooth functioning of companies.	Problem Solving

III.	**Project Identification and Report** Project- Meaning and Definition- Project Classification- Project Identification and its Importance- Project Formulation – Concepts, Need and Significance- Project Feasibility and its aspects- Contents, Reasons for Project Report Failure, Review Techniques- PERT and CPM. **(12 hours)**	Lecture Method	Students will be learned to prepare various projects for the companies.	Skill in Formulating Projects.
IV.	**Factory Design and Standardization** Factory Design & layout- Meaning, Importance and Factors affecting factory design. Factory Layout- meaning, considerations in factory layout, Standardization- meaning, objectives, types and advantages/importance, Quality control- meaning and importance. **(12 hours)**	Lecture Method	To familiarize the students to know and understand the various aspects of factory design & layout and quality control in Indian Companies.	Problem Solving
V.	**Small Scale Industry** Small Scale industries—Concept, Meaning and Definition- Classification and Characteristics- Difference between Large Scale and Small Scale Industries- Financial Schemes and policies for SSI- Problems of SSI- Sickness of small Scale industries , reasons and remedies. **(12 hours)**	Lecture Method	Students will be able to learn the difference between small and large scale companies in India.	Problem Solving.

List of References (Book/ICT/ Web links):

1. Vasanth Desai, 2010. The Dynamics of Entrepreneurial Development & Management, Himalaya Publishing Home Pvt.Ltd: Mumbai.
2. Gordon, E and Natrajan, K. 2009, Entrepreneurship Development, Himalaya Publishing Home Pvt.Ltd: Mumbai.
3. Vasanth Desai, Khanka SS, 2012, Small Scale Industries and Entrepreneurship, Sultan Chand Sons: New Delhi.

Name of the faculty member & Signature: Dr K. Gopi Krishna — KGK

Approved by Head of the Department: M.V.B Sailaja Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- III

Department: B.Com Honours Strategic Finance	**Class & Section: NCSF**	**Course Code: SF 23302**
Name of the Faculty Member: Dr K. Gopi Krishna		**Course Title: Financial Decision Making**

Unit	Topics to be Covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Financial Statement Analysis** Common Size financial statements- common base year financial statements- financial ratios (Liquidity, Leverage, Activity, Profitability, Market)- Profitability Analysis (Income Measurement Analysis, Revenue Analysis, cost of sales analysis, expense analysis, variation analysis)- Impact of Foreign Operations- Effects of changing prices and inflation- off balance sheet financing- impact of changes in accounting treatment- Accounting and economic concepts of value and Income- Earnings Quality. **(15 hours)**	Lecture Method	Students will be able to understand common size financial statement and various financial ratios.	Problem Solving
II.	**Financial Management** Calculating return- Types of Risk- Relationship between risk and Return- Term structure of interest rates- types of financial instruments- cost of capital- valuation of financial instruments. **(15 hours)**	Lecture Method	Students will be able to identify the relationship between risk and return and utilize the knowledge of long term financial management.	Problem Solving

III.	**Raising Capital** Financial markets and regulation- Market Efficiency- Financial Institutions- Initial and Secondary Public Offering- Dividend Policy and Share repurchase – Lease Financing. **(15 hours)**	Lecture Method	Students will be able to examine financial markets and regulations and analyze working capital management.	Skill in identifying IPOs of Indian Companies.
IV.	**Working Capital Management** Working Capital Terminology- Cash Management- Marketable Securities Management- Accounts Receivable Management- Inventory Management- Types of Short Term Credit- Short Term Credit Management. **(15 hours)**	Lecture Method	To familiarize the students to know and understand the various aspects of working capital.	Preparing Working Capital for Indian Companies.
V.	**Corporate Restructuring and International Finance** Mergers & Acquisitions – Bankruptcy- Other forms of restructuring – Fixed, Flexible and Floating exchange rates- Managing Transaction exposure- financing international trade- Tax implications of transfer pricing. **(15 hours)**	Lecture Method	Students will be able to learn the concepts of merger and acquisitions in Indian scenario and corporate restructuring.	Decision Making Skills.

List of References (Book/ICT/ Web links):

1. Wiley CMA excel Learning System, Part 2: Financial Decision Making.
2. Gibson, Charles H., Financial Reporting and Analysis, 13th Edition, South-Western Cengage Learning , Mason, OH, 2013.
3. Van horn, James, C and Wachowicz, John M. jr., Fundamentals of Financial Management, 13th edition, FT/Prentice Hall, harlow, England,2009.

Name of the faculty member & Signature: Dr K. Gopi Krishna

Approved by Head of the Department: M.V.B Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- I

Department: B.Com Honours Strategic Finance	**Class & Section: ACSF**	**Course Code: SF 22101**
Name of the Faculty Member: Dr K. Gopi Krishna		**Course Title: Financial Planning & Performance**

Unit	Topics to be Covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Strategic Planning** Analysis of external and internal factors affecting strategy- Long term mission and goals- Alignment of tactics with long term goals- Strategic Planning models and analytical techniques- Characteristics of successful strategic planning process. **(15 hours)**	Lecture Method and PPT	To understand the basic concepts of strategy and strategic planning, budgeting, models and techniques.	Conducted Subject Puzzle
II.	**Budgeting Concepts and Methodologies** Operations and Performance goals- Characteristics of a successful budget process- Resource Allocation- Forecasting techniques(Regression Analysis, Learning Curve Analysis, Expected Value)- Annual Business Plans(Master Budget), Production Budget, Cash Budget, Materials Budget, Project Budgeting, Activity based budgeting, Zero based Budgeting, Continuous (Rolling) budgets- Flexible budgeting.(Problems) **(15 hours)**	Lecture Method	To make the students to aware of various budgeting concepts and classify the forecasting techniques and demonstrate the budget.	Problem Solving

III.	**Top Level Planning and Analysis** Annual Profit Plan and Supporting Schedules- Operational Budgets- Financial Budgets- Proforma Income- Comparative and Commonsize Financial Statement Analysis- Cash flow Statements. **(15 hours)**	Lecture Method	Students will be able to make use of budgets to prepare an annual profit plan.	Problem Solving
IV.	**Cost and Variance Measures** Comparison of Actual to Planned results- Use of Flexible budgets to analyse performance- Management by Exception- Problems on Material, Labour and overhead variances Use of Standard Cost system- Analysis of Variation from Standard Cost Expectations. **(15 hours)**	Lecture Method	To make the students to know about importance and uses of standard cost systems.	Problem Solving
V.	**Performance Measures** Product Profitability Analysis- Business Unit Profitability Analysis- Customer Profitability Analysis- Return on Investment- Residual Income- Investment Base issues- Key Performance Indicators- Balanced Scorecard- Responsibility Centres and reporting segments. **(15 hours)**	Lecture Method	Students will be able to propose performance measures and discuss Key performance indicators.	Conducted Test

List of References (Book/ICT/ Web links):

1. Wiley CMA Excel Learning System, Part- 1: Financial Reporting, Planning, Performance & Control.
2. Wheelen, Thomas L.,et., Strategic Management and Business Policy: Globalization, Innovation and Sustainability, 14th Edition, Prentice Hall, Upper Saddle River, NJ, 2014.
3. Shashi K. Gupta and R. K. Sharma, Management Accounting- Principles and Practice, 13th Revises Edition, kalyani Publishers.

Name of the faculty member & Signature: Dr K. Gopi Krishna

Approved by Head of the Department: M.V.B Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:B. Com(BS) **Class &Nsf Section:** **Course Code:Bc23011**

Name of the Faculty Member:P.Sudha rani **Course Title:company law**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition of company, nature, characters, objective, incorporation Doctrine of indoor management.	Smart board	To develop knowledge of company	Quiz
II.	Kinds of companies issue of prospectuscontents issue if shares, bounsshares right shares share capital reduction alteration	Live example through stock exchange	To describe the structure of company	Model making
III.	Borrowing power debentures ultra bored registration of charge debentures types	Audio visual method	To know borrowing Powers of company	Word buzz
IV.	Company mgmt directors appointment removalmanagerial remuneration power duties meeting kinds notice agenda quorum, proxy.	Smartboard	To know various provisions of company regards meeting	Pilot project
V.	Reconstruction amalgamation winding up meaning modes by court consequences of winding up.	Smart board	To know various modes of winding up.	Pictionery

List of References (Book / ICT / Weblinks):

1)kapoor ND 2018 element of company law

2)Garg k Darren 2004 company law

1. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature: P. Sudha Rani

Approved by Head of the Department: Bairavi

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)
Teaching PlanfortheAcademicYear2023–2024
SEMESTER- III

Department:B.Com Honours SF **Class & Section: NCSF** **Course Code: SEC22303**

Name of the Faculty Member:
Rev Father Arul Jothi SJ

Course Title :Professional Skills

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Unit-I: Concepts of Communications Introduction: Definition and Process of Communication - Forms of Verbal and Non- verbal Communication. Barriers of Communication: Communication Barriers and Overcoming Communication Barriers - Guidelines for Effective Communication. Exercise: Role Play, Square Talk Activity.	Lecture Method	To learn about the aspects of communication and strategies in order to be able to communicate effectively.	• Exercise: Role Play, Square Talk Activity.
II.	Unit II: Language for Professional Competency. Active and Passive Voice. Articles. Subject- Verb Agreement. Exercise: Grammar Exercises for effective speaking and writing for business correspondence	Lecture Method	To learn about the grammatical concepts in English language, to communicate correctly and effectively.	• Exercise: Grammar Exercises for effective speaking and writing for business correspondence
III.	Unit-III: Oral Communication Power Point Presentation: Planning the Presentation - Delivering the Presentation - Developing & Displaying Visual Aids. Listening: Definition - Types of Listening Skills - Features of a Good Listener - Causes and effects of Poor	Power Point Presentation	To develop presentation skills and listening skills; skill sets which are considered pivotal in business scenarios.	• Exercise: Elocution and Extempore

	Listening. Exercise: Elocution and Extempore			
IV.	Unit-IV: Behavioural Techniques Body Language: Facial Expressions - Body Posture - Gestures - Eye Movement - Touch and the use of Personal Space. Business Attire and Grooming: Different types of Attire - Guidelines for Business Attire. Exercise: Power of Body Language, Charades.	Power Point Presentation and Lecture Method	To learn about body language and grooming etiquettes in order to demonstrate the same in business scenarios.	• Exercise: Power of Body Language, Charades.
V.	Unit-V: Etiquettes Etiquettes: Greeting Etiquette - Corporate Etiquette - E-mail Etiquette - Meeting Etiquette - Social Etiquette. Exercise: Introduction and Art of Conversation, Telephonic Activity.	Power Point Presentation and Lecture Method	To help the students equip themselves with certain etiquettes, which would in turn help demonstrate efficient social skills in the business domain.	• Exercise: Introduction and Art of Conversation, Telephonic Activity.

Listof References (Book/ICT/ Weblinks):

1. Foundations of Professional Communication Developed by JR Dingwall, Chuc Labrie, TK McLennon, and Laura Underwood for Old College Edited by Vesna Mirkovich
2. Soft Skills and Personality Development, this e-book is authored by CA. M K Sridhar.
   Published by The Institute of Chartered Accountants of India
   Southern India Regional Council, Chennai. First Edition March 2022.
3. The Handbook of Communication Skills Edited by Owen Hargie Fourth Edition published in 2019 by Rout ledge
   2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN
   And by Rout ledge 711 Third Avenue, New York, NY 10017

Name of the faculty member & Signature:

Rev Father Arul Jothi SJ-

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024 SEMESTER

Department: ACM\ACSF\ACBA **CourseCode:BE 23101**

Class&Section: ACM\ACSF\ACBA

Nameofthe FacultyMember:G.R.Nikitha **CourseTitle:BUSINESS ENGLISH**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Structure and Layout of Letters, Quotations, Orders & Tenders(9Hrs)** Elements, forms and style of letters (3) Inviting and sending quotations (4) Placing orders (2)	Lecture Method	1. Students will be to identify elements, forms and style of letters. 2.They will be to write quotations related to inviting, sending and placing orders.	Practicing different types of Business Letter and Quotations
II.	**Sales Letters (9Hrs)** Qualities and Functions of a Sales letter (2) Format of a Sales letter (3) Specimen Sales letter (4)	Lecture Method	1.Students will be to identify qualities and functions of a Sales Letter. 2.Students will be to write the format of a Sales Letter.	Practicing situational questions
III.	**Memorandum, Notices, Agenda and Minutes (9Hrs)** Functions and structure of a memorandum (1) Types of memorandum (1) Specimen memorandum (1) Format of Notice, Agenda and Minutes (3)	Lecture Method	1.They will also be able to understand and write the functions, structure and types of Memorandum. 2.Students will be to understand and write the format of notice, agenda and minutes	Revising the concepts related to different types of memo, notice, agenda and minutes.

IV.	**Telephone Etiquettes in Business Communication (9 Hrs)** Telephone Etiquettes in Customer Service (4) Texting Etiquettes (2)	Lecture Method	They will be able to understand the guidelines for answering and making effective telephone calls.	Assignment on do's and dont's of telephone and texting etiquettes
V.	**Reading Comprehension (9Hrs)** Strategies for reading comprehension (2) Aspects of efficient reading (1) Speed, accuracy skimming, scanning and proof reading (1) Factual comprehension (1) Specimen comprehension (1) Commonly confused/misused words (3)	Lecture Method	1.Students will use the strategies for reading comprehension and understand the aspects of efficient training. 2.They will also have a better understanding of scanning and proof reading of comprehension.	Practicingspecimen comprehension

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING:

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.

SUGGESTED READING:

1. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.
2. Gruscendorf, Marion. 2007. **English for Presentations**. U.K: Oxford Publication Oxford.
3. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.
4. Rai, Urmila., and Rai, S.M. 2002. **Business Communication**. Mumbai: Himalaya Publishing House.

Nameofthefacultymember&Signature:
G.R.Nikitha,

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-Mid Sem-1

Department: Strategic Finance **Class: DCSF** **Course Code:**

Name of the Faculty Member: Dr. Banka Kumar Raja **Course Title: Corporate Governance & Business Ethics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Values Values-Importance- Sources of value systems. Types-Values, Loyalty. Ethical Behavior. Values across cultures. Business Ethics-Nature- Characteristics and need. Ethical Practices in Management	Lecture method and Using PPT	Identify and explain the importance of values and ethics	Group presentation.
II.	The Ethical Value System Universalism Theory- Utilitarianism Theory. Distribution Justice Theory- Social Contracts Theory. Individual Freedom of Choice- The Concept. Ethical Values in culture. Relation Between Culture and Individual Ethics	Lecture method and Using PPT	Analyze and interpret the various theories of ethical value system	Quiz presentation.
III.	Law and Ethics Meaning of Law and Ethics- Relationship between law and ethics. Other bodies in enforcing ethical business behavior (Corporate, Government, Financial institutions and NGO). Fair Trade Practices. Fulfilling all national obligations under various laws(Implementation of government Act and Policies). Safeguarding of health and well being of the customer (Marketing)	Lecture method and Using PPT	Point out the relationship between law and ethics and understand the business	Seminar presentation.
IV.	Corporate Governance Meaning of corporate governance-Issues and need. Corporate Governance Code-Transparency and disclosure practices. Role of Directors- Share holders-Auditors.	Lecture method and Using PPT	Explain the corporate governance codes, transparency and disclosure practices	Debate presentation.
V.	Global Issues of Governance Global Issues of Governance. Accounting and regulatory framework-Corporate Scams. Committees in India and abroad dealing with corporate governance. Corporate Social Responsibility	Using PPT	Identify and point out the global issues of governance	Weekly tests.

List of References (Book / ICT / Weblinks):

1) Fernando A.C. 2012 Business Ethics. (Eighth Edition)
2) Murthy. C.S.V. 2004. Business Ethics (First Edition)
3) Francis Cheruniliam. 2011. Business Ethics and Government (12th Edition). Himalya Publishing House
4) Laura Hartman.P.2008. Business Ethics Tata Mcgraw Hill. New Delhi
5) Ghosh.B.N.2014. Business Ethics and Corporate Governance (3rd reprint).Mcgraw Hill Education (India): New Delhi
6) Dr. Khanka S.S 2014. Business Ethics and corporate Governance (Principles and Practices) (1st Edition). S. Chand and Co. Pvt.Ltd: New Delhi
7) Manual Velasqueez, G. 2003. Business Ethics (Concepts and Cases) (5th edition, 2nd Reprint)PearsonEducation Ltd.India: New Delhi

Approved by Head of the Department:

Mrs. M.V.B. Shailaja

Name of the faculty member & Signature:

Dr. Banka Kumar Raja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: B.Com.(Hons) Strategic Finance **Class & Section: ASF** **Course Code:23101**

Name of the Faculty Member:Dr.K.Musalaiah **Course Title: Indian Heritage and Culture**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian Customs and Traditions	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval Indian history and medieval Culture	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about historical, Social, religious and political issues of the nation.	Group presentation
IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions and democratic system of India	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about human Rights, tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr.K.Musalaiah – Dr. K. Musalaiah.

Approved by Head of the Department:

Mrs.MVB.Sailaja

Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -V

Department: DSE-1 **Class & Section: DSE/DCH** **Course Code: BC18013**

Name of the Faculty Member: Sweta Rao **Course Title: Marketing Management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Marketing** Concept of marketing-evolution-definition Nature and Scope, Marketing management tasks, Marketing concept as applied to marketing management, Significance of marketing in profit and nonprofit organization, Marketing process	PPT Presentation	Explain the concept of marketing and sketches the marketing environment.	Scenario based learning
II.	**Marketing Environment** Micro environment – meaning, Factors influencing micro environment-company consumers-competitors-suppliers-marketing intermediaries, macro environment-meaning, factors influencing macro environment-cultural/ social environment- demographic environment-physical/ natural-legal/political-economic-technological environment, SWOT analysis with reference to India	PPT Presentation and Chalk and Board	Classifies the market and identifies the various market segments.	Practical learning experience, personal SWOT analysis
III.	**Marketing Mix Elements** **Product** Definition of product- levels of product-classification of products	PPT Presentation	Point outs the marketing mix with reference to product and price.	Group discussion

List of References (Book / ICT / Weblinks):

1. Kotler Philip, Gary and Armstrong, **Principles of Management**, 13th Edition. New Delhi: Ehsan UI Haque Publications.
2. Sherlekar, S.A. 2011. **Marketing Management.** 13th Revised Enlarged Edition. Mumbai: Himalaya Publications.
3. Karunakaran, K. **Marketing Management.** 3rd Revised and Enlarged Edition.
4. Swamy, Rama V. and Namakumari, S. 2002. **Marketing Management.**
5. Puneet singhbhatia **Fundamentals of digital marketing**

Sweta Rao

Name of the faculty member & Signature:

Kavitha

Approved by Head of the Department

Sridevi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

ODD SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section: ACSF** BC23_002

Name of the Faculty Member: M.V.B.Sailaja **Course Title: Financial accounting**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Need for accounting — definition • Meaning – features – objectives • Functions – systems and bases and scope of accounting • Books keeping and accounting – branches of accounting – advantages – limitations • Basic terminology used – accounting concepts an conventions • Accounting equation • Classification of accounts – rules of double entry system • Journalizing – posting to ledgers – balancing of ledgers • Introduction to Accounting Standards – definition, meaning, List of Accounting Standards, Accounting Standards Board (ASB)	Lecture Method EXPLAINATION THROGH CHALK AND TALK PRESENTATION USING ICT Using software Tally p	Students will learn the basics of accounting terms and objectives of accounting	Quiz, Solving Problems using the basic accounting knowledge
II.	bank columns and petty cash b**Subsidiary Books** • Subdivision of journal – preparation of subsidiary books • Different types of cash book –	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn the meaning of subsidiary books and preparation.	Quiz, Solving Problems using the basic accounting knowledge

	simple cash book, cash book with cash and discount • Columns bank columns – cash book with cash discount and • Cash book with cash and ook.			
III.	**Bank Reconciliation Statement** • Bank reconciliation statement – need – reasons for difference between cash book • and pass book balances • Simple problems on favourable balance • Simple problems on overdraft balances • Ascertainment of correct cash book balance	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn reconciliation between cash book and pass book balances.	Quiz, Solving Problems using the basic accounting knowledge
IV.	**Trial Balance and Final Accounts** • Trial balance – meaning – objectives • Methods of preparation • Final accounts – preparation of manufacturing, trading, profit & loss account and Balance Sheet	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn preparation of final accounts of traders	Quiz, Solving Problems using the basic accounting knowledge
V.	**Errors and Rectification** • Errors and their rectification • Types of errors • Rectification before and after preparation of final accounts • Suspense account – effect of errors on profit	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn to rectify the errors using accounting entries.	Quiz, Solving Problems using the basic accounting knowledge

List of References (Book / ICT / Weblinks)

SP JAIN &NARANG Kalyani Publishers 2019

Himalaya publishing house

Name of the faculty member & Signature:

M.V.B.Sailaja Sailaja

Approved by Head of the Department:

M.V.B.Sailaja Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:

Class & Section: DSE (DCH)(DSF)

Course Code:BC18028

Name of the Faculty Member: M.V.B.Sailaja

Course Title: ADVANCED CORPORATE ACCOUNTING

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Preparation of consolidated Balance sheet (4) Cancellation of investment account (2) Minority Interest-cost of acquiring control or goodwill – capital reserve (3) (Simple problems on calculation of m**The accounts of Holding companies-I** Nature of holding companies, legal requirements for a holding company (1) Schedule III of the companies Act and subsidiary companies (2) inority interest, goodwill)	Lecture Method using ICT Tools. EXPLAINATION USING CHALK AND TALK	To Learn about the preparation of accounts of Holding companies	Quiz, Solving Problems .
II.	Realization of Assets **The accounts of Holding Companies-II**	EXPLAINATION USING CHALK AND TALK	To Learn about the preparation of accounts of Holding companies and learn meaning of Bonus shares	Quiz, Solving Problems .

	Preference share capital in Subsidiary Companies (1) Debentures in Subsidiary Companies (1) Pre-acquisition Profits/Reserves (1) Pre-acquisition Losses (1) Inter-company Transactions (2) Unrealized Profit on Stock Contingent liabilities (2) (1) Bonus shares (Excluding: Treatment of dividend received from subsidiary Company-goodwill in the Balance Sheet of a subsidiary company-Proposed dividend-Interim dividend by Subsidiary Company) (1) Problems on Holding Companies	Lecture Method using ICT Tools.		
III.	**Accounting of Electricity Companies (Double-Accounting System)** Meaning of Double Accounting System Revenue Account and Net-Revenue Account (1) Capital Account (Receipts and Expenditure on Capital) and General Balance Sheet (2) Replacement of an Asset Important provisions of Indian Electricity Act 1910,	EXPLAINATION USING CHALK AND TALK Lecture Method using ICT Tools.	Students learn double accounting system and preparation of accounts as per statutory requirements.	Quiz, Solving Problems .

	Electricity Supply Act 1948 and Companies Act 1956 Formats of Relevant Accounts (2) Calculation of reasonable Return and Disposal of Surplus Preparation of Net Revenue Account and Balance Sheet (3) (Including problems) Problems on Electricity Companies			
IV.	**Lease Accounting**: - Introduction-Accounting for finance leases-Books of Lesser & Lessee (4) Accounting for operating leases-Accounting for Sale & Lease back-Leading to finance lease-Accounting for Sale & Lease back- Leading to Operating lease	EXPLAINATION USING CHALK AND TALK Lecture Method using ICT Tools.	Students learn the concept of Lease and methodology of lease accounting.	Quiz, Solving Problems .
V.	**Liquidation of Companies 12Hrs** Liquidation of Companies (1) Meaning of Liquidation-Compulsory and Voluntary Liquidation (1) Liquidators Remuneration (2) Statement of Affairs (2) (2) Deficiency accounts as per List 'H' (2) Liquidators Final Statement Problems on Liquidation	EXPLAINATION USING CHALK AND TALK Lecture Method using ICT Tools.	Students learn how to liquidate a company and the procedure as per law.	Quiz, Solving Problems .

List of References (Book / ICT / Weblinks):
SP JAIN &NARANG KALYANI PUBLISHERS 2020 PUBLICATION
PRABHAKAR AND SHARMA ,HIMALAYA PUBLISHING HOUSE
Name of the faculty member & Signature:

M.V.B.SAILAJA Sailaja

Approved by Head of the Department: M.V.B.SAILAJA Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – III

Department: B.Com(Strategic Finance) **Class & Section: NCSF** **Course Code:** SEC22302

Name of the Faculty Member: B Venkataratnam **Course Title: B.Com(Strategic Finance)**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Electronic Commerce • Electronic Commerce Framework – electronic commerce and media convergence • The anatomy of E-Commerce applications • Electronic commerce consumer applications • Electronic commerce organization applications Electronic Commerce and World Wide Web • Architectural framework for electronic commerce • World Wide Web (WWW) as the architecture • Web background • Hypertext publishing • Technology behind the web • Security and the web **(6 Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the E-Commerce 1. Frame work 2. Applications 3. World wide web 4. Hyper Text Publishing	Quiz
II.	• Consumer – oriented applications • Mercantile process models • Mercantile models from the consumer's perspective • Mercantile models from the merchant's perspective Electronic Payment System • Types of electronic payments • Digital token-based electronic payment	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. Consumer – oriented applications 2. Mercantile models 3. Types of electronic payments 4. Risk and electronic payment systems	Seminar

	systems • Smart cards and electronic payment systems • Credit card-based electronic payment systems • Risk and electronic payment systems **(6 Hrs.)**			
III.	EDI Implementation, MIME and Value Added Networks • Standardization and EDI • EDI Software Implementation • EDI envelope for message transport • Value Added Networks (VANs) • Intra-Organizational Electronic Commerce • Internal information systems • Macro-forces and internal commerce • Work flow automation and co-ordination • Customization and internal commerce • Supply chain management **(6 Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. EDI Implementation 2. MIME and Value Added Networks 3. Intra-Organizational Electronic Commerce 4. Value Added Networks (VANs) 5. EDI envelope for message transport	Group Discussion
IV.	The Corporate Digital Library • Dimensions of internal electronic commerce systems • Making a business case of document library • Types of digital documents • Issues behind document infrastructure Advertising and Marketing on the Internet • The new age of information – based marketing • Advertising on the internet • Charting the on-line marketing process • Market research **(6 Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. The Corporate Digital Library 2. The new age of information – based marketing 3. Advertising on the internet 4. Charting the on-line marketing process 5. Market research 6. Types of digital documents 7. Dimensions of internal electronic commerce systems	Seminar
V.	Consumer Search and Resource Discovery • Search and resource discovery paradigms • Information search and retrieval	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. Consumer Search and Resource Discovery 2. Demand Education and Digital Copyrights	Group Discussion

	• Electronic commerce catalogues or directories • Information filtering, consumer On Demand Education and Digital Copyrights • Computer based education and training • Technological components of education on demand • Digital copy right and E-Commerce. **(6 Hrs.)**			

List of References (Book / ICT / Weblinks):

1. Kalkota, Ravi. Whinstone,Andrew B. Frontiers of Electronic Commerce. International Student edition. 2009 Impressed edition. New Delhi: Pearson Publication.
2. Treese, G. Winfield and Stewart, Lawrence C. 1998. Designing Systems for Internet Commerce. Low priced edition. Addison-Wesley-Tokyo Publication

Name of the faculty member & Signature: B Venkataratnam

Approved by Head of the Department: **Shailaja**

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section:DCSF** **Course Code: BC18502**

Name of the Faculty Member: **Mrs. Hilda Margreat** **Course Title: Business Law**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Contract Act - Agreement and Contract -Offer and Acceptance -Consideration - Capacity to contract -Consent	-Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Demonstrate an understanding of the legal environment of the business.	Group discussion, Case studies.
II.	Discharge of Contract -Legality of Object and Consideration. -Agreement which expressely declared to be void -Discharge of contract	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Explain legality of object and consideration, dischargeof a contract and remedies.	Group discussion, Case studies.
III.	Sale of Goods Act -Contract of Sale -Difference betwwen Sale and Agreement to sell -Conditions and warranties	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Identify the recognation of transactions involving the sale of goods Act.	Group discussion, Case studies.
IV.	Consumer Protection Act - Definitions of the terms. -Rights of Consumer -Consumer Redressal Agencies	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Dramatise the application of consumer protection Act.	Group discussion, Case studies.

V.	Intellectual Property Rights and Informations Technology Act. -Intellectual Property Rights -Informations Technology Act. -Right to Information Act	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	To recognise IPR, IT Act and RTI Act.	Group discussion, Case studies.

List of References (Book / ICT / Weblinks):

1. Garg, V.K. Sareen, V.K. Sharma Mukesh and Chawala R.C 2010 Business Law. 7th revised edition. 2013 reprint. New Delhi: Kalyani Publication
2. Kapoor N.D 2009 Elements of Mercantile Law. 31st edition
3. Maheshwari, S.N and Maheshwari, S.K 2011. A manual on Business Law.

Name of the faculty member & Signature: Mrs. Hilda Margreat.

Approved by Head of the Department:Mrs. M.V.B.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

I SEMESTER

Department: B. Com Business Process Management | **Class & Section: ACSF** | **Course Code: BC22001**

Name of the Faculty Member: **Mrs. Hilda Margreat** | **Course Title: Business organization and management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Fundamentals concepts- Concept of business, trade, industry and commerce business- features of business trade classification- aids to trade industry- classification- commerce. Relationship between trade, industry and commerce Business organization concept Functions of business.	White board, Projector, Case studies, Group Discussion	Identify and interpret the various principles of management.	Students created business plans for startup ideas, including market research, financial projections, and marketing strategies.
II.	Business organization forms of business organization classification- factors influencing the choice of suitable form of organization objectives of business essentials of a successful business. Sole proprietorship- meaning- characteristics, advantages and disadvantages and suitability partnership- meaning- characteristics kinds of partners. Registration of partnership deed rights and obligations of partners.	White board, Projector, Case studies, Group Discussion	Explain and demonstrate the uses of planning and organizing.	Students created organizational charts for various types of businesses, demonstrating the hierarchy and reporting structure. This activity helps them understand the roles and responsibilities within different organizational setups.

III.	Joint stock company meaning-characteristics- advantages kinds of companies. Differences between private and public companies promotion of a company stages-promoters characteristics-registration.	White board, Projector, Case studies, Group Discussion	Classify and combine the various techniques of control and coordination.	Explore the historical development of joint stock companies, from their origins to the modern corporation. Discuss how they have evolved and why they are a popular form of business organization.
IV.	Introduction to management-definition- meaning-nature, University of management-Significance of manage- Principle and functions of management-Characteristics- objectives of management- management vs administration- Levels of management- skills of management-Scientific management: meaning-principles- objectives- criticism. Planning meaning- definition-features- importance, Steps in planning, types of plans- limitations of planning organizing- meaning-definition- features- Principles of organization- organization structure, line organization, functional organization, line and staff organization- delegation of authority-meaning- principles- difficulties in delegation- Centralization-decentralization- differences between delegation and decentralization.	White board, Projector, Case studies, Group Discussion	Point out and develop the essence of motivation and direction to the students.	Organize team-building exercises to teach the importance of teamwork and collaboration in management. Debrief the activities to discuss leadership, communication, and problem-solving.
V.	Coordination- Meaning- need-principle and techniques- Span of control- factors determining span of control. Control- meaning- definition-process steps- requisites of a good control system. Motivation- meaning-theories of motivation- Maslow-McCleland and Hetzberg importance of motivation- motivational	White board, Projector, Case studies, Group Discussion	Interrelate and understand the essence of leadership and the importance of communication.	Discussing the importance of leadership theory in real-world situations and how leaders often draw from multiple theories depending on the circumstances

	techniques- Leadership- meaning- importance- styles. Theories of leadership- Trait theory- Behavioral theory- situational theory.			

List of References (Book / ICT / Weblinks):

1. "Principles of Management" by Harold Koontz and Heinz Weihrich
2. "Organizational Behavior" by Stephen P. Robbins and Timothy A. Judge
3. "Marketing Management" by Philip Kotler and Kevin Lane Keller
4. Singh, B.P. & Chhabra, T.N., Business Organisation and Management, Sun India Publications, New Delhi.
5. Shankar, Gauri; Modern Business Organisation, Mahavir Book Depot, New Delhi.
6. Tulsian, P.C.; Business Organisation & Management, Pearson Education, New Delhi. B.Com Programme CBCS Department of Commerce, University of Delhi, Delhi
7. Tripathi, P.C.; Principles of Management, Tata McGraw Hill Publishing, New Delhi.
8. Barry, Jim, Chandler, John, Clark, Heather; Organisation and Management, Thompson Learning, New Delhi.
9. Bushkirk, R.H.; Concepts of Business: An Introduction to Business System, Dryden Press, NY.
10. Douglas, MCgregor.; The Human Side of Enterprise, McGraw Hill, New York. 8. Kotler, Philip; Marketing Management: Analysis, Planning, Implementation & Control, Prentice-Hall of India, New Delhi.
11. Robbins, Stephen P.; Business Today: New World of Business, Harcourt College Publishers, Fortworth.
12. Buffa, Elwood S.; Production/Operations Management, Prentice Hall of India, New Delhi.

Name of the faculty member & Signature:
Mrs. Hilda Margreat

Approved by Head of the Department: Mrs. M.V.B Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section: DCSF** **Course Code: BC18019**

Name of the Faculty Member: **Mrs. Hilda Margreat** **Course Title: International Marketing and Export Management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction -Nature of IM -International dimensions of Marketing - Importance and framework - Reasons and benefits -India's export trade - Growth trend - Evaluation of EXIM policy - Export Promotion and incentives	Lecture Method using ICT Tools Presentation through ICT	Analyse the process of International Markets and classify India's export.	Group discussion, quiz,
II.	International Marketing Environment -Economic and trade Environment - Regional Trading blocs - Planning for IM - Marketing Research and Information System - Market Selection and Segmentation - IM coordination and control.	Lecture Method Presentation through ICT	Describe the factors of IM Environment and differentiate marketing research, market selection and market segmentation.	Group discussion,quiz, seminars
III.	Product Strtegies -Basic decisions - New Product development - Product planning and adapton - Marketing of sevices - Channel of distribution	Lecture Method Presentation through ICT	Analyse the importance of product and pricing strategies.	Group discussion,

	- Types of intermediaries - Channel development - Physical distribution			
IV.	Promotional Strategies - Advertising regulations - Pricing decision - Pricing distortion - Price quotation	Lecture Method Presentation through ICT	Differentiate the need for promotion mix strategies and pricing decision.	Group discussion,quiz
V.	- Foreign Exchange - Purchasing Power Parity - Balance of Payment Cause for disequlibrium in BOP - International Economic Organisation	Lecture Method Presentation through ICT	Explain forign exchange strategies, differentiate BOP and BOT and International Economic Organisation	Group discussion, quiz, seminar

List of References (Book / ICT / Weblinks):

1. Varma M.L International Trade
2. Sak onk visit and John J shaw. International Marketing(Analysis and strategy)
3. Rathore B.S and Rathore J.S 2010 Expoert Marketing(3rd Edition)

Name of the faculty member & Signature:Mrs. Hilda Margreat.

Approved by Head of the Department:Mrs. M.V.B Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section:DCSF/DCH** **Course Code: BC18030**

Name of the Faculty Member: **Mrs. Hilda Margreat** **Course Title:Labour Law**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Law relating to Factories Act - Meaning and definition of certain terms. - Provisions regarding health of workers -Provisions regarding safety of workers Provisions regarding employment of young persons and women Provisions regarding to annual leave with wage.	-Lecture Method - Explaination through chalk and talk. - Presentation through ICT	To understand various provision of Factories Act.	Group discussion, Case studies, Seminars
II.	Law relating to Workmen and Employees. -Workemen's compensation Act -Introduction to the Act. - Rules and Amount of compensation. -The ESI Act Purpose for which fund expended -Benefits of ESI -ESI constitution and adjudication of power. The Employees Provident Fund Act - Definition, EPF scheme 1952 -Employee Pension scheme 1995 - Employees Deposit Linked Insurance 1976	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Explain rules regarding workmen compensation and provident fund Act.	Group discussion,Seminars, Case studies.

III.	Law relating to payment of Gratuity Act 1972. -Payment and forfeiture - Compulsory Insurance -Inspectors- penalties and offences The Payment of Bonus - Computation of gross profits - Determination of available and allocable surplus	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	To illustrate the gross profits of Banking and non Banking company	Group discussion, Seminars Case studies.
IV.	Industrial DisputeAct, 1947 - Introduction - Procedure for settlement -Authorities -Strikesand lockouts -Special provision relating to lay-off	- Lecture Method - Explanation through chalk and talk. - Presentation through ICT	To show various adjudication machinery	Group discussion,Seminars Case studies.
V.	The Trade union Act,1926 -Definition, aims and objectives - Duties and liabilities - Amalgamation and dissolution of trade union.	- Lecture Method - Explanation through chalk and talk. - Presentation through ICT	To tell about duties and liabilities of registered trade union	Group discussion, Seminars Case studies.

List of References (Book / ICT / Weblinks):

B. D singh sr. Prof. HRM, IMT, Ghaziabad, Labour Law for Laws

Name of the faculty member & Signature: Mrs. Hilda Margreat.

Approved by Head of the Department:Mrs. M.V.B.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –24

SEMESTER

Department: B.Com ~~Business Process Management~~ Strategic Finance **Class & Section: ~~ABPM~~ ACSF** **Course Code: VE18201**

Name of the Faculty Member: Mrs. Hilda Margreat **Course Title: Value Education and Personality Development**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Ethics	Lecture Method	To Learn to differentiate between accepted and Counter norms and to be able to identify the various Dimensions of Human Development	Group discussion to understand the value system in the society.
II.	Approach to Life	Lecture Method	To Learn to demonstrate Love and experience of God and to be able to identify the Basic issues of Life and the Happiness as Life's goal.	Debate on the topics covered
III.	Concern for others	Lecture Method	To Understand the importance of concern for others and critic the various problems that deter the growth of the society	Scenario discussion
IV.	Transformation of Self	Lecture Method	To be able to recognize the traits of a good personality and practice self exploration	Self reflection and discovery of one's true self.
V.	Life Enrichment Skills	Lecture Method	To learn to be able to interpret the purpose of life and goal setting and demonstrate self management.	Exploring of personal skills through peer discussions.

List of References (Book / ICT / Weblinks):

1. Human Values – Development Programme – AIACHE
2. In Harmony – Value Education at College level. By a Team of Ethics Teachers (G.M. James , B.J JAYARAJ , K.CANDASSAMY, BERNARD D'SAMI , S.J.A PACKIARAJ)

Name of the faculty member & Signature: Mrs. Hilda Margreat

Approved by Head of the Department: Mrs. M.V.B Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section:ACSF** **Course Code: BC22006**

Name of the Faculty Member: **Mrs. Hilda Margreat** **Course Title:Company Law-1**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Contract Act - Agreement and Contract -Offer and Acceptance -Consideration - Capacity to contract -Consent	-Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Demonstrate an understanding of the legal environment of the business.	Group discussion, Case studies.
II.	Discharge of Contract -Legality of Object and Consideration. -Agreement which expressly declared to be void -Discharge of contract	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Explain legality of object and consideration, discharge of a contract and remedies.	Group discussion, Case studies.
III.	Sale of Goods Act -Contract of Sale -Difference between Sale and Agreement to sell -Conditions and warranties	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Identify the recognation of transactions involving the sale of goods Act.	Group discussion, Case studies.
IV.	Consumer Protection Act - Definitions of the terms. -Rights of Consumer -Consumer Redressal Agencies	- Lecture Method - Explaination through chalk and talk. - Presentation through	Dramatise the application of consumer protection Act.	Group discussion, Case studies.

		ICT		
V.	Intellectual Property Rights and Information Technology Act. -Intellectual Property Rights -Information Technology Act. -Right to Information Act	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	To recognise IPR, IT Act and RTI Act.	Group discussion, Case studies.

List of References (Book / ICT / Weblinks):

1. Garg, V.K. Sareen, V.K. Sharma Mukesh and Chawala R.C 2010 Business Law. 7th revised edition. 2013 reprint. New Delhi: Kalyani Publication
2. Kapoor N.D 2009 Elements of Mercantile Law. 31st edition
3. Maheshwari, S.N and Maheshwari, S.K 2011. A manual on Business Law.

Name of the faculty member & Signature: Mrs. Hilda Margreat.

Approved by Head of the Department:Mrs. M.V.B.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - IV

Department: B. COM (STRATEGIC FINANCE) **Class & Section: NCSF** **Course Code:SF23403**

Name of the Faculty Member: V.ANUSHA **Course Title : Business Statistics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to statistics: meaning , definition, functions, applications and limitations Collection and sources of data- primary and secondary data Classification and types of classification of data Tabulation of data and its types Sampling methods and its types, Sampling errors and non sampling errors	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	To learn merits and limitations in using the statistical data.	Offline Quiz.
II.	Diagrams: simple bar, multiple bar, subdivided bar, percentage bar and pie diagram Graphs: histogram, frequency polygon, frequency curve and Ogive curve	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to choose suitable diagrams and graphs for statistical data	Written Test.
III.	Measures of central tendency: mean, median mode , G. M , H. M (merits and demerits) and problems Measures of dispersion: Range, Q.D, Variance, Standard deviation, (Merits and demerits) Lorenze curve	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to analyze statistical data using different measures of central tendency. To Learn compare the homogeneity of the statistical data using different measures of dispersion.	Offline Quiz.

IV.	Correlation and its types , measures of correlation, Regression and its properties. Regression equations and its coefficients. Coefficient of correlation.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To learn about the relationship between the variable and to analyze the data by using regression analysis.	Written Test.
V.	Time series, components of time series, methods to find time series analysis. Index numbers (problems) Weighted and unweighted indices , Kelly's method, tests of consistency, chain base index numbers, fixed base index numbers and consumer price index number.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To learn about the concepts of times series and index numbers	Written Test.

Listof References (Book/ICT/ Weblinks):

1. Fundamentals of Statistics: Gupta S.C, Himalaya
2. Statistics: E. Narayanan Nadar, PHI Learning
3. Business Statistics: Dr. J. K. Thukral, Taxmann Publications
4. Business Statistics: K. Alagar, Tata McGraw Hill
5. Fundamentals of Statistical: S. P Gupta, Sultan Chand
6. Business Statistics: J. K. Sharma, Vikas Publishers
7. Business Statistics: S. L Aggarwal, S. L. Bhardwaj, Kalyani Publications
8. https://www.youtube.com/watch?v=X48cZ6DGaSw
9. https://www.youtube.com/watch?v=06lxbMpYxm4

V. (V. Anusha)

Nameofthefacultymember&Signature:

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:B.com honours strategic finance **Class & Section:NCSF** **Course Code:BC23015**

Name of the Faculty Member:G SHIVARANJANI

Course Title: corporate accounting.

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Company finalaccounts preparation of pand l account,balance sheet.with adjustments. Profits prior to incorporation.basis of approtionment.post, preincorportion expenses .	Chalk n board teaching method	To Learn about preparation of final accounts.to know about pre n post incorporation expenses treatment.	Practical preparation of company final accounts.
II.	Valuation of Good will.by average method,super profits, capitalisation of fmp,super profits method.valuation of shares by net assets backing , yield basis,fair value method.	Chalk n board method.ppt presentation.	Calculation of good will,shares value inpractical .	Good will,share value calculation for a firm.
III.	Amalgamation, different methods of amalgamation.calculation of purchase consideration by different methods. Internal reconstruction treatment of losses n preparation of balance sheet.	Chalk n board teaching method	Case study	Real life experience by industrial visit.
IV.	Preparation of insurance accounts in relation to life insurance, revenue account, balance sheet General insurance accounts reserve for unexpired risk.	Chalk n board method	Practical preparation of final accounts.	Quiz.

	bank accounts, profit n loss Account balance sheet,robd	chalk n board	preparation of final accounts	quiz

List of References (Book / ICT / Weblinks):

1. Jain,narang kalayani publications.
2. Sreelatha, Himalaya publications.
3. https://www.youtube.com/watch?v=uvupli4nik8

G SHIVARANJANI.

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-III

Department: Environmental Science

Class: B. Com -NCSF

Course Code:ES23301

Name of Faculty Member: Dr.G.Sudhakar

Course Title: EVS&GS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition, Scope and Importance of environmental Studies Renewable & Non-Renewable resources Definition of Ecosystem, Structure and functions Biodiversity and its conservation	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of naturalresources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	Environmental pollution Solid Waste Management Industrial Waste Management Disaster Management: floods, Earthquakes, and Cyclones	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge onsolid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	Rainwater Harvesting, Water-shed Management Global Warming Ozone depletion, and Acid rains Environmental Legislation Environmental & Human Health-HIV/AIDS Role of Information Technology in Environmental Studies.	Lecture Method using ICT Tools and Board	Apply environmental science knowledge to improve the resources. Evaluate and understand the sustainable environmental conditions and control methods	Oral question and answers To understand the environmental policies and regulations

	Why should we study gender issues? **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	Lecture Method using ICT Tools and Board	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	Oral question and answers To develop students' sensibility regarding issues of gender in contemporary India
V.	**Sexual harassment** **Say no eve teasing.** **Caste-based violence.** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act (2005)**	Lecture Method using ICT Tools and Board	Understand gender problems and ways of addressing them, including interactionsacross local to global scales in communities and overcome inequalities with legislation.	Oral question and answers To expose the students to debate on politics and economic works and on genderviolence.

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition.Chennai: Oxford University Press.

Dr D K Asthana and Dr Meera Asthana. 2014.

2.**A Textbook of EnvironmentalStudies** Revised Edition. New Delhi: S. Chand & Company

3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomen in the Telangana People's Struggle**. New Delhi: Kali for Women.

4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.** Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993

Name of the faculty member & Signature: (Dr. G. SUDHAKAR)

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024 SEMESTER

Department: ACM\ACSF\ACBA **Course Code: BE 23101**

Class & Section: ACM\ACSF\ACBA

Name of the Faculty Member: **Course Title: BUSINESS ENGLISH**
G.R.Nikitha

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Claim And Adjustment E-Mail (9Hrs)** Hints for Drafting Claim and Adjustment E- Mails (2) Elements of Claim and Adjustment E- Mails (2) Specimen Claim and Adjustment E- Mails(5)	Lecture Method	1. Students will be able to identify the elements Claim and Adjustment E- Mails. 2. students will be able to draft Claim and Adjustment E- Mails.	Practicing Claim and Adjustment E- Mails.
II.	**Grammar in Business Correspondence 9Hrs** Commonly Misused Prepositions (3) Subject- Verb Agreement (3) Articles (3)	Lecture Method	1.Students will be able to identify and understand about the concepts related to grammar.	Practicing different exercises related to grammar concepts
III.	**Job Applications Letters and Resume writing 9Hrs** Importance and Functions of an Application Letter (1) General Guidelines to write Application Letters and Resumes (1) The Form and Content of an Application Letter (1) Preparing a Resume (2) Specimen Application Letter and Resume (4)	Lecture Method	1.Students will understand the general guidelines to write Application letters and Resumes.	Practicing the specimen Resume Writing and Job Application.
IV.	**Report Writing – I (Business Report) (9Hrs)** Characteristics of a good	Lecture Method	Students will be able to understand different types	Drafting a report and practicing report writing.

	Business Report (1) Importance of Business Reports (1) Types and Functions of Business Reports (2) Preparing a Business Report and Specimen (2) Specimen Business Report (3)		of Reports, Preparation of reports and structure of report.	
V.	**Language Proficiency in Business Communication 9Hrs** Framing Questions (2) Active and Passive Voice (2) Punctuations (2) Paragraph Writing (3)	Lecture Method	1.Students will be able to identify and understand about the concepts related to grammar.	Practicing different exercises related to grammar concepts

List of References (Book / ICT / Weblinks):

ESSENTIAL READING:

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.

SUGGESTED READING:

1. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.
2. Gruscendorf, Marion. 2007. **English for Presentations**. U.K: Oxford Publication Oxford.
3. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.
4. Rai, Urmila., and Rai, S.M. 2002. **Business Communication**. Mumbai: Himalaya Publishing House.

Name of the faculty member & Signature:
G.R.Nikitha,

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department:B.com (hons)Strategic Finance **Class & Section:DCSF** **Course Code:**

Name of the Faculty Member:Mvb.Sailaja **Course Title: Auditing &Accounting Standards**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction – Definition of Auditing • Objectives of Audit – Scope of Audit • Advantages and limitations of an Audit • Types of Audit • Fraud • Error – Basic concepts in auditing - Audit evidence, auditor • Independence, materiality • Qualities and classification of auditors	Lecture Method using ICT Tools.lecture method.seminars	To Learn about the Practices of Auditing. To understand procedure for Audit	Seminars, guest lectures
II.	• Audit process – procedure – Techniques • Planning – Programme – Audit working papers • Audit Note book – Test checking (its features, advantages, limitations) • Audit Sampling (methods of sampling) **Vouching & Verification:**	Lecture Method using ICT Tools.lecture method.seminars	To Learn about the Practices of Auditing. To understand procedure for Audit	Seminars, guest lectures

	• Vouching of Cash Payments - purchase of goods • Assets, payment of taxes, traveling expenses, salaries & wages • Vouching of Cash Receipts - cash sales • Rental Receipts, Sale of Assets Income from Investments			
III.	**Internal controls, Check and Audit 12Hrs** • Definition of Internal Control – Objectives & environment of internal controls – features and limitations of internal controls • - Internal Check (Meaning and features) - Internal Audit (meaning and objectives)	Lecture Method using ICT Tools.lecture method.seminars	To learn Audit techniques	Seminars, guest lectures
IV.	**Company Audit** • Appointment of Auditor • Qualification and Disqualification of Auditor • Duties and Rights of Auditor • Procedure for Removal of Auditor • Audit Reports • Clean Report - qualified report Adverse Report and disclaimer of opinion	Lecture Method using ICT Tools.lecture method.seminars	Company law provisions for appoinment and rights and duties of Auditor.	Seminars, guest lectures
V.	**Introduction to Accounting Standards (issued by CA)** • Meaning of Accounting Standards – Objectives of accounting standards • Advantages of setting AS • The Accounting Standard board – Objectives of accounting standard board – functions of accounting standard board	Lecture Method using ICT Tools.lecture method.seminars	To understand Accounting standards and their significance.	Seminars, guest lectures

	• Applicability and Scope of accounting standards • Importance of accounting standards, responsibility of management and auditor's responsibility (2) A brief introduction to list of accounting standards issued by institute of Charted Accountants of India (As-1 to As-29			

List of References (Book / ICT / Weblinks):

1. K.Kiran Kumar ,kalyani publishers
2. Satya Devi.S ,himalaya publishers

Name of the faculty member & Signature:

Mvb.Sailaja

Approved by Head of the Department:

Mvb.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

ODD SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section: ACSF** **BC23**

Name of the Faculty Member:Mvb.Sailaja M.V.B.Sailaja **Course Title: Financial accounting II**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Partnership – Admission** • Legal provisions in the absence of a partnership deed • Fixed and fluctuating capitals • Preparation of final accounts with adjustments (2) • Profit and loss appropriation account – methods of calculating good will – treatment of Good will • Calculation of sacrificing, new profit sharing ratio and admission of a partner. (4)	Lecture Method EXPLAINATION THROGH CHALK AND TALK PRESENTATION USING ICT Using software Tally p	Students will learn the basics of accounting terms and objectives of accounting	Quiz, Solving Problems using the basic accounting knowledge
II.	**Partnership–Retirement and Death** • Treatment of goodwill • Methods of calculating good will • Calculation of gaining ratio, new profit sharing ratio • Retirement of a partner • Death of a partner Including joint life polic	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn the meaning of subsidiary books and preparation.	Quiz, Solving Problems using the basic accounting knowledge

III.	**Partnership – Dissolution and Insolvency 12Hrs** • Dissolution of partnership • Insolvency of a partner • Insolvency of firm (excluding sale to firm, company and amalgamation)	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn reconciliation between cash book and pass book balances.	Quiz, Solving Problems using the basic accounting knowledge
IV.	**Single entry system** • Single Entry- Features -Books and Accounts maintained (2) • Preparation of Statement of affairs-Difference between statement of affairs and Balance Sheet (2) • Recording of transactions-Ascertainment of profits under Single entry system	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn preparation of final accounts of traders	Quiz, Solving Problems using the basic accounting knowledge
V.	**Consignment Accounts** • Consignment Meaning – features – Pro-forma Invoice – Account sales – Delcredere commission – Accounting treatment in the books of consignor & consignee – Valuation of stock – treatment of normal & abnormal loss – invoice of goods at a price higher than cost price (simple [problems)	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn to rectify the errors using accounting entries.	Quiz, Solving Problems using the basic accounting knowledge

t of References (Book / ICT / Weblinks)

P JAIN &NARANG Kalyani Publishers 2019

Himalaya publishing house

Name of the faculty member & Signature:

M.V.B.Sailaja

Approved by Head of the Department:

M.V.B.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: B.com(hons)Strategic Finance **Class & Section:NCSF** **Course Code:**

Name of the Faculty Member:Sailaja.Mvb **Course Title: Direct Tax**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	ntroduction Indian Taxation System – Over view of Direct Taxes Income Tax: Basic Concepts: Income, Person, Assessee, Assessment year, Previous year, Income, Casual income, PAN, Gross total income Agricultural income and its assessment (theory only) Capital and Revenue, Residential status and incidence	problem solving methods	understanding the taxation laws	solving Problems using the provisiSons of tax laws
II.	Income from salary, Allowances,perquisites,profits in lieu of salary. Income from House Property Meaning, Annual value, Let-out house, Self-occupied house, Deemed to be let-out house Deductions from annual value, Deemed ownership, Unrealized rent	problem solving methods	Calaulation of income headwise as per I.T Act 1961.	solving Problems using the provisiSons of tax laws

III.	Income from Business and Profession Chargeability, Deductions expressly allowed and disallowed General deductions, computation of profits and gains from business and profession Depreciation (simple problems) Capital Gains Capital assets meaning, Types, Cost of inflation index, Transfer types Transfer not regarded as transfer, Cost of acquisition of various assets, Deductions from capital gains	problem solving methods	Calaulation of income headwise as per I.T Act 1961.	solving Problems using the provisiSons of tax laws
IV.	Income from Other Sources & Gross Total Income Interest on securities, Bond washing transaction, Dividends on shares, casual income, family pension Gifts received and other general incomes including deductions, Deemed income (simple problems) Deductions from gross total income and Rebates, aggregation of incomes, Set off and carry forward of losses Computation of total income and tax liability of Individual Assesse	problem solving methods	Calaulation of income headwise as per I.T Act 1961.	solving Problems using the provisiSons of tax laws
V.	Assessment of Income Filing of returns & Advance Tax, Tax Deducted at Source (Theory Only) Types of Assessment - Self assessment, Regular assessment, Best judgment	problem solving methods	Calaulation of income headwise as per I.T Act 1961.	solving Problems using the provisiSons of tax laws

	assessment - Assessment procedure, Using Old and New Regime for calculation of tax liability (individual only) Income tax authorities (Theory only) Computation of total income and tax liability of Hindu Undivided Family			

List of References (Book / ICT / Weblinks):

1. V.P Gour, R.Puri Kalyani publishers
2. K.Prem Raja,CA.Sridhar ,Hamsrala Publishers
3. Taxmann publishers

Name of the faculty member & Signature:

Mvb.Sailaja

Approved by Head of the Department:

Mvb.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:B.com honours strategic finance **Class & Section:ACSF** **Course Code:SF18201**

Name of the Faculty Member: PRIYA THAKUR

Course Title: Managerial Economics

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Managerial economics meaning, definition,nature,scope,concepts of ME, relation of ME with other disciplines,role and responsibilities of managerial economist, ME bridges gap between theory and practical	Chalk and board teaching method and PPT Presentation	To define managerial economics and to describe the economics concept, tools and practices used in managerial economics.	Introduction to ME, seminar
II.	Meaning of demand, types, determinants of demand, law of demand,consumer surplus, elasticity of demand and its types	Chalk n board method.ppt presentation.	To explain demand analysis and to apply demand forecasting methods based on nature of product	Seminar , group discussion
III.	Production function - its meaning and types, production function with one variable input and two variable input, returns to scale, economies and diseconomies of scale and learning curve	Chalk n board teaching method , PPT Presentation	To analyse input-output relation in different time periods	Seminar, viva
IV.	Meaning and features of perfect competition , monopoly, oligopoly and monopolistic competition, price output decision in perfect market , monopoly , oligopoly, monopolistic competition, price leadership in oligopoly, pricing policies , methods of pricing	Chalk n board method and PPT presentation	To identify and distinguish different market structure in price and output decision	Seminar , group discussion

V.	Meaning of profit, nature of profit, profit theories, break even analysis , capital budgeting meaning and importance of cost of capital	Chalk n board method and PPT presentation	To compare different pricing strategies	Seminar , group discussion

List of References (Book / ICT / Weblinks):

1. **Managerial economics - R.L.Varshney, K.L.Maheshwari (Sultan chand & sons)**
2. ✓ Production Function - MBA Notes (mbahub.in)
3. Capital Budgeting: Definition, Methods, and Examples (investopedia.com)

Name of the faculty member & Signature: Priya Thakur

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:B.com honours strategic finance **Class & Section: NCSF** **Course Code:SEC23401**

Name of the Faculty Member: PRIYA THAKUR

Course Title: Leadership and management skills

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Roles, functions and characteristics of a leader, evolution and growth of leadership,leadership traits and ethics, styles of leadership , types of leadership	Chalk and board teaching method and PPT Presentation	To understand about leadership and its growth	Introduction to leadership, seminar
II.	Conceptual, human and technical , role of leader, basic managerial skills, self management skills	Chalk n board method.ppt presentation.	To explain management skills and different concepts	Seminar , group discussion
III.	Innovative leadership , concept of emotional and social intelligence , design thinking , challenges and opportunities , global leaders	Chalk n board teaching method , PPT Presentation	To analyse different concepts , challenges faced by leaders	Seminar, viva
IV.	Immersing trends in leaders, types of leaderships	Chalk n board method and PPT presentation	To understand about different types of leadership	Seminar , group discussion
V.	Business ethics - benefits, introduction, implementation of ethics, harassment issues, responsibilities and its types, conflicts and privacy policies	Chalk n board method and PPT presentation	To analyse benefits of ethics,awareness on workplace harassment	Seminar , group discussion and debate

List of References (Book / ICT / Weblinks):

1. Leadership and management skills - Patrick

2. 10 Most Important Leadership Skills For The 21st Century Workplace (And How To Develop Them) (forbes.com)
3. https://youtu.be/M8C2B949BqA

Name of the faculty member & Signature: Priya Thakur

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:B.com honours strategic finance **Class & Section:DCSF** **Course Code:SF18602**

Name of the Faculty Member: PRIYA THAKUR

Course Title: Indirect Taxes

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Objectives and basic schemes of GST, meaning and salient features of GST, subsuming of taxes, benefits of implementing GST, constitutional amendments, structure of GST, GST Council	Chalk and board teaching method and PPT Presentation	To describe basic scheme of GST, GST council powers and functions.	Introduction to GST, seminar
II.	GST acts- CGST Act, SGST Act, and IGST act, salient feature and definitions	Chalk n board method.ppt presentation.	To explain various GST acts and also various definitions	Seminar , group discussion
III.	Procedure and levy under GST, registration under GST, compulsory registration, deemed registration, special provisions, exempted goods and services	Chalk n board teaching method , PPT Presentation	To identify the registration procedure , levying of GST and exemptions	Seminar, viva
IV.	Assessments and returns- types of returns, claim of input tax credit and reclaim of ITC	Chalk n board method and PPT presentation	To analyse different types of assessments and returns under GST	Seminar , group discussion
V.	Customs act 1962- types of custom duties, custom ports, valuation and appointments	Chalk n board method and PPT presentation	To appraise the EXIM procedure as per customs in India (Act)	Seminar , group discussion

List of References (Book / ICT / Weblinks):

1. Goods & Services Tax (GST) | Home
2. What is SGST, CGST, IGST and UTGST? (cleartax.in)
3. Types of Duties under Customs (taxguru.in)

Name of the faculty member & Signature: Priya Thakur

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER- II

Department: B.Com Honours SF | **Class & Section: ACSF II sem** | **Course Code: SF22201**

Name of the Faculty Member: **Dr K. Gopi Krishna** | **Course Title: Financial Control**

Unit	Topicsto becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Cost Measurement Concepts** Cost behavior and cost objects- Actual and normal costs- Standard Costs- Absorption Costing- Variable (direct) costing – Joint and by-product costing.	Lecture Method & PPT	Students will be able to define cost behavior and types of costs.	Conducted subject Puzzle
II.	**Costing Systems & Overhead costs** Job order costing- Process costing- Activity based costing- Life cycle costing- Fixed and variable overhead expenses- Plant-wide versus departmental overhead- determination of Allocation base- Allocation of service department costs.	PPT	Students will be able to classify costing systems and compare different types of costs.	Given Industry Examples with their practical Application
III.	**Supply chain Mgmt & Business Process Improvement** Lean manufacturing-Enterprise resource planning- theory of constraints & throughput costing- capacity management Analysis- value chain analysis—value added concepts- process Analysis- Activity based management- continuous improvement concepts- Best practice	Lecture Method & PPT	Students will be able to solve problems in supply chain management.	Conducted Quiz

	analysis- cost of quality analysis- efficient accounting process.			
IV.	**Internal Controls** Internal control structure and management philosophy- Internal control policies for safeguarding and assurance- Internal control risk- corporate governance- external audit requirements- Internal auditing.	Lecture Method & PPT	Students will be able to conclude and criticize on the basis of internal auditing.	Given Industry Examples with their practical Application
V.	**Systems control and security measures.** General accounting system controls- Application and Transaction controls- Network control – Backup Control- Business Continuity planning.	Lecture Method & PPT	Students will be able to develop and create a business continuity plan.	Conducted Test

Listof References (Book/ICT/ Weblinks):

1. Wiley CMA excel Learning system, part- I: Financial reporting, Planning, Performance & Control..
2. Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary, Cost Management: A Strategic Emphasis, 6th edition, MCGraw Hill, Newyo NY, 2013.
3. Horngren, Charles T., Datar, Srikant, Rajan, Madhav, Cost Accounting: A managerial Emphasis, 14th edition, Prentice Hall, upper Saddle rver, NJ,2012.

Name of the faculty member & Signature:

Dr K. Gopi Krishna -

Approved by Head of the Department:

Mrs M.V.B Sailaja-

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER- II

Department: B.Com Honours SF | **Class & Section: ACSF II sem** | **Course Code: SF22201**

Name of the Faculty Member: **Dr K. Gopi Krishna** | **Course Title: Financial Control**

Unit	Topicsto becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Cost Measurement Concepts** Cost behavior and cost objects- Actual and normal costs- Standard Costs- Absorption Costing- Variable (direct) costing – Joint and by-product costing.	Lecture Method & PPT	Students will be able to define cost behavior and types of costs.	Conducted subject Puzzle
II.	**Costing Systems & Overhead costs** Job order costing- Process costing- Activity based costing- Life cycle costing- Fixed and variable overhead expenses- Plant-wide versus departmental overhead- determination of Allocation base- Allocation of service department costs.	PPT	Students will be able to classify costing systems and compare different types of costs.	Given Industry Examples with their practical Application
III.	**Supply chain Mgmt & Business Process Improvement** Lean manufacturing-Enterprise resource planning- theory of constraints & throughput costing- capacity management Analysis- value chain analysis—value added concepts- process Analysis- Activity based management- continuous improvement concepts- Best practice	Lecture Method & PPT	Students will be able to solve problems in supply chain management.	Conducted Quiz

	analysis- cost of quality analysis- efficient accounting process.			
IV.	**Internal Controls** Internal control structure and management philosophy- Internal control policies for safeguarding and assurance- Internal control risk- corporate governance- external audit requirements- Internal auditing.	Lecture Method & PPT	Students will be able to conclude and criticize on the basis of internal auditing.	Given Industry Examples with their practical Application
V.	**Systems control and security measures.** General accounting system controls- Application and Transaction controls- Network control – Backup Control- Business Continuity planning.	Lecture Method & PPT	Students will be able to develop and create a business continuity plan.	Conducted Test

Listof References (Book/ICT/ Weblinks):

1. Wiley CMA excel Learning system, part- I: Financial reporting, Planning, Performance & Control..
2. Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary, Cost Management: A Strategic Emphasis, 6th edition, MCGraw Hill, Newyo NY, 2013.
3. Horngren, Charles T., Datar, Srikant, Rajan, Madhav, Cost Accounting: A managerial Emphasis, 14th edition, Prentice Hall, upper Saddle rver, NJ,2012.

Name of the faculty member & Signature:

Dr K. Gopi Krishna -

Approved by Head of the Department:

Mrs M.V.B Sailaja-

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER- VI

Department: B.Com Honours SF	**Class & Section: NCSF IV sem**	**Course Code: SF23401**
Name of the Faculty Member:	**Dr K. Gopi Krishna**	**Course Title: Financial Decision Making-II**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Decision Analysis** Cost/Volume/Profit Analysis- Break even Analysis (Simple Problems)- Profit Performance and Alternative operative levels- Analysis of Multiple products- sunk costs- opportunity costs and other related concepts- marginal costs and marginal revenue- special orders and pricing- make versus buy-sell or process further- add or drop a segment- capacity considerations.	Lecture Method & PPT	Students will be able to define marginal , sunk and opportunity costs and recall cost volume profit analysis.	Problem Solving
II.	**Pricing** Pricing methodologies- target costing-Elasticity of demand- product life cycle considerations- Market structure considerations.	Lecture Method & PPT	Students will be able to demonstrate understanding of pricing methodologies.	Given Industry Examples with their practical Application
III.	**Enterprise Risk Management** Types of risk- Risk identification and assessment- risk mitigation strategies- managing risk.	Lecture Method & PPT	Students will be able to demonstrate understanding of enterprise risk management.	Conducted test
IV.	**Investment Decisions** Capital budgeting decisions- stages of capital budgeting- incremental	Lecture Method	Students will be able to identify a system of investment decision	Problem Solving

	cash flows- income tax considerations- discounted cash flow analysis(net present value, internal rate of return, comparison of NV and IRR)- Payback and Discounted Payback- Risk Analysis in Capital investment.	& PPT	and develop stages of capital budgeting.	
V.	**Professional Ethics.** Ethical considerations for management accounting and financial management professionals (IMA's Statement of Ethical Professional Practice, Fraud Triangle, evaluation and resolution of ethical issues)- ethical considerations for the organization- (IMA's statement on Management accounting, values and ethics: from inception to practice, US foreign Corrupt Practices act, Corporate responsibility for ethical conduct.	Lecture Method & PPT	Students will be able to understand the importance of ethics for management accounting and financial management professionals.	Conducted Test

Listof References (Book/ICT/ Weblinks):

1. Wiley CMA excel Learning system, part- II: Financial Decision Making.
2. Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary, Cost Management: A Strategic Emphasis, 6th edition, MCGraw Hill, Newyo NY, 2013.
3. Horngren, Charles T., Datar, Srikant, Rajan, Madhav, Cost Accounting: A managerial Emphasis, 14th edition, Prentice Hall, upper Saddle rver, NJ,2012.

Name of the faculty member & Signature:

Dr K. Gopi Krishna -

Approved by Head of the Department:

Mrs M.V.B Sailaja-

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER- VI

Department: B.Com Honours SF	**Class & Section: DCSF VI sem**	**Course Code: BC 18016**
Name of the Faculty Member:	**Dr K. Gopi Krishna**	**Course Title: Human Resource Management (DSE)**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** Concepts- significance-objectives-scope- functions- changing role of human resource manager- HRM policies- Impact of environment on HRM- Human Resource Development: Concept-scope- Objectives- Brief introduction of techniques of HRD.	Lecture Method & PPT	To understand the concept of HRM, functions and changing role of a HR manager.	Conducted Quiz
II.	**Acquisition of Human Resource** Job design- Approaches- Job rotation- Job enlargement- Job enrichment- Job bandwidth- Job analysis- Concepts- objectives-components (Job description and Job Specification)- Methods of Job Analysis- Human Resource Planning: Concept- objectives- factors affecting HR planning- Process of HR planning- Problems in HR planning- Recruitment: Objectives- Sources of recruitment- Selection: Concept- Selection- Procedure- tests and Interview- Placement- Induction- Promotion- Transfer.	Lecture Method & PPT	To distinguish between the various methods of job design and interpret the techniques of acquisition of human resource.	Given Industry Examples with their practical Application

III.	**Developing and Motivating Human Resource** Training- Assessing training needs-methods and evaluation of training-development: techniques of management development-evaluating effectiveness-performance management- concept-performance appraisal- concept-traditional and modern methods of appraisal- concept of potential appraisal- assessment centers and career planning and development-concept of empowerment-participative management: objectives-types-quality circles-brief introduction to forms of workers participation in management in india.	Lecture Method & PPT	To explain the importance of HRP and point out the various HRD approaches for work life balance and describe the concept of job evaluation.	Conducted test
IV.	**International Human Resource Management and E- HRM** Introduction- Global recruitment-Global selection approach- cross culture training- compensation. Aspects of E- HRM,E- HRP, E-Recruitment, E- selection, E-Performance Management, E-Training and Development, E- HR records and Audit.	Lecture Method & PPT	To analyze the core concepts of HRD, TQM and understand the concept of Career development.	Conducted Quiz
V.	**Recent Trends in HRM** Knowledge Management: Concept – KM Architecture- Knowledge Conversion- Knowledge Management Process- Employer's Brand – Business Process Outsourcing- HR issues, Learning Organization: Concept- Role of leader in Learning Organizations.	Lecture Method & PPT	To explain the various concepts of workers participation and quality of work life.	Conducted Test

Listof References (Book/ICT/ Weblinks):

1. Subba Rao P: Personnel and Human Resource Management, Himalaya.
2. K. Aswathappa , Human Resource and Personnel Management.
3. Gupta CB, Human Resource Management, Sultan Chand & Sons.

Name of the faculty member & Signature:

Dr K. Gopi Krishna -

Approved by Head of the Department:

Mrs M.V.B Sailaja-

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: B.Com Honors Strategic Finance **Class & Section: DCSF/DCH** **Course Code: BC 21025**

Name of the Faculty Member: Dr.Sunitha Nair A.

Course Title: Financial Markets and Institutions

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Overview of Indian Financial System, Functions, Segments, Latest developments, defects,Remedial measures, financial reforms, Financial services-fund based and non fund based, modern activities, innovative financial instruments, challenges faced by financial service sector	Lecture Method using ICT Tools,	To have a conceptual knowledge of financial systems and its elements, to classify the financial markets and services	Quiz, presentation, viva etc
II.	Capital markets- primary and secondary, Primary markets- methods of floating new issues, general and SEBI guidelines for new issue, recent trends, Secondary market-SEBI norms, stock exchanges, meaning, functions, Organization listing procedure, types of brokers, functions, NSE,OTCEI, Defects of the Indian Capital markets	Lecture Method using ICT Tools,	To explain about the capital markets with reference to Stock markets as per SEBI regulations	Quiz, presentation, viva etc
III.	Money market- structure, features, objectives, importance,segments, call and bill market, CPs, CDs,Inter bank certificates,Repo, DFHL	Lecture Method using ICT Tools,	To understand the role of money market in the Indian Financial System	Quiz, presentation, viva etc
IV.	Securitisation of debts, modus, role of merchant banks and other agents in these, structure, benefits,	Lecture Method using ICT Tools,	To analyse depository and the systems and to understand the concepts in derivatives and	Quiz, presentation, viva etc

	drawbacks, future prospects. Derivatives-meaning, types,concepts of forwards, futures, options and swaps, importance. Depository systems-meaning, process, SEBI norms,benefits and drawbacks. NSDL & CDSL		securitization of debts	
V.	Mutual funds-origin, classification, importance, operation, concept of NAV- guidelines, reason for slow growth, future prospects. Merchant Banking-concept, origin, role, services, regulatory framework pre and post issue management, qualities, SEBI regulations and conditions for Merchant bankers	Lecture Method using ICT Tools,	O appraise financial service system related to mutual funds and merchant banking	Quiz, presentation, viva etc

List of References (Book / ICT / Weblinks):

- Gordon & Natarajan 2012. Financial Markets and Services (3rd edition)Himalaya Publishing House, Mumbai.

Name of the faculty member & Signature:
Dr. Sunitha Nair A.

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Class & Section: NCSF

Department: BCom Hons(Strategic Finance)

Name of the Faculty Member: N.Anitha Rani

Course Code: SECCB23401

Course Title: Foundation of Digital Marketing & Web Design (FDM)

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Digital Marketing Strategy - Exploring Digital Marketing, Starting with the Website	Discussion and ICT Tools	Explained the basics of Digital Marketing Concepts, Different strategies	Discussion about traditional And Digital marketing strategy
II.	Foundations of Analytics, Search Engine Optimization (SEO), Search & Display Marketing	Discussion and ICT Tools	Analyze and Interpret the Analytics, SEO	Acquainted with the Concept Of SEO, Search and Display Marketing
III.	Social Media Marketing, Video Marketing, E-Mail Marketing: Introduction, E-Mail Marketing: Tools and Setup, E-Mail Marketing: Segmentation, E-Mail Marketing: Personalization, Mobile Friendly Design, Content Marketing: Introduction – Foundations, Blogs for Content Marketing, Content Marketing for Staying Relevant, Newsletters for Content Marketing, Mobile Marketing foundations	Discussion and ICT Tools	Explain the Concepts on Social media marketing, Email Marketing Various Blogs, Vlogs and News Letters in Content Marketing	Learned about the Various Techniques for Creating the Content Marketing towards Blogs, Vlogs and News Letter
IV.	Web Design: Introduction, Exploring and Learning Web Design, Conversion Rate		Explore the CRO and Target Audience in Web Design	Got the Knowledge of Target Audience and CRO Approaches

	Optimization (CRO), Setting CRO, Target Audience, Champion Optimization	Discussion and ICT Tools		
V.	Google Analytics: Introduction – Core Concepts, Additional interface features, Audience Reports, Acquisition Reports, Social Reports, Behavior Reports, Track Reports, Conversion Reports, Additional features	Discussion and ICT Tools	Identify the Various Reports from Google Analytics	Learned about the Google Analytics and Reports and Track events

List of References (Book / ICT / Weblinks):

1. Jan and Deborah (2010), **"Social Media Marketing All in One for Dummies",** Oxford Publication – Delhi.
2. Seema Gupta (2020), **"Digital Marketing",** Mc Graw Hill – New- Delhi.
3. Puneeth Singh Bhatia (2018), **"Fundamentals of Digital Marketing",** Pearson Publications – New- Delhi.
4. Cory (2015), Google Adwords for Beginners: A Do it Yourself Guide to PPC Advertising.

N. Anitharani

Name of the faculty member & Signature:
N. Anitha Rani

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: Bcom (Honours) Strategic Finance

Class & Section: DCSF

Course Code:BC21029

Name of the Faculty Member: Mr. Katha Praveen Kumar

Course Title: Accounting For Management II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Differential Cost-meaning-characteristics of differential costs - differential costing Vs marginal costing. Practical applications of Differential Cost Analysis. Absorption Costing-marginal costing and direct costing-pricing decisions - product pricing methods Marginal Cost Contribution-key factor-profit planning-CVP analysis - break even analysis-break even chart-advantages and limitations of marginal cost applications of marginal costing technique	Used the white board	Understanding the relation among cost, volume & profit	Solving Problems using the basic computer instruction
II.	Budgeting & Budgetary Control Meaning and need for Budget-meaning of estimate, forecast budget & budgetary control-objectives of budgetary control-advantages - limitations Installation of Budgetary Control System - budget manual - budget period - classification of budgets Functional Budgets-Sales budget-Production budget - Capacity utilization budget - Overhead budget -	Used the white board	Enabled the students to prepare various kinds of budgets.	Solving Problems using the basic computer instruction

	Flexible budgets - Master budget Zero-based budgeting its application and advantages - limitations - budgetary control and reporting			
III.	Responsibility Accounting - meaning – objectives. Responsibility Centers-expense centers-profit centers - Investment centers. Human Resources Accounting - definition-objectives-advantages-Objections. Valuation methods-human resources accounting in India. Historical cost method, Replacement cost method, opportunity cost method	Lecture Method using ICT Tools	solve linear programming problems, transportation problems.	Solving Problems using the basic computer instruction
IV.	Accounting for Price Level changes (inflation accounting) introduction. price level changes & financial statements - meaning of Accounting for Changing Prices. Approaches to Price-level accounting-current purchasing power accounting-current cost accounting-specific & general price level accounting -their characteristics & limitations (theory only) Current purchasing power problems. Current cost accounting problems	Used the white board	Understanding responsibility accounting, human resource accounting & amp; Inflation accounting.	Solving Problems using the basic computer instruction
V.	Management Information System & Reporting. Meaning-nature-features objectives applications. Financial Information Systems-marketing information systems - Human resources information systems. Reporting-essentials of a good reporting system. Report-kinds of reports - review of reports (theory only)	Lecture Method using ICT Tools	Understanding the various reports to provide the required information for management.	Solving Problems using the basic computer instruction

List of References (Book / ICT / Weblinks):

1. Gupta, Shashi K, and Sharma, R.K. 2011. Financial Management (7th Edition). Kalyani Publishers: New Delhi.

2. Jain, S.P. and Narang, K.L. 2005. Advanced cost accounting (Cost Management) (10th revised & enlarged edition). Kalyani Publishers: New Delhi.

Name of the faculty member & Signature: Katha Praveen Kumar

Approved by Head of the Department:

Out

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2024 – 2025

SEMESTER

Department: B. Com (SF) **Classit** DSF **Section:** **Course Co.** **de:** SF18601

Name of the Faculty Member: P. Sudha rani **Course Title:** company law

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition of company, nature, characters, objective, incorporation Doctrine of indoor management.	Smart board	To develop knowledge of company	Quiz
II.	Kinds of companies issue of prospectuscontents issue if shares, bounsshares right shares share capital reduction alteration	Live example through stock exchange	To describe the structure of company	Model making
III.	Borrowing power debentures ultra bored registration of charge debentures types	Audio visual method	To know borrowing Powers of company	Word buzz
IV.	Company mgmt directors appointment removalmanagerial remuneration power duties meeting kinds notice agenda quorum, proxy.	Smartboard	To know various provisions of company regards meeting	Pilot project
V.	Reconstruction amalgamation winding up meaning modes by court consequences of winding up.	Smart board	To know various modes of winding up.	Pictionery

List of References (Book / ICT / Weblinks):

1) kapoor ND 2018 element of company law
2) Garg k Darren 2004 company law

1. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

P. SUDHA RANI

P. Sudha Rani

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section:DCSF/DCH** **Course Code: BC18030**

Name of the Faculty Member: **Mrs. Hilda Margreat** **Course Title:Labour Law**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Law relating to Factories Act - Meaning and definition of certain terms. - Provisions regarding health of workers -Provisions regarding safety of workers Provisions regarding employment of young persons and women Provisions regarding to annual leave with wage.	-Lecture Method - Explaination through chalk and talk. - Presentation through ICT	To understand various provision of Factories Act.	Group discussion, Case studies, Seminars
II.	Law relating to Workmen and Employees. -Workemen's compensation Act -Introduction to the Act. - Rules and Amount of compensation. -The ESI Act Purpose for which fund expended -Benefits of ESI -ESI constitution and adjudication of power. The Employees Provident Fund Act - Definition, EPF scheme 1952 -Employee Pension scheme 1995 - Employees Deposit Linked Insurance 1976	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Explain rules regarding workmen compensation and provident fund Act.	Group discussion,Seminars, Case studies.

III.	Law relating to payment of Gratuity Act 1972. -Payment and forfeiture - Compulsory Insurance -Inspectors- penalties and offences The Payment of Bonus - Computation of gross profits - Determination of available and allocable surplus	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	To illustrate the gross profits of Banking and non Banking company	Group discussion, Seminars Case studies.
IV.	Industrial DisputeAct, 1947 - Introduction - Procedure for settlement -Authorities -Strikesand lockouts -Special provision relating to lay-off	- Lecture Method - Explanation through chalk and talk. - Presentation through ICT	To show various adjudication machinery	Group discussion,Seminars Case studies.
V.	The Trade union Act,1926 -Definition, aims and objectives - Duties and liabilities - Amalgamation and dissolution of trade union.	- Lecture Method - Explanation through chalk and talk. - Presentation through ICT	To tell about duties and liabilities of registered trade union	Group discussion, Seminars Case studies.

List of References (Book / ICT / Weblinks):

B. D singh sr. Prof. HRM, IMT, Ghaziabad, Labour Law for Laws

Name of the faculty member & Signature: Mrs. Hilda Margreat.

Approved by Head of the Department:Mrs. M.V.B.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –24

SEMESTER

Department: B.Com ~~Business Process Management~~ Strategic Finance **Class & Section: ~~ABPM~~ ACSF** **Course Code: VE18201**

Name of the Faculty Member: Mrs. Hilda Margreat **Course Title: Value Education and Personality Development**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Ethics	Lecture Method	To Learn to differentiate between accepted and Counter norms and to be able to identify the various Dimensions of Human Development	Group discussion to understand the value system in the society.
II.	Approach to Life	Lecture Method	To Learn to demonstrate Love and experience of God and to be able to identify the Basic issues of Life and the Happiness as Life's goal.	Debate on the topics covered
III.	Concern for others	Lecture Method	To Understand the importance of concern for others and critic the various problems that deter the growth of the society	Scenario discussion
IV.	Transformation of Self	Lecture Method	To be able to recognize the traits of a good personality and practice self exploration	Self reflection and discovery of one's true self.
V.	Life Enrichment Skills	Lecture Method	To learn to be able to interpret the purpose of life and goal setting and demonstrate self management.	Exploring of personal skills through peer discussions.

List of References (Book / ICT / Weblinks):

1. Human Values – Development Programme – AIACHE
2. In Harmony – Value Education at College level. By a Team of Ethics Teachers (G.M. James , B.J JAYARAJ , K.CANDASSAMY, BERNARD D'SAMI , S.J.A PACKIARAJ)

Name of the faculty member & Signature: Mrs. Hilda Margreat

Approved by Head of the Department: Mrs. M.V.B Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section:ACSF** **Course Code: BC22006**

Name of the Faculty Member: **Mrs. Hilda Margreat** **Course Title:Company Law-1**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Contract Act - Agreement and Contract -Offer and Acceptance -Consideration - Capacity to contract -Consent	-Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Demonstrate an understanding of the legal environment of the business.	Group discussion, Case studies.
II.	Discharge of Contract -Legality of Object and Consideration. -Agreement which expressly declared to be void -Discharge of contract	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Explain legality of object and consideration, discharge of a contract and remedies.	Group discussion, Case studies.
III.	Sale of Goods Act -Contract of Sale -Difference between Sale and Agreement to sell -Conditions and warranties	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Identify the recognation of transactions involving the sale of goods Act.	Group discussion, Case studies.
IV.	Consumer Protection Act - Definitions of the terms. -Rights of Consumer -Consumer Redressal Agencies	- Lecture Method - Explaination through chalk and talk. - Presentation through	Dramatise the application of consumer protection Act.	Group discussion, Case studies.

		ICT		
V.	Intellectual Property Rights and Information Technology Act. -Intellectual Property Rights -Information Technology Act. -Right to Information Act	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	To recognise IPR, IT Act and RTI Act.	Group discussion, Case studies.

List of References (Book / ICT / Weblinks):

1. Garg, V.K. Sareen, V.K. Sharma Mukesh and Chawala R.C 2010 Business Law. 7th revised edition. 2013 reprint. New Delhi: Kalyani Publication
2. Kapoor N.D 2009 Elements of Mercantile Law. 31st edition
3. Maheshwari, S.N and Maheshwari, S.K 2011. A manual on Business Law.

Name of the faculty member & Signature: Mrs. Hilda Margreat.

Approved by Head of the Department:Mrs. M.V.B.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - IV

Department: B. COM (STRATEGIC FINANCE) **Class & Section: NCSF** **Course Code:SF23403**

Name of the Faculty Member: V.ANUSHA **Course Title : Business Statistics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to statistics: meaning , definition, functions, applications and limitations Collection and sources of data- primary and secondary data Classification and types of classification of data Tabulation of data and its types Sampling methods and its types, Sampling errors and non sampling errors	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	To learn merits and limitations in using the statistical data.	Offline Quiz.
II.	Diagrams: simple bar, multiple bar, subdivided bar, percentage bar and pie diagram Graphs: histogram, frequency polygon, frequency curve and Ogive curve	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to choose suitable diagrams and graphs for statistical data	Written Test.
III.	Measures of central tendency: mean, median mode , G. M , H. M (merits and demerits) and problems Measures of dispersion: Range, Q.D, Variance, Standard deviation, (Merits and demerits) Lorenze curve	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to analyze statistical data using different measures of central tendency. To Learn compare the homogeneity of the statistical data using different measures of dispersion.	Offline Quiz.

IV.	Correlation and its types , measures of correlation, Regression and its properties. Regression equations and its coefficients. Coefficient of correlation.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To learn about the relationship between the variable and to analyze the data by using regression analysis.	Written Test.
V.	Time series, components of time series, methods to find time series analysis. Index numbers (problems) Weighted and unweighted indices , Kelly's method, tests of consistency, chain base index numbers, fixed base index numbers and consumer price index number.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To learn about the concepts of times series and index numbers	Written Test.

Listof References (Book/ICT/ Weblinks):

1. Fundamentals of Statistics: Gupta S.C, Himalaya
2. Statistics: E. Narayanan Nadar, PHI Learning
3. Business Statistics: Dr. J. K. Thukral, Taxmann Publications
4. Business Statistics: K. Alagar, Tata McGraw Hill
5. Fundamentals of Statistical: S. P Gupta, Sultan Chand
6. Business Statistics: J. K. Sharma, Vikas Publishers
7. Business Statistics: S. L Aggarwal, S. L. Bhardwaj, Kalyani Publications
8. https://www.youtube.com/watch?v=X48cZ6DGaSw
9. https://www.youtube.com/watch?v=06lxbMpYxm4

V. (V. Anusha)

Nameofthefacultymember&Signature:

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:B.com honours strategic finance **Class & Section:NCSF** **Course Code:BC23015**

Name of the Faculty Member:G SHIVARANJANI

Course Title: corporate accounting.

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Company finalaccounts preparation of pand l account,balance sheet.with adjustments. Profits prior to incorporation.basis of approtionment.post, preincorportion expenses .	Chalk n board teaching method	To Learn about preparation of final accounts.to know about pre n post incorporation expenses treatment.	Practical preparation of company final accounts.
II.	Valuation of Good will.by average method,super profits, capitalisation of fmp,super profits method.valuation of shares by net assets backing , yield basis,fair value method.	Chalk n board method.ppt presentation.	Calculation of good will,shares value inpractical .	Good will,share value calculation for a firm.
III.	Amalgamation, different methods of amalgamation.calculation of purchase consideration by different methods. Internal reconstruction treatment of losses n preparation of balance sheet.	Chalk n board teaching method	Case study	Real life experience by industrial visit.
IV.	Preparation of insurance accounts in relation to life insurance, revenue account, balance sheet General insurance accounts reserve for unexpired risk.	Chalk n board method	Practical preparation of final accounts.	Quiz.

	bank accounts, profit n loss Account balance sheet,robd	chalk n board	preparation of final accounts	quiz

List of References (Book / ICT / Weblinks):

1. Jain,narang kalayani publications.
2. Sreelatha, Himalaya publications.
3. https://www.youtube.com/watch?v=uvupli4nik8

G SHIVARANJANI.

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-III

Department: Environmental Science

Class: B. Com -NCSF

Course Code:ES23301

Name of Faculty Member: Dr.G.Sudhakar

Course Title: EVS&GS

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition, Scope and Importance of environmental Studies Renewable & Non-Renewable resources Definition of Ecosystem, Structure and functions Biodiversity and its conservation	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of naturalresources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	Environmental pollution Solid Waste Management Industrial Waste Management Disaster Management: floods, Earthquakes, and Cyclones	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge onsolid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	Rainwater Harvesting, Water-shed Management Global Warming Ozone depletion, and Acid rains Environmental Legislation Environmental & Human Health-HIV/AIDS Role of Information Technology in Environmental Studies.	Lecture Method using ICT Tools and Board	Apply environmental science knowledge to improve the resources. Evaluate and understand the sustainable environmental conditions and control methods	Oral question and answers To understand the environmental policies and regulations

	Why should we study gender issues? **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	Lecture Method using ICT Tools and Board	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	Oral question and answers To develop students' sensibility regarding issues of gender in contemporary India
V.	**Sexual harassment** **Say no eve teasing.** **Caste-based violence.** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act (2005)**	Lecture Method using ICT Tools and Board	Understand gender problems and ways of addressing them, including interactionsacross local to global scales in communities and overcome inequalities with legislation.	Oral question and answers To expose the students to debate on politics and economic works and on genderviolence.

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition.Chennai: Oxford University Press.

Dr D K Asthana and Dr Meera Asthana. 2014.

2.**A Textbook of EnvironmentalStudies** Revised Edition. New Delhi: S. Chand & Company

3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomen in the Telangana People's Struggle**. New Delhi: Kali for Women.

4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.** Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993

Name of the faculty member & Signature: (Dr. G. SUDHAKAR)

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024 SEMESTER

Department: ACM\ACSF\ACBA **Course Code: BE 23101**

Class & Section: ACM\ACSF\ACBA

Name of the Faculty Member: **Course Title: BUSINESS ENGLISH**
G.R.Nikitha

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Claim And Adjustment E-Mail (9Hrs)** Hints for Drafting Claim and Adjustment E- Mails (2) Elements of Claim and Adjustment E- Mails (2) Specimen Claim and Adjustment E- Mails(5)	Lecture Method	1. Students will be able to identify the elements Claim and Adjustment E- Mails. 2. students will be able to draft Claim and Adjustment E- Mails.	Practicing Claim and Adjustment E- Mails.
II.	**Grammar in Business Correspondence 9Hrs** Commonly Misused Prepositions (3) Subject- Verb Agreement (3) Articles (3)	Lecture Method	1.Students will be able to identify and understand about the concepts related to grammar.	Practicing different exercises related to grammar concepts
III.	**Job Applications Letters and Resume writing 9Hrs** Importance and Functions of an Application Letter (1) General Guidelines to write Application Letters and Resumes (1) The Form and Content of an Application Letter (1) Preparing a Resume (2) Specimen Application Letter and Resume (4)	Lecture Method	1.Students will understand the general guidelines to write Application letters and Resumes.	Practicing the specimen Resume Writing and Job Application.
IV.	**Report Writing – I (Business Report) (9Hrs)** Characteristics of a good	Lecture Method	Students will be able to understand different types	Drafting a report and practicing report writing.

	Business Report (1) Importance of Business Reports (1) Types and Functions of Business Reports (2) Preparing a Business Report and Specimen (2) Specimen Business Report (3)		of Reports, Preparation of reports and structure of report.	
V.	**Language Proficiency in Business Communication 9Hrs** Framing Questions (2) Active and Passive Voice (2) Punctuations (2) Paragraph Writing (3)	Lecture Method	1.Students will be able to identify and understand about the concepts related to grammar.	Practicing different exercises related to grammar concepts

List of References (Book / ICT / Weblinks):

ESSENTIAL READING:

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.

SUGGESTED READING:

1. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.
2. Gruscendorf, Marion. 2007. **English for Presentations**. U.K: Oxford Publication Oxford.
3. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.
4. Rai, Urmila., and Rai, S.M. 2002. **Business Communication**. Mumbai: Himalaya Publishing House.

Name of the faculty member & Signature:
G.R.Nikitha,

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department:B.com (hons)Strategic Finance **Class & Section:DCSF** **Course Code:**

Name of the Faculty Member:Mvb.Sailaja **Course Title: Auditing &Accounting Standards**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction – Definition of Auditing • Objectives of Audit – Scope of Audit • Advantages and limitations of an Audit • Types of Audit • Fraud • Error – Basic concepts in auditing - Audit evidence, auditor • Independence, materiality • Qualities and classification of auditors	Lecture Method using ICT Tools.lecture method.seminars	To Learn about the Practices of Auditing. To understand procedure for Audit	Seminars, guest lectures
II.	• Audit process – procedure – Techniques • Planning – Programme – Audit working papers • Audit Note book – Test checking (its features, advantages, limitations) • Audit Sampling (methods of sampling) **Vouching & Verification:**	Lecture Method using ICT Tools.lecture method.seminars	To Learn about the Practices of Auditing. To understand procedure for Audit	Seminars, guest lectures

	• Vouching of Cash Payments - purchase of goods • Assets, payment of taxes, traveling expenses, salaries & wages • Vouching of Cash Receipts - cash sales • Rental Receipts, Sale of Assets Income from Investments			
III.	**Internal controls, Check and Audit 12Hrs** • Definition of Internal Control – Objectives & environment of internal controls – features and limitations of internal controls • - Internal Check (Meaning and features) - Internal Audit (meaning and objectives)	Lecture Method using ICT Tools.lecture method.seminars	To learn Audit techniques	Seminars, guest lectures
IV.	**Company Audit** • Appointment of Auditor • Qualification and Disqualification of Auditor • Duties and Rights of Auditor • Procedure for Removal of Auditor • Audit Reports • Clean Report - qualified report Adverse Report and disclaimer of opinion	Lecture Method using ICT Tools.lecture method.seminars	Company law provisions for appoinment and rights and duties of Auditor.	Seminars, guest lectures
V.	**Introduction to Accounting Standards (issued by CA)** • Meaning of Accounting Standards – Objectives of accounting standards • Advantages of setting AS • The Accounting Standard board – Objectives of accounting standard board – functions of accounting standard board	Lecture Method using ICT Tools.lecture method.seminars	To understand Accounting standards and their significance.	Seminars, guest lectures

	• Applicability and Scope of accounting standards • Importance of accounting standards, responsibility of management and auditor's responsibility (2) A brief introduction to list of accounting standards issued by institute of Charted Accountants of India (As-1 to As-29			

List of References (Book / ICT / Weblinks):

1. K.Kiran Kumar ,kalyani publishers
2. Satya Devi.S ,himalaya publishers

Name of the faculty member & Signature:

Mvb.Sailaja

Approved by Head of the Department:

Mvb.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

ODD SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section: ACSF** **BC23**

Name of the Faculty Member:Mvb.Sailaja M.V.B.Sailaja **Course Title: Financial accounting II**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Partnership – Admission** • Legal provisions in the absence of a partnership deed • Fixed and fluctuating capitals • Preparation of final accounts with adjustments (2) • Profit and loss appropriation account – methods of calculating good will – treatment of Good will • Calculation of sacrificing, new profit sharing ratio and admission of a partner. (4)	Lecture Method EXPLAINATION THROGH CHALK AND TALK PRESENTATION USING ICT Using software Tally p	Students will learn the basics of accounting terms and objectives of accounting	Quiz, Solving Problems using the basic accounting knowledge
II.	**Partnership–Retirement and Death** • Treatment of goodwill • Methods of calculating good will • Calculation of gaining ratio, new profit sharing ratio • Retirement of a partner • Death of a partner Including joint life polic	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn the meaning of subsidiary books and preparation.	Quiz, Solving Problems using the basic accounting knowledge

III.	**Partnership – Dissolution and Insolvency 12Hrs** • Dissolution of partnership • Insolvency of a partner • Insolvency of firm (excluding sale to firm, company and amalgamation)	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn reconciliation between cash book and pass book balances.	Quiz, Solving Problems using the basic accounting knowledge
IV.	**Single entry system** • Single Entry- Features -Books and Accounts maintained (2) • Preparation of Statement of affairs-Difference between statement of affairs and Balance Sheet (2) • Recording of transactions-Ascertainment of profits under Single entry system	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn preparation of final accounts of traders	Quiz, Solving Problems using the basic accounting knowledge
V.	**Consignment Accounts** • Consignment Meaning – features – Pro-forma Invoice – Account sales – Delcredere commission – Accounting treatment in the books of consignor & consignee – Valuation of stock – treatment of normal & abnormal loss – invoice of goods at a price higher than cost price (simple [problems)	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn to rectify the errors using accounting entries.	Quiz, Solving Problems using the basic accounting knowledge

t of References (Book / ICT / Weblinks)

P JAIN &NARANG Kalyani Publishers 2019

Himalaya publishing house

Name of the faculty member & Signature:

M.V.B.Sailaja

Approved by Head of the Department:

M.V.B.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER IV

Department: B.com(hons)Strategic Finance **Class & Section:NCSF** **Course Code:**

Name of the Faculty Member:Sailaja.Mvb **Course Title: Direct Tax**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	ntroduction Indian Taxation System – Over view of Direct Taxes Income Tax: Basic Concepts: Income, Person, Assessee, Assessment year, Previous year, Income, Casual income, PAN, Gross total income Agricultural income and its assessment (theory only) Capital and Revenue, Residential status and incidence	problem solving methods	understanding the taxation laws	solving Problems using the provisiSons of tax laws
II.	Income from salary, Allowances,perquisites,profits in lieu of salary. Income from House Property Meaning, Annual value, Let-out house, Self-occupied house, Deemed to be let-out house Deductions from annual value, Deemed ownership, Unrealized rent	problem solving methods	Calaulation of income headwise as per I.T Act 1961.	solving Problems using the provisiSons of tax laws

III.	Income from Business and Profession Chargeability, Deductions expressly allowed and disallowed General deductions, computation of profits and gains from business and profession Depreciation (simple problems) Capital Gains Capital assets meaning, Types, Cost of inflation index, Transfer types Transfer not regarded as transfer, Cost of acquisition of various assets, Deductions from capital gains	problem solving methods	Calaulation of income headwise as per I.T Act 1961.	solving Problems using the provisiSons of tax laws
IV.	Income from Other Sources & Gross Total Income Interest on securities, Bond washing transaction, Dividends on shares, casual income, family pension Gifts received and other general incomes including deductions, Deemed income (simple problems) Deductions from gross total income and Rebates, aggregation of incomes, Set off and carry forward of losses Computation of total income and tax liability of Individual Assesse	problem solving methods	Calaulation of income headwise as per I.T Act 1961.	solving Problems using the provisiSons of tax laws
V.	Assessment of Income Filing of returns & Advance Tax, Tax Deducted at Source (Theory Only) Types of Assessment - Self assessment, Regular assessment, Best judgment	problem solving methods	Calaulation of income headwise as per I.T Act 1961.	solving Problems using the provisiSons of tax laws

	assessment - Assessment procedure, Using Old and New Regime for calculation of tax liability (individual only) Income tax authorities (Theory only) Computation of total income and tax liability of Hindu Undivided Family			

List of References (Book / ICT / Weblinks):

1. V.P Gour, R.Puri Kalyani publishers
2. K.Prem Raja,CA.Sridhar ,Hamsrala Publishers
3. Taxmann publishers

Name of the faculty member & Signature:

Mvb.Sailaja

Approved by Head of the Department:

Mvb.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:B.com honours strategic finance **Class & Section:ACSF** **Course Code:SF18201**

Name of the Faculty Member: PRIYA THAKUR

Course Title: Managerial Economics

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Managerial economics meaning, definition,nature,scope,concepts of ME, relation of ME with other disciplines,role and responsibilities of managerial economist, ME bridges gap between theory and practical	Chalk and board teaching method and PPT Presentation	To define managerial economics and to describe the economics concept, tools and practices used in managerial economics.	Introduction to ME, seminar
II.	Meaning of demand, types, determinants of demand, law of demand,consumer surplus, elasticity of demand and its types	Chalk n board method.ppt presentation.	To explain demand analysis and to apply demand forecasting methods based on nature of product	Seminar , group discussion
III.	Production function - its meaning and types, production function with one variable input and two variable input, returns to scale, economies and diseconomies of scale and learning curve	Chalk n board teaching method , PPT Presentation	To analyse input-output relation in different time periods	Seminar, viva
IV.	Meaning and features of perfect competition , monopoly, oligopoly and monopolistic competition, price output decision in perfect market , monopoly , oligopoly, monopolistic competition, price leadership in oligopoly, pricing policies , methods of pricing	Chalk n board method and PPT presentation	To identify and distinguish different market structure in price and output decision	Seminar , group discussion

V.	Meaning of profit, nature of profit, profit theories, break even analysis , capital budgeting meaning and importance of cost of capital	Chalk n board method and PPT presentation	To compare different pricing strategies	Seminar , group discussion

List of References (Book / ICT / Weblinks):

1. **Managerial economics - R.L.Varshney, K.L.Maheshwari (Sultan chand & sons)**
2. ✓ Production Function - MBA Notes (mbahub.in)
3. Capital Budgeting: Definition, Methods, and Examples (investopedia.com)

Name of the faculty member & Signature: Priya Thakur

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:B.com honours strategic finance **Class & Section: NCSF** **Course Code:SEC23401**

Name of the Faculty Member: PRIYA THAKUR

Course Title: Leadership and management skills

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Roles, functions and characteristics of a leader, evolution and growth of leadership,leadership traits and ethics, styles of leadership , types of leadership	Chalk and board teaching method and PPT Presentation	To understand about leadership and its growth	Introduction to leadership, seminar
II.	Conceptual, human and technical , role of leader, basic managerial skills, self management skills	Chalk n board method.ppt presentation.	To explain management skills and different concepts	Seminar , group discussion
III.	Innovative leadership , concept of emotional and social intelligence , design thinking , challenges and opportunities , global leaders	Chalk n board teaching method , PPT Presentation	To analyse different concepts , challenges faced by leaders	Seminar, viva
IV.	Immersing trends in leaders, types of leaderships	Chalk n board method and PPT presentation	To understand about different types of leadership	Seminar , group discussion
V.	Business ethics - benefits, introduction, implementation of ethics, harassment issues, responsibilities and its types, conflicts and privacy policies	Chalk n board method and PPT presentation	To analyse benefits of ethics,awareness on workplace harassment	Seminar , group discussion and debate

List of References (Book / ICT / Weblinks):

1. Leadership and management skills - Patrick

2. 10 Most Important Leadership Skills For The 21st Century Workplace (And How To Develop Them) (forbes.com)
3. https://youtu.be/M8C2B949BqA

Name of the faculty member & Signature: Priya Thakur

Approved by Head of the Department:

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(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:B.com honours strategic finance **Class & Section:DCSF** **Course Code:SF18602**

Name of the Faculty Member: PRIYA THAKUR

Course Title: Indirect Taxes

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Objectives and basic schemes of GST, meaning and salient features of GST, subsuming of taxes, benefits of implementing GST, constitutional amendments, structure of GST, GST Council	Chalk and board teaching method and PPT Presentation	To describe basic scheme of GST, GST council powers and functions.	Introduction to GST, seminar
II.	GST acts- CGST Act, SGST Act, and IGST act, salient feature and definitions	Chalk n board method.ppt presentation.	To explain various GST acts and also various definitions	Seminar , group discussion
III.	Procedure and levy under GST, registration under GST, compulsory registration, deemed registration, special provisions, exempted goods and services	Chalk n board teaching method , PPT Presentation	To identify the registration procedure , levying of GST and exemptions	Seminar, viva
IV.	Assessments and returns- types of returns, claim of input tax credit and reclaim of ITC	Chalk n board method and PPT presentation	To analyse different types of assessments and returns under GST	Seminar , group discussion
V.	Customs act 1962- types of custom duties, custom ports, valuation and appointments	Chalk n board method and PPT presentation	To appraise the EXIM procedure as per customs in India (Act)	Seminar , group discussion

List of References (Book / ICT / Weblinks):

1. Goods & Services Tax (GST) | Home
2. What is SGST, CGST, IGST and UTGST? (cleartax.in)
3. Types of Duties under Customs (taxguru.in)

Name of the faculty member & Signature: Priya Thakur

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER- II

Department: B.Com Honours SF | **Class & Section: ACSF II sem** | **Course Code: SF22201**

Name of the Faculty Member: **Dr K. Gopi Krishna** | **Course Title: Financial Control**

Unit	Topicsto becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Cost Measurement Concepts** Cost behavior and cost objects- Actual and normal costs- Standard Costs- Absorption Costing- Variable (direct) costing – Joint and by-product costing.	Lecture Method & PPT	Students will be able to define cost behavior and types of costs.	Conducted subject Puzzle
II.	**Costing Systems & Overhead costs** Job order costing- Process costing- Activity based costing- Life cycle costing- Fixed and variable overhead expenses- Plant-wide versus departmental overhead- determination of Allocation base- Allocation of service department costs.	PPT	Students will be able to classify costing systems and compare different types of costs.	Given Industry Examples with their practical Application
III.	**Supply chain Mgmt & Business Process Improvement** Lean manufacturing-Enterprise resource planning- theory of constraints & throughput costing- capacity management Analysis- value chain analysis—value added concepts- process Analysis- Activity based management- continuous improvement concepts- Best practice	Lecture Method & PPT	Students will be able to solve problems in supply chain management.	Conducted Quiz

	analysis- cost of quality analysis- efficient accounting process.			
IV.	**Internal Controls** Internal control structure and management philosophy- Internal control policies for safeguarding and assurance- Internal control risk- corporate governance- external audit requirements- Internal auditing.	Lecture Method & PPT	Students will be able to conclude and criticize on the basis of internal auditing.	Given Industry Examples with their practical Application
V.	**Systems control and security measures.** General accounting system controls- Application and Transaction controls- Network control – Backup Control- Business Continuity planning.	Lecture Method & PPT	Students will be able to develop and create a business continuity plan.	Conducted Test

Listof References (Book/ICT/ Weblinks):

1. Wiley CMA excel Learning system, part- I: Financial reporting, Planning, Performance & Control..
2. Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary, Cost Management: A Strategic Emphasis, 6th edition, MCGraw Hill, Newyo NY, 2013.
3. Horngren, Charles T., Datar, Srikant, Rajan, Madhav, Cost Accounting: A managerial Emphasis, 14th edition, Prentice Hall, upper Saddle rver, NJ,2012.

Name of the faculty member & Signature:

Dr K. Gopi Krishna -

Approved by Head of the Department:

Mrs M.V.B Sailaja-

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

SEMESTER- II

Department: B.Com Honours SF | **Class & Section: ACSF II sem** | **Course Code: SF22201**

Name of the Faculty Member: **Dr K. Gopi Krishna** | **Course Title: Financial Control**

Unit	Topicsto becovered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Cost Measurement Concepts** Cost behavior and cost objects- Actual and normal costs- Standard Costs- Absorption Costing- Variable (direct) costing – Joint and by-product costing.	Lecture Method & PPT	Students will be able to define cost behavior and types of costs.	Conducted subject Puzzle
II.	**Costing Systems & Overhead costs** Job order costing- Process costing- Activity based costing- Life cycle costing- Fixed and variable overhead expenses- Plant-wide versus departmental overhead- determination of Allocation base- Allocation of service department costs.	PPT	Students will be able to classify costing systems and compare different types of costs.	Given Industry Examples with their practical Application
III.	**Supply chain Mgmt & Business Process Improvement** Lean manufacturing-Enterprise resource planning- theory of constraints & throughput costing- capacity management Analysis- value chain analysis—value added concepts- process Analysis- Activity based management- continuous improvement concepts- Best practice	Lecture Method & PPT	Students will be able to solve problems in supply chain management.	Conducted Quiz

	analysis- cost of quality analysis- efficient accounting process.			
IV.	**Internal Controls** Internal control structure and management philosophy- Internal control policies for safeguarding and assurance- Internal control risk- corporate governance- external audit requirements- Internal auditing.	Lecture Method & PPT	Students will be able to conclude and criticize on the basis of internal auditing.	Given Industry Examples with their practical Application
V.	**Systems control and security measures.** General accounting system controls- Application and Transaction controls- Network control – Backup Control- Business Continuity planning.	Lecture Method & PPT	Students will be able to develop and create a business continuity plan.	Conducted Test

Listof References (Book/ICT/ Weblinks):

1. Wiley CMA excel Learning system, part- I: Financial reporting, Planning, Performance & Control..
2. Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary, Cost Management: A Strategic Emphasis, 6th edition, MCGraw Hill, Newyo NY, 2013.
3. Horngren, Charles T., Datar, Srikant, Rajan, Madhav, Cost Accounting: A managerial Emphasis, 14th edition, Prentice Hall, upper Saddle rver, NJ,2012.

Name of the faculty member & Signature:

Dr K. Gopi Krishna -

Approved by Head of the Department:

Mrs M.V.B Sailaja-

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023-2024

SEMESTER- VI

Department: B.Com Honours SF	**Class & Section: NCSF IV sem**	**Course Code: SF23401**
Name of the Faculty Member:	**Dr K. Gopi Krishna**	**Course Title: Financial Decision Making-II**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Decision Analysis** Cost/Volume/Profit Analysis- Break even Analysis (Simple Problems)- Profit Performance and Alternative operative levels- Analysis of Multiple products- sunk costs- opportunity costs and other related concepts- marginal costs and marginal revenue- special orders and pricing- make versus buy-sell or process further- add or drop a segment- capacity considerations.	Lecture Method & PPT	Students will be able to define marginal , sunk and opportunity costs and recall cost volume profit analysis.	Problem Solving
II.	**Pricing** Pricing methodologies- target costing-Elasticity of demand- product life cycle considerations- Market structure considerations.	Lecture Method & PPT	Students will be able to demonstrate understanding of pricing methodologies.	Given Industry Examples with their practical Application
III.	**Enterprise Risk Management** Types of risk- Risk identification and assessment- risk mitigation strategies- managing risk.	Lecture Method & PPT	Students will be able to demonstrate understanding of enterprise risk management.	Conducted test
IV.	**Investment Decisions** Capital budgeting decisions- stages of capital budgeting- incremental	Lecture Method	Students will be able to identify a system of investment decision	Problem Solving

	cash flows- income tax considerations- discounted cash flow analysis(net present value, internal rate of return, comparison of NV and IRR)- Payback and Discounted Payback- Risk Analysis in Capital investment.	& PPT	and develop stages of capital budgeting.	
V.	**Professional Ethics.** Ethical considerations for management accounting and financial management professionals (IMA's Statement of Ethical Professional Practice, Fraud Triangle, evaluation and resolution of ethical issues)- ethical considerations for the organization- (IMA's statement on Management accounting, values and ethics: from inception to practice, US foreign Corrupt Practices act, Corporate responsibility for ethical conduct.	Lecture Method & PPT	Students will be able to understand the importance of ethics for management accounting and financial management professionals.	Conducted Test

Listof References (Book/ICT/ Weblinks):

1. Wiley CMA excel Learning system, part- II: Financial Decision Making.
2. Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary, Cost Management: A Strategic Emphasis, 6th edition, MCGraw Hill, Newyo NY, 2013.
3. Horngren, Charles T., Datar, Srikant, Rajan, Madhav, Cost Accounting: A managerial Emphasis, 14th edition, Prentice Hall, upper Saddle rver, NJ,2012.

Name of the faculty member & Signature:

Dr K. Gopi Krishna -

Approved by Head of the Department:

Mrs M.V.B Sailaja-

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER- VI

Department: B.Com Honours SF	**Class & Section: DCSF VI sem**	**Course Code: BC 18016**
Name of the Faculty Member:	**Dr K. Gopi Krishna**	**Course Title: Human Resource Management (DSE)**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** Concepts- significance-objectives-scope- functions- changing role of human resource manager- HRM policies- Impact of environment on HRM- Human Resource Development: Concept-scope- Objectives- Brief introduction of techniques of HRD.	Lecture Method & PPT	To understand the concept of HRM, functions and changing role of a HR manager.	Conducted Quiz
II.	**Acquisition of Human Resource** Job design- Approaches- Job rotation- Job enlargement- Job enrichment- Job bandwidth- Job analysis- Concepts- objectives-components (Job description and Job Specification)- Methods of Job Analysis- Human Resource Planning: Concept- objectives- factors affecting HR planning- Process of HR planning- Problems in HR planning- Recruitment: Objectives- Sources of recruitment- Selection: Concept- Selection- Procedure- tests and Interview- Placement- Induction- Promotion- Transfer.	Lecture Method & PPT	To distinguish between the various methods of job design and interpret the techniques of acquisition of human resource.	Given Industry Examples with their practical Application

III.	**Developing and Motivating Human Resource** Training- Assessing training needs-methods and evaluation of training-development: techniques of management development-evaluating effectiveness-performance management- concept-performance appraisal- concept-traditional and modern methods of appraisal- concept of potential appraisal- assessment centers and career planning and development-concept of empowerment-participative management: objectives-types-quality circles-brief introduction to forms of workers participation in management in india.	Lecture Method & PPT	To explain the importance of HRP and point out the various HRD approaches for work life balance and describe the concept of job evaluation.	Conducted test
IV.	**International Human Resource Management and E- HRM** Introduction- Global recruitment-Global selection approach- cross culture training- compensation. Aspects of E- HRM,E- HRP, E-Recruitment, E- selection, E-Performance Management, E-Training and Development, E- HR records and Audit.	Lecture Method & PPT	To analyze the core concepts of HRD, TQM and understand the concept of Career development.	Conducted Quiz
V.	**Recent Trends in HRM** Knowledge Management: Concept – KM Architecture- Knowledge Conversion- Knowledge Management Process- Employer's Brand – Business Process Outsourcing- HR issues, Learning Organization: Concept- Role of leader in Learning Organizations.	Lecture Method & PPT	To explain the various concepts of workers participation and quality of work life.	Conducted Test

Listof References (Book/ICT/ Weblinks):

1. Subba Rao P: Personnel and Human Resource Management, Himalaya.
2. K. Aswathappa , Human Resource and Personnel Management.
3. Gupta CB, Human Resource Management, Sultan Chand & Sons.

Name of the faculty member & Signature:

Dr K. Gopi Krishna -

Approved by Head of the Department:

Mrs M.V.B Sailaja-

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: B.Com Honors Strategic Finance **Class & Section: DCSF/DCH** **Course Code: BC 21025**

Name of the Faculty Member: Dr.Sunitha Nair A.

Course Title: Financial Markets and Institutions

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Overview of Indian Financial System, Functions, Segments, Latest developments, defects,Remedial measures, financial reforms, Financial services-fund based and non fund based, modern activities, innovative financial instruments, challenges faced by financial service sector	Lecture Method using ICT Tools,	To have a conceptual knowledge of financial systems and its elements, to classify the financial markets and services	Quiz, presentation, viva etc
II.	Capital markets- primary and secondary, Primary markets- methods of floating new issues, general and SEBI guidelines for new issue, recent trends, Secondary market-SEBI norms, stock exchanges, meaning, functions, Organization listing procedure, types of brokers, functions, NSE,OTCEI, Defects of the Indian Capital markets	Lecture Method using ICT Tools,	To explain about the capital markets with reference to Stock markets as per SEBI regulations	Quiz, presentation, viva etc
III.	Money market- structure, features, objectives, importance,segments, call and bill market, CPs, CDs,Inter bank certificates,Repo, DFHL	Lecture Method using ICT Tools,	To understand the role of money market in the Indian Financial System	Quiz, presentation, viva etc
IV.	Securitisation of debts, modus, role of merchant banks and other agents in these, structure, benefits,	Lecture Method using ICT Tools,	To analyse depository and the systems and to understand the concepts in derivatives and	Quiz, presentation, viva etc

	drawbacks, future prospects. Derivatives-meaning, types,concepts of forwards, futures, options and swaps, importance. Depository systems-meaning, process, SEBI norms,benefits and drawbacks. NSDL & CDSL		securitization of debts	
V.	Mutual funds-origin, classification, importance, operation, concept of NAV- guidelines, reason for slow growth, future prospects. Merchant Banking-concept, origin, role, services, regulatory framework pre and post issue management, qualities, SEBI regulations and conditions for Merchant bankers	Lecture Method using ICT Tools,	O appraise financial service system related to mutual funds and merchant banking	Quiz, presentation, viva etc

List of References (Book / ICT / Weblinks):

- Gordon & Natarajan 2012. Financial Markets and Services (3rd edition)Himalaya Publishing House, Mumbai.

Name of the faculty member & Signature:
Dr. Sunitha Nair A.

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Class & Section: NCSF

Department: BCom Hons(Strategic Finance)

Name of the Faculty Member: N.Anitha Rani

Course Code: SECCB23401

Course Title: Foundation of Digital Marketing & Web Design (FDM)

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Digital Marketing Strategy - Exploring Digital Marketing, Starting with the Website	Discussion and ICT Tools	Explained the basics of Digital Marketing Concepts, Different strategies	Discussion about traditional And Digital marketing strategy
II.	Foundations of Analytics, Search Engine Optimization (SEO), Search & Display Marketing	Discussion and ICT Tools	Analyze and Interpret the Analytics, SEO	Acquainted with the Concept Of SEO, Search and Display Marketing
III.	Social Media Marketing, Video Marketing, E-Mail Marketing: Introduction, E-Mail Marketing: Tools and Setup, E-Mail Marketing: Segmentation, E-Mail Marketing: Personalization, Mobile Friendly Design, Content Marketing: Introduction – Foundations, Blogs for Content Marketing, Content Marketing for Staying Relevant, Newsletters for Content Marketing, Mobile Marketing foundations	Discussion and ICT Tools	Explain the Concepts on Social media marketing, Email Marketing Various Blogs, Vlogs and News Letters in Content Marketing	Learned about the Various Techniques for Creating the Content Marketing towards Blogs, Vlogs and News Letter
IV.	Web Design: Introduction, Exploring and Learning Web Design, Conversion Rate		Explore the CRO and Target Audience in Web Design	Got the Knowledge of Target Audience and CRO Approaches

	Optimization (CRO), Setting CRO, Target Audience, Champion Optimization	Discussion and ICT Tools		
V.	Google Analytics: Introduction – Core Concepts, Additional interface features, Audience Reports, Acquisition Reports, Social Reports, Behavior Reports, Track Reports, Conversion Reports, Additional features	Discussion and ICT Tools	Identify the Various Reports from Google Analytics	Learned about the Google Analytics and Reports and Track events

List of References (Book / ICT / Weblinks):

1. Jan and Deborah (2010), **"Social Media Marketing All in One for Dummies",** Oxford Publication – Delhi.
2. Seema Gupta (2020), **"Digital Marketing",** Mc Graw Hill – New- Delhi.
3. Puneeth Singh Bhatia (2018), **"Fundamentals of Digital Marketing",** Pearson Publications – New- Delhi.
4. Cory (2015), Google Adwords for Beginners: A Do it Yourself Guide to PPC Advertising.

N. Anitharani

Name of the faculty member & Signature:
N. Anitha Rani

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: Bcom (Honours) Strategic Finance

Class & Section: DCSF

Course Code:BC21029

Name of the Faculty Member: Mr. Katha Praveen Kumar

Course Title: Accounting For Management II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Differential Cost-meaning-characteristics of differential costs - differential costing Vs marginal costing. Practical applications of Differential Cost Analysis. Absorption Costing-marginal costing and direct costing-pricing decisions - product pricing methods Marginal Cost Contribution-key factor-profit planning-CVP analysis - break even analysis-break even chart-advantages and limitations of marginal cost applications of marginal costing technique	Used the white board	Understanding the relation among cost, volume & profit	Solving Problems using the basic computer instruction
II.	Budgeting & Budgetary Control Meaning and need for Budget-meaning of estimate, forecast budget & budgetary control-objectives of budgetary control-advantages - limitations Installation of Budgetary Control System - budget manual - budget period - classification of budgets Functional Budgets-Sales budget-Production budget - Capacity utilization budget - Overhead budget -	Used the white board	Enabled the students to prepare various kinds of budgets.	Solving Problems using the basic computer instruction

	Flexible budgets - Master budget Zero-based budgeting its application and advantages - limitations - budgetary control and reporting			
III.	Responsibility Accounting - meaning – objectives. Responsibility Centers-expense centers-profit centers - Investment centers. Human Resources Accounting - definition-objectives-advantages-Objections. Valuation methods-human resources accounting in India. Historical cost method, Replacement cost method, opportunity cost method	Lecture Method using ICT Tools	solve linear programming problems, transportation problems.	Solving Problems using the basic computer instruction
IV.	Accounting for Price Level changes (inflation accounting) introduction. price level changes & financial statements - meaning of Accounting for Changing Prices. Approaches to Price-level accounting-current purchasing power accounting-current cost accounting-specific & general price level accounting -their characteristics & limitations (theory only) Current purchasing power problems. Current cost accounting problems	Used the white board	Understanding responsibility accounting, human resource accounting & amp; Inflation accounting.	Solving Problems using the basic computer instruction
V.	Management Information System & Reporting. Meaning-nature-features objectives applications. Financial Information Systems-marketing information systems - Human resources information systems. Reporting-essentials of a good reporting system. Report-kinds of reports - review of reports (theory only)	Lecture Method using ICT Tools	Understanding the various reports to provide the required information for management.	Solving Problems using the basic computer instruction

List of References (Book / ICT / Weblinks):

1. Gupta, Shashi K, and Sharma, R.K. 2011. Financial Management (7th Edition). Kalyani Publishers: New Delhi.

2. Jain, S.P. and Narang, K.L. 2005. Advanced cost accounting (Cost Management) (10th revised & enlarged edition). Kalyani Publishers: New Delhi.

Name of the faculty member & Signature: Katha Praveen Kumar

Approved by Head of the Department:

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(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2024 – 2025

SEMESTER

Department: B. Com (SF) **Classit** DSF **Section:** **Course Co.** **de:** SF18601

Name of the Faculty Member: P. Sudha rani **Course Title:** company law

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition of company, nature, characters, objective, incorporation Doctrine of indoor management.	Smart board	To develop knowledge of company	Quiz
II.	Kinds of companies issue of prospectuscontents issue if shares, bounsshares right shares share capital reduction alteration	Live example through stock exchange	To describe the structure of company	Model making
III.	Borrowing power debentures ultra bored registration of charge debentures types	Audio visual method	To know borrowing Powers of company	Word buzz
IV.	Company mgmt directors appointment removalmanagerial remuneration power duties meeting kinds notice agenda quorum, proxy.	Smartboard	To know various provisions of company regards meeting	Pilot project
V.	Reconstruction amalgamation winding up meaning modes by court consequences of winding up.	Smart board	To know various modes of winding up.	Pictionery

List of References (Book / ICT / Weblinks):

1) kapoor ND 2018 element of company law
2) Garg k Darren 2004 company law

1. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

P. SUDHA RANI

P. Sudha Rani

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –2024

SEMESTER - III

Department:B.COM (HONS) STRATEGIC FINANCE Class & section: General Elective Course Code: G23FIT

Name of the Faculty Member: Ms. Thakur Satya Priya Course Title: Goods and services tax

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**INTRODUCTION TO INDIRECT TAXES:** -Meaning and types of indirect taxes , objectives and features of indirect taxes	- Lecture method - PPT presentation	-Students will be able to understand about indirect taxes before understanding the concept of GST	- Group discussions -Oral test on topics covered - Seminar by students
II.	**INTRODUCTION TO GOODS AND SERVICES TAX :** Objectives and basic schemes of GST , benefits of implementing GST in India , structure of GST dual model	- Lecture method - PPT presentation	- Students will be able to understand basic schemes of GST and its benefits	- Group discussions -Oral test on topics covered - Seminar by students
III.	**CGST AND SGST** Aggregate turnover , adjudicating authority , place of business , reverse charge , job work , input tax credit , business supply , export goods and services and imports of goods and services	-Lecture method - PPT presentation	-Students will be able to understand different types of GST and understand about Telangana state GST	-Group discussions .Oral test on topics covered - Seminar by students
IV.	**PROCEDURE AND LEVY UNDER GST :** Registration under GST ,	-Lecture method - PPT presentation	-Students will be able to understand about the registration procedure of GST	-Group discussions -Oral test on topics covered - Seminar by students

	compulsory registration , deemed registration , exempted goods and services under GST act and rates of GST		and which goods and services are exempted under the act	
V.	**ASSESSMENTS AND RETURNS :** Types of assessments , types of returns	-Lecture method .PPT presentation	-Students will be able to understand about the different types of assessments and how to file a return	-Group discussions -Oral test on topics covered - Seminar by students

ect taxes taxmann's

://cleartax.in/s/gst-returns

://www.indiafilings.com/

://taxguru.in/goods-and-service-tax/types-assessment-gst.html

Name of the faculty member & Signature:

Ms. Priya Thakur

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –

2024 SEMESTER – V

Department: B.COM (HONS) STRATEGIC FINANCE Class & Section: DCSF Course Code: SF18501

Name of the Faculty Member: Ms.Thakur Satya Priya Course Title: Banking Theory and practice

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** : - Origin and growth of banking of India - Kinds of banks -Unit Vs branch -Functions of commercial banks -Narasimham committee report - E banking : models for it , advantages and constraints of E banking	- Lecture method -PPT presentations to understand about electronic banking system	- Students understand when did the system of banking start in India - Students understand the new change in banking i.e., electronic banking system	- Group discussions - Test on the topics covered : oral / written
II.	**Banking and customer relationship:** - Definition of banker and customer - Special features of relationship -Opening of accounts -special types of customers - married women , companies , partnership firms , clubs and non trading institutions	- Lecture method .PPT presentations on different types of customers	-Students understand how does the banker and customer relation works - students understand the different types of customers in bank - students understand the method of opening an account in the bank	- Group discussions .Test on the topics covered : oral / written - students gets the practical knowledge by filling up the bank opening account form

III.	**loans and advances :** - meaning and definition of loans and advances - precautions to be taken while advancing loans against securities - goods : documents of title of goods - real estate - insurance policies - collateral securities banker's receipts	- Lecture method .PPT presentations on precautions	- students understand the different types of loans facilities available in the bank - students understand what precautions a banker will take before advancing the loans	- Group discussions . Test on the topics covered : oral / written
IV.	**types of banks :** - co operative banks - district co operative banks - land development banks - regional rural banks - national bank for agriculture and rural development and central bank : need and its importance - objectives and functions of central bank - critical crossing of central bank and its working	-Lecture method -PPT presentations	- students understand the different types of banks - students understand the functions and importance of central bank	-Group discussions . Test on the topics covered : oral / written - they were given an assignment to write on different banks - private and public
V.	**negotiable instruments :** - characteristics and types of negotiable instruments - promissory note and bill of exchange - cheques - crossing and types of crossing - endorsement : its types - duties and responsibilities of paying banker and collecting banker - consequences of wrongful dishonour mortgage - types	-Lecture method .PPT presentations	- students understand about the different types of negotiable instruments students understand about cheques and how to cross a cheque	- Group discussions - Test on the topics covered : oral / written - knowledge on crossing of cheques - knowledge on wrongful dishonour of cheque

References (Book / ICT / Weblinks):

. **financial services - banking and insurance** - mithani , d.m., and gordon 2013

banking theory and practice - 9th revised edition , dr. srivastava .p.k., 2003

https://www.newindianexpress.com/expressdeals/services/how-to-open-a-bank-account-in-india-online-and-offline/302.html#:~:text=You%20must%20complete%20the%20form,or%20Aadhar%20card%20is%20required.

https://www.bankbazaar.com/ifsc/list-of-merged-public-sector-banks-in-india-2021.ht

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –2024 SEMESTER – III

Department: B.COM (HONS) STRATEGIC FINANCE Class & Section: NCSF **Course Code: SF23301**

Name of the Faculty Member: Ms. Thakur Satya Priya **Course Title: Financial Reporting**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Financial statements :** - Income statements - statement of comprehensive income - statement of changes in equity - statement of cash flows	-Marker and white board - Lecture method	-Students will be able to prepare financial statements -Students will be able to understand the different types of statements	-Test on topics covered - oral and board test
II.	**Asset valuation :** - Fair value standards and measurements - Accounts receivable , inventory - Investment in marketable securities , property , plant and equipment - Depreciation methods - Impairment - Intangible assets - Deferred tax assets and leasehold assets	-Marker and white board - Lecture method	- Students will be able to understand how to value the asset - Students will be able to understand different types of depreciation	-Test on topics covered - oral and board test
III.	**Valuation of liabilities :** - Current liabilities - Contingencies - Long term liabilities	-Marker and white board - Lecture method	- Students will be able to understand different types of liabilities - Students will be able to	-Test on topics covered - oral and board test

	- Bonds payable - Warranties - Off balance sheet financing - Deferred tax liabilities , lease liabilities		develop conceptual understanding on off balance sheet financing	
IV.	**Equity transaction :** - paid in capital - retained earnings - accumulated other comprehensive income - stock dividends - stock splits - stock options	- Lecture method - group discussions	- students will be able to develop conceptual understanding on equity transactions - students understand about different types of stocks	-Test on topics covered - oral and board test -assignments on topics covered
V.	**revenue recognition :** - principles of revenue recognition - percentage of completion versus completed contract method - major difference between us gaap and ifrs	- Lecture method - group discussions	- students will be able to recognise revenue recognition principles - students will be able to understand how to prepare financial statements according to gaap and ifrs -	-Test on topics covered - oral and board test -assignments on topics covered

.ist of References (Book / ICT / Weblinks) :

cmexcel learning system part 1 : financial reporting , planning , performance and control

stripe.com/in/guides/introduction-to-revenue-recognition#:~:text=Revenue%20recognition%20is%20an%20aspect,is%2

ed%20(cash%20accounting).

corporatefinanceinstitute.com/resources/accounting/ifrs-vs-us-gaap/

Name of the faculty member & Signature:

Approved by Head of the Department:

OYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year

2023–2024 SEMESTER-I

Department: B.Sc.Computer Science&Cognitive systems **Class &Section:ASF** **CourseCode:BC22003**

Name of the Faculty Member: K Nandini **Course Title: Fundamentals of Information Technology**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Computers 1. Definition - Characteristics and limitations of computers 2. Block diagram of a computer, CPU 3. Primary and secondary storage 4. Input and output devices Data Representation and Storage 1. Data representation in computers, bits and bytes 2. Number systems (Binary, Octal and Hexadecimal) 3. Conversion from decimal to binary, octal, hexadecimal and vice versa 4. Secondary storage 5. Random Vs Sequential access, Tracks and Sectors 6. Storage characteristics 7. Increasing data storage capacity through compression (disk compression and file compression)	Lecture based using Power point presentations etc	Understand basic computer terminology and number systems.	Conducted Group Discussion on latest technologies,Applications and use of Technology in todays generation.

II.	Operating Systems 1. Meaning, Definition, Functions 2. Types of operating systems: Desktop OS, Server OS, Mainframe OS, Hand-held OS & Embedded OS 3. Multi Tasking and Multi threading 4. Multi User multi processor support 5. Miscellaneous tasks 6. Batch Processing systems 7. Real time systems, Time sharing systems User Interfaces 1.GUI, Pen based, Touch Screen & Conversational interfaces 2. Common Operating Systems: DOS, Windows 95/98 and UNIX	Collaborative Group work and used ICT tools	Learn about operating systems, and its types.	Conducted Computer based test
III.	Applications of Information Technology 1. Application programs 2. Horizontal Market Applications, Vertical Market Applications 3. Customs Applications, Shareware and Public domain software Transaction Processing 1. Centralized transaction processing 2. Client Server software, Distributed computing and Replication 3. Information tools for management control: DSS, EIS, GIS, OLAP 4. Data Warehousing and Data Mining IT in Business and Industry 1. Home and at play, Education and Training, Entertainment and Arts 2. Science, Engineering and Math, Computers in hiding IT Enabled Services	Lecture Method using ICT Tools	Learn about the applications of Information technology	Conducted Quiz

	1. BPO, KPO & Call centers			
IV.	Systems Development 1. The six phases of Systems Analysis & Design The challenges of Digital Age 1. Security issues: Threats to Computers & Communications 2. Security: Safeguarding Computers & Communications 3. Quality of Life Issues 4. The ethics of using databases: concerns about accuracy & privacy 5. Five generations of programming languages	Real world case studies	Importance of system development and the phases of SDLC	Conducted Seminars
V.	Modern Communications 1. Communications, FAX 2. Voice Mail and Information Services, Email Group Communications 1.News groups, Mailing lists, IRC, Network games 2. Video conferencing 3. File exchange, bandwidth 4. Modem, Network topologies 5. Network Types – LAN, MAN and WAN 6. Dialup Access	Interactive Multimedia Presentations	Use of modern means of communications, types of networks and topologies	Conducted Viva

List of References (Book/ICT/ Weblinks):

1. Computer Fundamentals, Concepts, Systems and Applications. 4 th edition. BPB Publications
2. Bharihoke Deepak. 2000. Fundamentals of Information Technology. 2 nd edition. Excel books

Name of the faculty member & Signature: K Nandini
Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER V

Department:CSF **Class&Section:DCSF** **CourseCode: SF18505**

Nameofthe FacultyMember: Bhanu sree S **CourseTitle: Database management systems**

Unit	Topics to be covered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction, data base applications ,ddl ,dml, database designs, entity relationship model, extended er,Constraints, attribute inheritance , chareteristics advantages	Oracle sql, ppts.flow charts, diagrams, ict tools	Represent logical database using ER and enhanced ER model, importance of ER in back ends	Quiz,SolvingProblemsusing sql, write and excueting queries
II.	Relational model, Reduction to schema,normalization 1NF,2NF,3NF,BCNF.set operators,aggregate functions,joins,views,relational algebra, modification of database, anomalies..	Sql, ppt ,real world examples of an application ,ict tools	Formulate database using relational algebra and organize relation using normalization	Assignment , joining the tables and organizing using sql.
III.	Introduction, programming , functions and procedures , triggers , cursors, roles, authorization on views, functions and application security , scalar functions , granting privileges	Ppt ,ict tools	Design sql, queries and implement PL/SQL	Group discussion on triggers and importance of authorization, developing codes using pl/sql
IV.	Physical storage media , magnetic disks, buffer manger , replacement policies, file organization ,hash function , dynamic hash function , comparison b , b+ trees	PPT, architecture of storage media , flow charts	Classify the storage and file structure , storage access , indexing and hashing techniques of the data base	Class activity on tree traversal, hash function and its working

Internal Quality Assurance Cell 2023-2024
2023-2024

V.	Transcations, serializabity recoverability, testing for serializability , concurrency control, lock based protocols, recovery system , storage structures, recovery and atomicity , log based recovery , check points , dead lock handling .	PPT, usage of transctions via upi apps	Explain the concept of transcations , recovery system and concurrency control	Presentations on concurrency control, viva voice on transcation concepts

Listof References (Book/ICT/ Weblinks):

1. Korth Henry, Database system concepts 6th edition
2. Bayross Ivan 2010 SQL, PL/SQL the programming language for Oracle
3. https://www.youtube.com/@education4uofficial

Nameofthefacultymember&Signature: S. Bhanu Sree

Approvedby HeadoftheDepartment: M. V. B Sailaja.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- V

Department: B.Com Honours Strategic Finance	**Class & Section: DCSF**	**Course Code: SF 18503**
Name of the Faculty Member: Dr K. Gopi Krishna		**Course Title: Entrepreneurial Development.**

Unit	Topics to be Covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Entrepreneurship** Entrepreneurship – Meaning, Definition of Entrepreneur- Entrepreneurship, Characteristics, Classification and Functions of an Entrepreneur- Entrepreneurs VS Entrepreneurship- Entrepreneurial Environment, Women Entrepreneurs- Concept, Support and assistance, Problems and measures- Role of Entrepreneur in Economic Development. **(12 hours)**	Lecture Method and PPT	To understand the basic concepts of Entrepreneurship and women entrepreneurs in India.	Activity conducted for Students to identify the problems in India and the ways to solve problems through entrepreneurship.
II.	**Entrepreneurship Development & Training** Entrepreneurial Development & Training- Meaning, Need and Objectives of EDP, Entrepreneurial Training- Meaning, Importance, Objectives and Methods, Institutions Assisting entrepreneurs, Financial assistance to entrepreneurs, Types and Sources of Finance **(12 hours)**	Lecture Method	To make the students to aware of various training programs offered in India and facilitate easy and smooth functioning of companies.	Problem Solving

III.	**Project Identification and Report** Project- Meaning and Definition- Project Classification- Project Identification and its Importance- Project Formulation – Concepts, Need and Significance- Project Feasibility and its aspects- Contents, Reasons for Project Report Failure, Review Techniques- PERT and CPM. **(12 hours)**	Lecture Method	Students will be learned to prepare various projects for the companies.	Skill in Formulating Projects.
IV.	**Factory Design and Standardization** Factory Design & layout- Meaning, Importance and Factors affecting factory design. Factory Layout- meaning, considerations in factory layout, Standardization- meaning, objectives, types and advantages/importance, Quality control- meaning and importance. **(12 hours)**	Lecture Method	To familiarize the students to know and understand the various aspects of factory design & layout and quality control in Indian Companies.	Problem Solving
V.	**Small Scale Industry** Small Scale industries—Concept, Meaning and Definition- Classification and Characteristics- Difference between Large Scale and Small Scale Industries- Financial Schemes and policies for SSI- Problems of SSI- Sickness of small Scale industries , reasons and remedies. **(12 hours)**	Lecture Method	Students will be able to learn the difference between small and large scale companies in India.	Problem Solving.

List of References (Book/ICT/ Web links):

1. Vasanth Desai, 2010. The Dynamics of Entrepreneurial Development & Management, Himalaya Publishing Home Pvt.Ltd: Mumbai.
2. Gordon, E and Natrajan, K. 2009, Entrepreneurship Development, Himalaya Publishing Home Pvt.Ltd: Mumbai.
3. Vasanth Desai, Khanka SS, 2012, Small Scale Industries and Entrepreneurship, Sultan Chand Sons: New Delhi.

Name of the faculty member & Signature: Dr K. Gopi Krishna — KGK

Approved by Head of the Department: M.V.B Sailaja Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- III

Department: B.Com Honours Strategic Finance	**Class & Section: NCSF**	**Course Code: SF 23302**
Name of the Faculty Member: Dr K. Gopi Krishna		**Course Title: Financial Decision Making**

Unit	Topics to be Covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Financial Statement Analysis** Common Size financial statements- common base year financial statements- financial ratios (Liquidity, Leverage, Activity, Profitability, Market)- Profitability Analysis (Income Measurement Analysis, Revenue Analysis, cost of sales analysis, expense analysis, variation analysis)- Impact of Foreign Operations- Effects of changing prices and inflation- off balance sheet financing- impact of changes in accounting treatment- Accounting and economic concepts of value and Income- Earnings Quality. **(15 hours)**	Lecture Method	Students will be able to understand common size financial statement and various financial ratios.	Problem Solving
II.	**Financial Management** Calculating return- Types of Risk- Relationship between risk and Return- Term structure of interest rates- types of financial instruments- cost of capital- valuation of financial instruments. **(15 hours)**	Lecture Method	Students will be able to identify the relationship between risk and return and utilize the knowledge of long term financial management.	Problem Solving

III.	**Raising Capital** Financial markets and regulation- Market Efficiency- Financial Institutions- Initial and Secondary Public Offering- Dividend Policy and Share repurchase – Lease Financing. **(15 hours)**	Lecture Method	Students will be able to examine financial markets and regulations and analyze working capital management.	Skill in identifying IPOs of Indian Companies.
IV.	**Working Capital Management** Working Capital Terminology- Cash Management- Marketable Securities Management- Accounts Receivable Management- Inventory Management- Types of Short Term Credit- Short Term Credit Management. **(15 hours)**	Lecture Method	To familiarize the students to know and understand the various aspects of working capital.	Preparing Working Capital for Indian Companies.
V.	**Corporate Restructuring and International Finance** Mergers & Acquisitions – Bankruptcy- Other forms of restructuring – Fixed, Flexible and Floating exchange rates- Managing Transaction exposure- financing international trade- Tax implications of transfer pricing. **(15 hours)**	Lecture Method	Students will be able to learn the concepts of merger and acquisitions in Indian scenario and corporate restructuring.	Decision Making Skills.

List of References (Book/ICT/ Web links):

1. Wiley CMA excel Learning System, Part 2: Financial Decision Making.
2. Gibson, Charles H., Financial Reporting and Analysis, 13th Edition, South-Western Cengage Learning , Mason, OH, 2013.
3. Van horn, James, C and Wachowicz, John M. jr., Fundamentals of Financial Management, 13th edition, FT/Prentice Hall, harlow, England,2009.

Name of the faculty member & Signature: Dr K. Gopi Krishna

Approved by Head of the Department: M.V.B Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- I

Department: B.Com Honours Strategic Finance	**Class & Section: ACSF**	**Course Code: SF 22101**
Name of the Faculty Member: Dr K. Gopi Krishna		**Course Title: Financial Planning & Performance**

Unit	Topics to be Covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Strategic Planning** Analysis of external and internal factors affecting strategy- Long term mission and goals- Alignment of tactics with long term goals- Strategic Planning models and analytical techniques- Characteristics of successful strategic planning process. **(15 hours)**	Lecture Method and PPT	To understand the basic concepts of strategy and strategic planning, budgeting, models and techniques.	Conducted Subject Puzzle
II.	**Budgeting Concepts and Methodologies** Operations and Performance goals- Characteristics of a successful budget process- Resource Allocation- Forecasting techniques(Regression Analysis, Learning Curve Analysis, Expected Value)- Annual Business Plans(Master Budget), Production Budget, Cash Budget, Materials Budget, Project Budgeting, Activity based budgeting, Zero based Budgeting, Continuous (Rolling) budgets- Flexible budgeting.(Problems) **(15 hours)**	Lecture Method	To make the students to aware of various budgeting concepts and classify the forecasting techniques and demonstrate the budget.	Problem Solving

III.	**Top Level Planning and Analysis** Annual Profit Plan and Supporting Schedules- Operational Budgets- Financial Budgets- Proforma Income- Comparative and Commonsize Financial Statement Analysis- Cash flow Statements. **(15 hours)**	Lecture Method	Students will be able to make use of budgets to prepare an annual profit plan.	Problem Solving
IV.	**Cost and Variance Measures** Comparison of Actual to Planned results- Use of Flexible budgets to analyse performance- Management by Exception- Problems on Material, Labour and overhead variances Use of Standard Cost system- Analysis of Variation from Standard Cost Expectations. **(15 hours)**	Lecture Method	To make the students to know about importance and uses of standard cost systems.	Problem Solving
V.	**Performance Measures** Product Profitability Analysis- Business Unit Profitability Analysis- Customer Profitability Analysis- Return on Investment- Residual Income- Investment Base issues- Key Performance Indicators- Balanced Scorecard- Responsibility Centres and reporting segments. **(15 hours)**	Lecture Method	Students will be able to propose performance measures and discuss Key performance indicators.	Conducted Test

List of References (Book/ICT/ Web links):

1. Wiley CMA Excel Learning System, Part- 1: Financial Reporting, Planning, Performance & Control.
2. Wheelen, Thomas L.,et., Strategic Management and Business Policy: Globalization, Innovation and Sustainability, 14th Edition, Prentice Hall, Upper Saddle River, NJ, 2014.
3. Shashi K. Gupta and R. K. Sharma, Management Accounting- Principles and Practice, 13th Revises Edition, kalyani Publishers.

Name of the faculty member & Signature: Dr K. Gopi Krishna

Approved by Head of the Department: M.V.B Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:B. Com(BS) **Class &Nsf Section:** **Course Code:Bc23011**

Name of the Faculty Member:P.Sudha rani **Course Title:company law**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Definition of company, nature, characters, objective, incorporation Doctrine of indoor management.	Smart board	To develop knowledge of company	Quiz
II.	Kinds of companies issue of prospectuscontents issue if shares, bounsshares right shares share capital reduction alteration	Live example through stock exchange	To describe the structure of company	Model making
III.	Borrowing power debentures ultra bored registration of charge debentures types	Audio visual method	To know borrowing Powers of company	Word buzz
IV.	Company mgmt directors appointment removalmanagerial remuneration power duties meeting kinds notice agenda quorum, proxy.	Smartboard	To know various provisions of company regards meeting	Pilot project
V.	Reconstruction amalgamation winding up meaning modes by court consequences of winding up.	Smart board	To know various modes of winding up.	Pictionery

List of References (Book / ICT / Weblinks):

1)kapoor ND 2018 element of company law

2)Garg k Darren 2004 company law

1. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature: P. Sudha Rani

Approved by Head of the Department: Bairavi

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)
Teaching PlanfortheAcademicYear2023–2024
SEMESTER- III

Department:B.Com Honours SF **Class & Section: NCSF** **Course Code: SEC22303**

Name of the Faculty Member:
Rev Father Arul Jothi SJ

Course Title :Professional Skills

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Unit-I: Concepts of Communications Introduction: Definition and Process of Communication - Forms of Verbal and Non- verbal Communication. Barriers of Communication: Communication Barriers and Overcoming Communication Barriers - Guidelines for Effective Communication. Exercise: Role Play, Square Talk Activity.	Lecture Method	To learn about the aspects of communication and strategies in order to be able to communicate effectively.	• Exercise: Role Play, Square Talk Activity.
II.	Unit II: Language for Professional Competency. Active and Passive Voice. Articles. Subject- Verb Agreement. Exercise: Grammar Exercises for effective speaking and writing for business correspondence	Lecture Method	To learn about the grammatical concepts in English language, to communicate correctly and effectively.	• Exercise: Grammar Exercises for effective speaking and writing for business correspondence
III.	Unit-III: Oral Communication Power Point Presentation: Planning the Presentation - Delivering the Presentation - Developing & Displaying Visual Aids. Listening: Definition - Types of Listening Skills - Features of a Good Listener - Causes and effects of Poor	Power Point Presentation	To develop presentation skills and listening skills; skill sets which are considered pivotal in business scenarios.	• Exercise: Elocution and Extempore

	Listening. Exercise: Elocution and Extempore			
IV.	Unit-IV: Behavioural Techniques Body Language: Facial Expressions - Body Posture - Gestures - Eye Movement - Touch and the use of Personal Space. Business Attire and Grooming: Different types of Attire - Guidelines for Business Attire. Exercise: Power of Body Language, Charades.	Power Point Presentation and Lecture Method	To learn about body language and grooming etiquettes in order to demonstrate the same in business scenarios.	• Exercise: Power of Body Language, Charades.
V.	Unit-V: Etiquettes Etiquettes: Greeting Etiquette - Corporate Etiquette - E-mail Etiquette - Meeting Etiquette - Social Etiquette. Exercise: Introduction and Art of Conversation, Telephonic Activity.	Power Point Presentation and Lecture Method	To help the students equip themselves with certain etiquettes, which would in turn help demonstrate efficient social skills in the business domain.	• Exercise: Introduction and Art of Conversation, Telephonic Activity.

Listof References (Book/ICT/ Weblinks):

1. Foundations of Professional Communication Developed by JR Dingwall, Chuc Labrie, TK McLennon, and Laura Underwood for Old College Edited by Vesna Mirkovich
2. Soft Skills and Personality Development, this e-book is authored by CA. M K Sridhar.
   Published by The Institute of Chartered Accountants of India
   Southern India Regional Council, Chennai. First Edition March 2022.
3. The Handbook of Communication Skills Edited by Owen Hargie Fourth Edition published in 2019 by Rout ledge
   2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN
   And by Rout ledge 711 Third Avenue, New York, NY 10017

Name of the faculty member & Signature:

Rev Father Arul Jothi SJ-

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024 SEMESTER

Department: ACM\ACSF\ACBA **CourseCode:BE 23101**

Class&Section: ACM\ACSF\ACBA

Nameofthe FacultyMember:G.R.Nikitha **CourseTitle:BUSINESS ENGLISH**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Structure and Layout of Letters, Quotations, Orders & Tenders(9Hrs)** Elements, forms and style of letters (3) Inviting and sending quotations (4) Placing orders (2)	Lecture Method	1. Students will be to identify elements, forms and style of letters. 2.They will be to write quotations related to inviting, sending and placing orders.	Practicing different types of Business Letter and Quotations
II.	**Sales Letters (9Hrs)** Qualities and Functions of a Sales letter (2) Format of a Sales letter (3) Specimen Sales letter (4)	Lecture Method	1.Students will be to identify qualities and functions of a Sales Letter. 2.Students will be to write the format of a Sales Letter.	Practicing situational questions
III.	**Memorandum, Notices, Agenda and Minutes (9Hrs)** Functions and structure of a memorandum (1) Types of memorandum (1) Specimen memorandum (1) Format of Notice, Agenda and Minutes (3)	Lecture Method	1.They will also be able to understand and write the functions, structure and types of Memorandum. 2.Students will be to understand and write the format of notice, agenda and minutes	Revising the concepts related to different types of memo, notice, agenda and minutes.

IV.	**Telephone Etiquettes in Business Communication (9 Hrs)** Telephone Etiquettes in Customer Service (4) Texting Etiquettes (2)	Lecture Method	They will be able to understand the guidelines for answering and making effective telephone calls.	Assignment on do's and dont's of telephone and texting etiquettes
V.	**Reading Comprehension (9Hrs)** Strategies for reading comprehension (2) Aspects of efficient reading (1) Speed, accuracy skimming, scanning and proof reading (1) Factual comprehension (1) Specimen comprehension (1) Commonly confused/misused words (3)	Lecture Method	1.Students will use the strategies for reading comprehension and understand the aspects of efficient training. 2.They will also have a better understanding of scanning and proof reading of comprehension.	Practicingspecimen comprehension

Listof References (Book/ICT/ Weblinks):

ESSENTIAL READING:

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.

SUGGESTED READING:

1. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.
2. Gruscendorf, Marion. 2007. **English for Presentations**. U.K: Oxford Publication Oxford.
3. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.
4. Rai, Urmila., and Rai, S.M. 2002. **Business Communication**. Mumbai: Himalaya Publishing House.

Nameofthefacultymember&Signature:
G.R.Nikitha,

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-Mid Sem-1

Department: Strategic Finance **Class: DCSF** **Course Code:**

Name of the Faculty Member: Dr. Banka Kumar Raja **Course Title: Corporate Governance & Business Ethics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Values Values-Importance- Sources of value systems. Types-Values, Loyalty. Ethical Behavior. Values across cultures. Business Ethics-Nature- Characteristics and need. Ethical Practices in Management	Lecture method and Using PPT	Identify and explain the importance of values and ethics	Group presentation.
II.	The Ethical Value System Universalism Theory- Utilitarianism Theory. Distribution Justice Theory- Social Contracts Theory. Individual Freedom of Choice- The Concept. Ethical Values in culture. Relation Between Culture and Individual Ethics	Lecture method and Using PPT	Analyze and interpret the various theories of ethical value system	Quiz presentation.
III.	Law and Ethics Meaning of Law and Ethics- Relationship between law and ethics. Other bodies in enforcing ethical business behavior (Corporate, Government, Financial institutions and NGO). Fair Trade Practices. Fulfilling all national obligations under various laws(Implementation of government Act and Policies). Safeguarding of health and well being of the customer (Marketing)	Lecture method and Using PPT	Point out the relationship between law and ethics and understand the business	Seminar presentation.
IV.	Corporate Governance Meaning of corporate governance-Issues and need. Corporate Governance Code-Transparency and disclosure practices. Role of Directors- Share holders-Auditors.	Lecture method and Using PPT	Explain the corporate governance codes, transparency and disclosure practices	Debate presentation.
V.	Global Issues of Governance Global Issues of Governance. Accounting and regulatory framework-Corporate Scams. Committees in India and abroad dealing with corporate governance. Corporate Social Responsibility	Using PPT	Identify and point out the global issues of governance	Weekly tests.

List of References (Book / ICT / Weblinks):

1) Fernando A.C. 2012 Business Ethics. (Eighth Edition)
2) Murthy. C.S.V. 2004. Business Ethics (First Edition)
3) Francis Cheruniliam. 2011. Business Ethics and Government (12th Edition). Himalya Publishing House
4) Laura Hartman.P.2008. Business Ethics Tata Mcgraw Hill. New Delhi
5) Ghosh.B.N.2014. Business Ethics and Corporate Governance (3rd reprint).Mcgraw Hill Education (India): New Delhi
6) Dr. Khanka S.S 2014. Business Ethics and corporate Governance (Principles and Practices) (1st Edition). S. Chand and Co. Pvt.Ltd: New Delhi
7) Manual Velasqueez, G. 2003. Business Ethics (Concepts and Cases) (5th edition, 2nd Reprint)PearsonEducation Ltd.India: New Delhi

Approved by Head of the Department:

Mrs. M.V.B. Shailaja

Name of the faculty member & Signature:

Dr. Banka Kumar Raja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: B.Com.(Hons) Strategic Finance **Class & Section: ASF** **Course Code:23101**

Name of the Faculty Member:Dr.K.Musalaiah **Course Title: Indian Heritage and Culture**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian Customs and Traditions	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval Indian history and medieval Culture	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about historical, Social, religious and political issues of the nation.	Group presentation
IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions and democratic system of India	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about human Rights, tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr.K.Musalaiah – Dr. K. Musalaiah.

Approved by Head of the Department:

Mrs.MVB.Sailaja

Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -V

Department: DSE-1 **Class & Section: DSE/DCH** **Course Code: BC18013**

Name of the Faculty Member: Sweta Rao **Course Title: Marketing Management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Marketing** Concept of marketing-evolution-definition Nature and Scope, Marketing management tasks, Marketing concept as applied to marketing management, Significance of marketing in profit and nonprofit organization, Marketing process	PPT Presentation	Explain the concept of marketing and sketches the marketing environment.	Scenario based learning
II.	**Marketing Environment** Micro environment – meaning, Factors influencing micro environment-company consumers-competitors-suppliers-marketing intermediaries, macro environment-meaning, factors influencing macro environment-cultural/ social environment- demographic environment-physical/ natural-legal/political-economic-technological environment, SWOT analysis with reference to India	PPT Presentation and Chalk and Board	Classifies the market and identifies the various market segments.	Practical learning experience, personal SWOT analysis
III.	**Marketing Mix Elements** **Product** Definition of product- levels of product-classification of products	PPT Presentation	Point outs the marketing mix with reference to product and price.	Group discussion

List of References (Book / ICT / Weblinks):

1. Kotler Philip, Gary and Armstrong, **Principles of Management**, 13th Edition. New Delhi: Ehsan UI Haque Publications.
2. Sherlekar, S.A. 2011. **Marketing Management.** 13th Revised Enlarged Edition. Mumbai: Himalaya Publications.
3. Karunakaran, K. **Marketing Management.** 3rd Revised and Enlarged Edition.
4. Swamy, Rama V. and Namakumari, S. 2002. **Marketing Management.**
5. Puneet singhbhatia **Fundamentals of digital marketing**

Sweta Rao

Name of the faculty member & Signature:

Kavitha

Approved by Head of the Department

Sridevi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

ODD SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section: ACSF** BC23_002

Name of the Faculty Member: M.V.B.Sailaja **Course Title: Financial accounting**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Need for accounting — definition • Meaning – features – objectives • Functions – systems and bases and scope of accounting • Books keeping and accounting – branches of accounting – advantages – limitations • Basic terminology used – accounting concepts an conventions • Accounting equation • Classification of accounts – rules of double entry system • Journalizing – posting to ledgers – balancing of ledgers • Introduction to Accounting Standards – definition, meaning, List of Accounting Standards, Accounting Standards Board (ASB)	Lecture Method EXPLAINATION THROGH CHALK AND TALK PRESENTATION USING ICT Using software Tally p	Students will learn the basics of accounting terms and objectives of accounting	Quiz, Solving Problems using the basic accounting knowledge
II.	bank columns and petty cash b**Subsidiary Books** • Subdivision of journal – preparation of subsidiary books • Different types of cash book –	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn the meaning of subsidiary books and preparation.	Quiz, Solving Problems using the basic accounting knowledge

	simple cash book, cash book with cash and discount • Columns bank columns – cash book with cash discount and • Cash book with cash and ook.			
III.	**Bank Reconciliation Statement** • Bank reconciliation statement – need – reasons for difference between cash book • and pass book balances • Simple problems on favourable balance • Simple problems on overdraft balances • Ascertainment of correct cash book balance	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn reconciliation between cash book and pass book balances.	Quiz, Solving Problems using the basic accounting knowledge
IV.	**Trial Balance and Final Accounts** • Trial balance – meaning – objectives • Methods of preparation • Final accounts – preparation of manufacturing, trading, profit & loss account and Balance Sheet	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn preparation of final accounts of traders	Quiz, Solving Problems using the basic accounting knowledge
V.	**Errors and Rectification** • Errors and their rectification • Types of errors • Rectification before and after preparation of final accounts • Suspense account – effect of errors on profit	Lecture Method PRESENTATION USING ICT Using software Tally p	Students learn to rectify the errors using accounting entries.	Quiz, Solving Problems using the basic accounting knowledge

List of References (Book / ICT / Weblinks)

SP JAIN &NARANG Kalyani Publishers 2019

Himalaya publishing house

Name of the faculty member & Signature:

M.V.B.Sailaja Sailaja

Approved by Head of the Department:

M.V.B.Sailaja Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department:

Class & Section: DSE (DCH)(DSF)

Course Code:BC18028

Name of the Faculty Member: M.V.B.Sailaja

Course Title: ADVANCED CORPORATE ACCOUNTING

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Preparation of consolidated Balance sheet (4) Cancellation of investment account (2) Minority Interest-cost of acquiring control or goodwill – capital reserve (3) (Simple problems on calculation of m**The accounts of Holding companies-I** Nature of holding companies, legal requirements for a holding company (1) Schedule III of the companies Act and subsidiary companies (2) inority interest, goodwill)	Lecture Method using ICT Tools. EXPLAINATION USING CHALK AND TALK	To Learn about the preparation of accounts of Holding companies	Quiz, Solving Problems .
II.	Realization of Assets **The accounts of Holding Companies-II**	EXPLAINATION USING CHALK AND TALK	To Learn about the preparation of accounts of Holding companies and learn meaning of Bonus shares	Quiz, Solving Problems .

	Preference share capital in Subsidiary Companies (1) Debentures in Subsidiary Companies (1) Pre-acquisition Profits/Reserves (1) Pre-acquisition Losses (1) Inter-company Transactions (2) Unrealized Profit on Stock Contingent liabilities (2) (1) Bonus shares (Excluding: Treatment of dividend received from subsidiary Company-goodwill in the Balance Sheet of a subsidiary company-Proposed dividend-Interim dividend by Subsidiary Company) (1) Problems on Holding Companies	Lecture Method using ICT Tools.		
III.	**Accounting of Electricity Companies (Double-Accounting System)** Meaning of Double Accounting System Revenue Account and Net-Revenue Account (1) Capital Account (Receipts and Expenditure on Capital) and General Balance Sheet (2) Replacement of an Asset Important provisions of Indian Electricity Act 1910,	EXPLAINATION USING CHALK AND TALK Lecture Method using ICT Tools.	Students learn double accounting system and preparation of accounts as per statutory requirements.	Quiz, Solving Problems .

	Electricity Supply Act 1948 and Companies Act 1956 Formats of Relevant Accounts (2) Calculation of reasonable Return and Disposal of Surplus Preparation of Net Revenue Account and Balance Sheet (3) (Including problems) Problems on Electricity Companies			
IV.	**Lease Accounting**: - Introduction-Accounting for finance leases-Books of Lesser & Lessee (4) Accounting for operating leases-Accounting for Sale & Lease back-Leading to finance lease-Accounting for Sale & Lease back- Leading to Operating lease	EXPLAINATION USING CHALK AND TALK Lecture Method using ICT Tools.	Students learn the concept of Lease and methodology of lease accounting.	Quiz, Solving Problems .
V.	**Liquidation of Companies 12Hrs** Liquidation of Companies (1) Meaning of Liquidation-Compulsory and Voluntary Liquidation (1) Liquidators Remuneration (2) Statement of Affairs (2) (2) Deficiency accounts as per List 'H' (2) Liquidators Final Statement Problems on Liquidation	EXPLAINATION USING CHALK AND TALK Lecture Method using ICT Tools.	Students learn how to liquidate a company and the procedure as per law.	Quiz, Solving Problems .

List of References (Book / ICT / Weblinks):
SP JAIN &NARANG KALYANI PUBLISHERS 2020 PUBLICATION
PRABHAKAR AND SHARMA ,HIMALAYA PUBLISHING HOUSE
Name of the faculty member & Signature:

M.V.B.SAILAJA Sailaja

Approved by Head of the Department: M.V.B.SAILAJA Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – III

Department: B.Com(Strategic Finance) **Class & Section: NCSF** **Course Code:** SEC22302

Name of the Faculty Member: B Venkataratnam **Course Title: B.Com(Strategic Finance)**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Electronic Commerce • Electronic Commerce Framework – electronic commerce and media convergence • The anatomy of E-Commerce applications • Electronic commerce consumer applications • Electronic commerce organization applications Electronic Commerce and World Wide Web • Architectural framework for electronic commerce • World Wide Web (WWW) as the architecture • Web background • Hypertext publishing • Technology behind the web • Security and the web **(6 Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the E-Commerce 1. Frame work 2. Applications 3. World wide web 4. Hyper Text Publishing	Quiz
II.	• Consumer – oriented applications • Mercantile process models • Mercantile models from the consumer's perspective • Mercantile models from the merchant's perspective Electronic Payment System • Types of electronic payments • Digital token-based electronic payment	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. Consumer – oriented applications 2. Mercantile models 3. Types of electronic payments 4. Risk and electronic payment systems	Seminar

	systems • Smart cards and electronic payment systems • Credit card-based electronic payment systems • Risk and electronic payment systems **(6 Hrs.)**			
III.	EDI Implementation, MIME and Value Added Networks • Standardization and EDI • EDI Software Implementation • EDI envelope for message transport • Value Added Networks (VANs) • Intra-Organizational Electronic Commerce • Internal information systems • Macro-forces and internal commerce • Work flow automation and co-ordination • Customization and internal commerce • Supply chain management **(6 Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. EDI Implementation 2. MIME and Value Added Networks 3. Intra-Organizational Electronic Commerce 4. Value Added Networks (VANs) 5. EDI envelope for message transport	Group Discussion
IV.	The Corporate Digital Library • Dimensions of internal electronic commerce systems • Making a business case of document library • Types of digital documents • Issues behind document infrastructure Advertising and Marketing on the Internet • The new age of information – based marketing • Advertising on the internet • Charting the on-line marketing process • Market research **(6 Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. The Corporate Digital Library 2. The new age of information – based marketing 3. Advertising on the internet 4. Charting the on-line marketing process 5. Market research 6. Types of digital documents 7. Dimensions of internal electronic commerce systems	Seminar
V.	Consumer Search and Resource Discovery • Search and resource discovery paradigms • Information search and retrieval	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. Consumer Search and Resource Discovery 2. Demand Education and Digital Copyrights	Group Discussion

	• Electronic commerce catalogues or directories • Information filtering, consumer On Demand Education and Digital Copyrights • Computer based education and training • Technological components of education on demand • Digital copy right and E-Commerce. **(6 Hrs.)**			

List of References (Book / ICT / Weblinks):

1. Kalkota, Ravi. Whinstone,Andrew B. Frontiers of Electronic Commerce. International Student edition. 2009 Impressed edition. New Delhi: Pearson Publication.
2. Treese, G. Winfield and Stewart, Lawrence C. 1998. Designing Systems for Internet Commerce. Low priced edition. Addison-Wesley-Tokyo Publication

Name of the faculty member & Signature: B Venkataratnam

Approved by Head of the Department: **Shailaja**

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section:DCSF** **Course Code: BC18502**

Name of the Faculty Member: **Mrs. Hilda Margreat** **Course Title: Business Law**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Contract Act - Agreement and Contract -Offer and Acceptance -Consideration - Capacity to contract -Consent	-Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Demonstrate an understanding of the legal environment of the business.	Group discussion, Case studies.
II.	Discharge of Contract -Legality of Object and Consideration. -Agreement which expressely declared to be void -Discharge of contract	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Explain legality of object and consideration, dischargeof a contract and remedies.	Group discussion, Case studies.
III.	Sale of Goods Act -Contract of Sale -Difference betwwen Sale and Agreement to sell -Conditions and warranties	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Identify the recognation of transactions involving the sale of goods Act.	Group discussion, Case studies.
IV.	Consumer Protection Act - Definitions of the terms. -Rights of Consumer -Consumer Redressal Agencies	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	Dramatise the application of consumer protection Act.	Group discussion, Case studies.

V.	Intellectual Property Rights and Informations Technology Act. -Intellectual Property Rights -Informations Technology Act. -Right to Information Act	- Lecture Method - Explaination through chalk and talk. - Presentation through ICT	To recognise IPR, IT Act and RTI Act.	Group discussion, Case studies.

List of References (Book / ICT / Weblinks):

1. Garg, V.K. Sareen, V.K. Sharma Mukesh and Chawala R.C 2010 Business Law. 7th revised edition. 2013 reprint. New Delhi: Kalyani Publication
2. Kapoor N.D 2009 Elements of Mercantile Law. 31st edition
3. Maheshwari, S.N and Maheshwari, S.K 2011. A manual on Business Law.

Name of the faculty member & Signature: Mrs. Hilda Margreat.

Approved by Head of the Department:Mrs. M.V.B.Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

I SEMESTER

Department: B. Com Business Process Management | **Class & Section: ACSF** | **Course Code: BC22001**

Name of the Faculty Member: **Mrs. Hilda Margreat** | **Course Title: Business organization and management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Fundamentals concepts- Concept of business, trade, industry and commerce business- features of business trade classification- aids to trade industry- classification- commerce. Relationship between trade, industry and commerce Business organization concept Functions of business.	White board, Projector, Case studies, Group Discussion	Identify and interpret the various principles of management.	Students created business plans for startup ideas, including market research, financial projections, and marketing strategies.
II.	Business organization forms of business organization classification- factors influencing the choice of suitable form of organization objectives of business essentials of a successful business. Sole proprietorship- meaning- characteristics, advantages and disadvantages and suitability partnership- meaning- characteristics kinds of partners. Registration of partnership deed rights and obligations of partners.	White board, Projector, Case studies, Group Discussion	Explain and demonstrate the uses of planning and organizing.	Students created organizational charts for various types of businesses, demonstrating the hierarchy and reporting structure. This activity helps them understand the roles and responsibilities within different organizational setups.

III.	Joint stock company meaning-characteristics- advantages kinds of companies. Differences between private and public companies promotion of a company stages-promoters characteristics-registration.	White board, Projector, Case studies, Group Discussion	Classify and combine the various techniques of control and coordination.	Explore the historical development of joint stock companies, from their origins to the modern corporation. Discuss how they have evolved and why they are a popular form of business organization.
IV.	Introduction to management-definition- meaning-nature, University of management-Significance of manage- Principle and functions of management-Characteristics- objectives of management- management vs administration- Levels of management- skills of management-Scientific management: meaning-principles- objectives- criticism. Planning meaning- definition-features- importance, Steps in planning, types of plans- limitations of planning organizing- meaning-definition- features- Principles of organization- organization structure, line organization, functional organization, line and staff organization- delegation of authority-meaning- principles- difficulties in delegation- Centralization-decentralization- differences between delegation and decentralization.	White board, Projector, Case studies, Group Discussion	Point out and develop the essence of motivation and direction to the students.	Organize team-building exercises to teach the importance of teamwork and collaboration in management. Debrief the activities to discuss leadership, communication, and problem-solving.
V.	Coordination- Meaning- need-principle and techniques- Span of control- factors determining span of control. Control- meaning- definition-process steps- requisites of a good control system. Motivation- meaning-theories of motivation- Maslow-McCleland and Hetzberg importance of motivation- motivational	White board, Projector, Case studies, Group Discussion	Interrelate and understand the essence of leadership and the importance of communication.	Discussing the importance of leadership theory in real-world situations and how leaders often draw from multiple theories depending on the circumstances

	techniques- Leadership- meaning- importance- styles. Theories of leadership- Trait theory- Behavioral theory- situational theory.			

List of References (Book / ICT / Weblinks):

1. "Principles of Management" by Harold Koontz and Heinz Weihrich
2. "Organizational Behavior" by Stephen P. Robbins and Timothy A. Judge
3. "Marketing Management" by Philip Kotler and Kevin Lane Keller
4. Singh, B.P. & Chhabra, T.N., Business Organisation and Management, Sun India Publications, New Delhi.
5. Shankar, Gauri; Modern Business Organisation, Mahavir Book Depot, New Delhi.
6. Tulsian, P.C.; Business Organisation & Management, Pearson Education, New Delhi. B.Com Programme CBCS Department of Commerce, University of Delhi, Delhi
7. Tripathi, P.C.; Principles of Management, Tata McGraw Hill Publishing, New Delhi.
8. Barry, Jim, Chandler, John, Clark, Heather; Organisation and Management, Thompson Learning, New Delhi.
9. Bushkirk, R.H.; Concepts of Business: An Introduction to Business System, Dryden Press, NY.
10. Douglas, MCgregor.; The Human Side of Enterprise, McGraw Hill, New York. 8. Kotler, Philip; Marketing Management: Analysis, Planning, Implementation & Control, Prentice-Hall of India, New Delhi.
11. Robbins, Stephen P.; Business Today: New World of Business, Harcourt College Publishers, Fortworth.
12. Buffa, Elwood S.; Production/Operations Management, Prentice Hall of India, New Delhi.

Name of the faculty member & Signature:
Mrs. Hilda Margreat

Approved by Head of the Department: Mrs. M.V.B Sailaja

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: B.COM (HONS)STRATEGIC FINANCE **Class & Section: DCSF** **Course Code: BC18019**

Name of the Faculty Member: **Mrs. Hilda Margreat** **Course Title: International Marketing and Export Management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction -Nature of IM -International dimensions of Marketing - Importance and framework - Reasons and benefits -India's export trade - Growth trend - Evaluation of EXIM policy - Export Promotion and incentives	Lecture Method using ICT Tools Presentation through ICT	Analyse the process of International Markets and classify India's export.	Group discussion, quiz,
II.	International Marketing Environment -Economic and trade Environment - Regional Trading blocs - Planning for IM - Marketing Research and Information System - Market Selection and Segmentation - IM coordination and control.	Lecture Method Presentation through ICT	Describe the factors of IM Environment and differentiate marketing research, market selection and market segmentation.	Group discussion,quiz, seminars
III.	Product Strtegies -Basic decisions - New Product development - Product planning and adapton - Marketing of sevices - Channel of distribution	Lecture Method Presentation through ICT	Analyse the importance of product and pricing strategies.	Group discussion,

	- Types of intermediaries - Channel development - Physical distribution			
IV.	Promotional Strategies - Advertising regulations - Pricing decision - Pricing distortion - Price quotation	Lecture Method Presentation through ICT	Differentiate the need for promotion mix strategies and pricing decision.	Group discussion,quiz
V.	- Foreign Exchange - Purchasing Power Parity - Balance of Payment Cause for disequlibrium in BOP - International Economic Organisation	Lecture Method Presentation through ICT	Explain forign exchange strategies, differentiate BOP and BOT and International Economic Organisation	Group discussion, quiz, seminar

List of References (Book / ICT / Weblinks):

1. Varma M.L International Trade
2. Sak onk visit and John J shaw. International Marketing(Analysis and strategy)
3. Rathore B.S and Rathore J.S 2010 Expoert Marketing(3rd Edition)

Name of the faculty member & Signature:Mrs. Hilda Margreat.

Approved by Head of the Department:Mrs. M.V.B Sailaja

Lesson Plans

Loyola Academy Degree & PG College, Alwal, Secunderabad 500010

YEAR-WISE AND SEMESTER-WISE DISTRIBUTION OF SUBJECTS
DEPARTMENT OF COMMERCE - B.COM. BUSINESS ANALYTICS
FIRST SEMESTER
ACADEMIC YEAR 2023-2024 OF 2023-26 BATCH (CBCS)

Sl. No.	Part	Subject Code	Title of the Subject	Hours /Week	Duration of Exam (hrs.)	Marks			Credits
						Internal	External	Total	
THEORY									
1	I	BE 23101	Business English-I (ELS1)	3	3	40	60	100	3
1	I	IC23101	Indian Heritage and Culture (AECC-1)	2	3	40	60	100	2
3	II	BC22001	Business Organization and Management (CORE-1)	4	3	40	60	100	4
4	II	BC22002	Financial Accounting-I (CORE-2)	4	3	40	60	100	4
5	II	CA22101	Data - Driven Decision Making (CORE-3)	4	3	40	60	100	4
6	II	BC22003	Fundamentals of Information Technology (CORE-4)	4	3	40	60	100	4
PRACTICALS									
7	II	BC22001P	Business Organization and Management Practical (CORE-1)	2	3	40	60	100	1
8	II	CA22102	Data - Driven Decision Making Practical (CORE-3)	2	3	40	60	100	1
9	II	BC22004	Financial Accounting-I Practical (CORE-2)	2	3	40	60	100	1
10	II	BC22005	Fundamentals of Information Technology Practical (CORE-4)	2	3	40	60	100	1

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: B.Com. Business Analytics **Class & Section: ACBA** **Course Code:23101**

Name of the Faculty Member:Dr.K.Musalaiah **Course Title: Indian Heritage and Culture**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system. Indus Valley Civilization, Vedic/Aryan Culture. Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian Customs and Traditions	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals. Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval Indian history and medieval Culture	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about historical, Social, religious and political issues of the nation.	Group presentation
IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions and democratic system of India	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about human Rights, tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr.K.Musalaiah – Dr. K. Musalaiah.

Approved by Head of the Department:

Mrs. T. Swarna

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

I SEMESTER

Department: B. Com Business Analytics **Class & Section: ACBA** **Course Code: BC22001**

Name of the Faculty Member:
T. Swarna

Course Title:
Business organization and management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Fundamentals concepts- Concept of business, trade, industry and commerce business- features of business trade classification- aids to trade industry- classification- commerce. Relationship between trade, industry and commerce Business organization concept Functions of business.	White board, Projector, Case studies, Group Discussion	Identify and interpret the various principles of management.	Students created business plans for startup ideas, including market research, financial projections, and marketing strategies.
II.	Business organization forms of business organization classification- factors influencing the choice of suitable form of organization objectives of business essentials of a successful business. Sole proprietorship- meaning- characteristics, advantages and disadvantages and suitability partnership- meaning- characteristics kinds of partners. Registration of partnership deed rights and obligations of partners.	White board, Projector, Case studies, Group Discussion	Explain and demonstrate the uses of planning and organizing.	Students created organizational charts for various types of businesses, demonstrating the hierarchy and reporting structure. This activity helps them understand the roles and responsibilities within different organizational setups.

II.	Joint stock company meaning-characteristics- advantages kinds of companies. Differences between private and public companies promotion of a company stages-promoters characteristics-registration.	White board, Projector, Case studies, Group Discussion	Classify and combine the various techniques of control and coordination.	Explore the historical development of joint stock companies, from their origins to the modern corporation. Discuss how they have evolved and why they are a popular form of business organization.
IV.	Introduction to management-definition- meaning-nature, University of management-Significance of manage- Principle and functions of management-Characteristics- objectives of management- management vs administration- Levels of management- skills of management-Scientific management: meaning-principles- objectives- criticism. Planning meaning- definition-features- importance, Steps in planning, types of plans- limitations of planning organizing- meaning-definition- features- Principles of organization- organization structure, line organization, functional organization, line and staff organization- delegation of authority-meaning- principles- difficulties in delegation- Centralization-decentralization- differences between delegation and decentralization.	White board, Projector, Case studies, Group Discussion	Point out and develop the essence of motivation and direction to the students.	Organize team-building exercises to teach the importance of teamwork and collaboration in management. Debrief the activities to discuss leadership, communication, and problem-solving.
V.	Coordination- Meaning- need-principle and techniques- Span of control- factors determining span of control. Control- meaning- definition-process steps- requisites of a good control system. Motivation- meaning-theories of motivation- Maslow-McCleland and Hetzberg importance	White board, Projector, Case studies, Group Discussion	Interrelate and understand the essence of leadership and the importance of communication.	Discussing the importance of leadership theory in real-world situations and how leaders often draw from multiple theories depending on the circumstances

	of motivation- motivational techniques- Leadership- meaning- importance- styles. Theories of leadership- Trait theory- Behavioral theory- situational theory.			

List of References (Book / ICT / Weblinks):

1. "Principles of Management" by Harold Koontz and Heinz Weihrich
2. "Organizational Behavior" by Stephen P. Robbins and Timothy A. Judge
3. "Marketing Management" by Philip Kotler and Kevin Lane Keller
4. Singh, B.P. & Chhabra, T.N., Business Organisation and Management, Sun India Publications, New Delhi.
5. Shankar, Gauri; Modern Business Organisation, Mahavir Book Depot, New Delhi.
6. Tulsian, P.C.; Business Organisation & Management, Pearson Education, New Delhi. B.Com Programme CBCS Department of Commerce, University of Delhi, Delhi
7. Tripathi, P.C.; Principles of Management, Tata McGraw Hill Publishing, New Delhi.
8. Barry, Jim, Chandler, John, Clark, Heather; Organisation and Management, Thompson Learning, New Delhi.
9. Bushkirk, R.H.; Concepts of Business: An Introduction to Business System, Dryden Press, NY.
10. Douglas, MCgregor.; The Human Side of Enterprise, McGraw Hill, New York. 8. Kotler, Philip; Marketing Management: Analysis, Planning, Implementation & Control, Prentice-Hall of India, New Delhi.
11. Robbins, Stephen P.; Business Today: New World of Business, Harcourt College Publishers, Fortworth.
12. Buffa, Elwood S.; Production/Operations Management, Prentice Hall of India, New Delhi.

Name of the faculty member & Signature: T. Swarna

Approved by Head of the Department: T. Swarna

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

1ST SEMESTER

Department: B.COM (BUSINESS ANALYTICS)

Class & Section: ACBA

Course Code: BC22002

Name of the Faculty Member: K. RAJITHA

Course Title: FINANCIAL ACCOUNTING 1

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	INTRODUCTION Need-Definition-Features-Objectives-Functions-Systems-Scope-Branches-Advantages and Disadvantages-Basic Terms-Concepts and Conventions-Accounting Equation-Classification of accounts-rules of double entry system-Journalizing-Posting Balancing of ledgers-Accounting standards-List_ASB	Power point Smart board	The students will be able to prepare financial statements in accordance with GAAP	Quiz, Solving Problems using the basic instructions.
II.	SUBSIDIARY BOOKS Subdivision of journal-Preparation-types	Smart board Power point	The students will be able to prepare financial statements in accordance with GAAP	Solving Problems using the basic instructions.
III.	BANK RECONCILIATION STATEMENT Need-Reasons for difference-problems on favourable and unfavourable balances-Ascertainment of correct cash book balance.	Smart board and power point	The students will be able to prepare financial statements in accordance with GAAP	Solving Problems using the basic instructions.

IV.	TRIAL BALANCE AND FINAL ACCOUNTS Meaning-Objectives-Methods-Manufacturing, Trading and Profit and Loss account and Balance Sheet-Adjusting and Closing entries	Smart board and power point	The students will be able to prepare financial statements in accordance with GAAP	Solving Problems using the basic instructions.
V.	ERRORS AND RECTIFICATION Types-Rectification before and after final accounts-Suspense account-effect of errors on profit.	Smart board Power point	The students will be able to prepare financial statements in accordance with GAAP	Solving Problems using the basic instructions.

List of References (Book / ICT / Weblinks):

1. S.P. JAIN AND K.L.NARANG 2011, FINANCIAL ACCOUNTING PART 1 (11TH Revised edition)
2. R.L.GUPTA AND RADHASWAMY 2001 VOL.1 10TH EDITION ,SULTAN CHAND & SONS
3. S.N.MAHESHWARI 2004 ADVANCED ACCOUNTANCY VOL.1 NEW DELHI, VIKAS PUBLISHING HOUSE.
4. https://youtu.be/SUQMUc3Z3vs?si=eAkWTbUwH8Oqey4-
5. https://youtu.be/dWHD1-3tVOY?si=_gRKKY2M9hikevzH
6. https://youtu.be/qeHc8w23Kl4?si=5hBSiIHf0zbLrEEs
7. https://youtu.be/umttvGKOi8g?si=CGlCR17rXa5AcCnF
8. https://youtu.be/zCZoqINp5P0?si=hVtkaMXC5WAo-x7D

Name of the faculty member & Signature: K. RAJITHA

Approved by Head of the Department: T. SWARNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - I

Department: B.Com(Business Analytics) **Class & Section: ACBA** **Course Code: 23037**

Name of the Faculty Member: B Venkataratnam

Course Title: B.Com(Business Analytics) Data Driven Decision making.

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Challenges: Identify hurdles to becoming a data-driven organization - Opportunities: Analyze data practices in the organization - Identify how data can benefit the organization - Distinguish how to be a proactive data practitioner **(12 Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. Data Driven Decision Making 2. Analyze data practices in the organization 3. Identify how data can benefit the organization	Seminar
II.	Business Analysis Principles: Identify the categories of analytical people - Distinguish and define roles and responsibilities of professionals in data analysis - Data Driven Decision Making: Identify cultural barriers - Distinguish solutions to cultural and cross-functional barriers - Identify six steps of the data-driven decision-making model. **(12 Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. the categories of analytical people Mercantile models 2. roles and responsibilities of professionals in data analysis 3. Data Driven Decision Making: cultural barriers 4. six steps of the data-driven decision-making model	Group Discussion
III.	Relational Databases: Nature of relational databases - Purpose of the SQL language - Key aspects of ACID - Meaning of ETL - Not Only SQL: Big data and other data storage tools - Interacting with MongoDB - Document stores and graph stores - Big Data: Key functions of big data technologies - Utility of Hadoop - Purpose of MapReduce - Statistical Tool, Machine Learning, and Data Visualization: Tools	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the 1. Nature of relational databases 2. Purpose of the SQL language 3. Key aspects of ACID 4. Meaning of ETL 5. Not Only SQL 6. Big data and other data storage tools 7. Utility of Hadoop 8. Purpose of MapReduce	Quiz

	for statistical analysis - Python and R - Purpose of machine learning - Visualization tools. **(12 Hrs.)**		9. Statistical Tool 10. Machine Learning, and Data Visualization	
IV.	Data Life Cycle: Identify the stages in the data life cycle - Data in the organization: Distinguish between ways that data enters the organization - Identify the forms data takes as it is stored and used within the organization. **(12 Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the Data Life Cycle 1. the stages in the data life cycle 2. Data in the organization 3. the forms data takes as it is stored and used within the organization	Seminar
V.	Requirements gathering process: Analyze why requirement gathering process is critical to proper analysis - 3 V's of data: Distinguish between the ways data is consumed (the three V's of data) - Customer journey map: Understand how requirement gathering fits with the development of a customer journey map - Distinguish between the stages of the customer journey map **(12 Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the Requirements gathering process 1. 3 V's of data 2. Customer journey map	Group Discussion

List of References (Book / ICT / Weblinks):

1. Data Analysis Fundamentals Certificate; AICPA
2. Fundamentals of Business Analytics, 2nd Edition; R N Prasad, Seema Acharya; Wiley
3. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson
4. Monetizing Your Data: A Guide to Turning Data into Profit-Driving Strategies and Solutions; Andrew Roman Wells, Kathy Williams Chiang; Wiley
5. AI and Analytics, Accelerating Business Decisions; Sameer Dhanrajani; Wiley
6. Data Analytics with R; Bharti Motwani; Wiley.

Name of the faculty member & Signature: B Venkataratnam

Approved by Head of the Department: **Swarna**

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-I

Department:BCOM ANALYTICS **Class&Section:ACBA** **CourseCode:BC22003**

Nameofthe FacultyMember: Mary perpetual succour **CourseTitle:Fundamentals of Information technology**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**UNIT-IIntroduction to Computers** Definition - Characteristics and limitations of computersBlock diagram of a computer, CPUPrimary and secondary storage.Input and output devicesdata Representation and StorageData representation in computers, bits and bytesConversion from decimal to binary, octal, hexadecimal and vice versaSecondary storage Random Vs Sequential access, Tracks and SectorsStorage characteristicsIncreasing data storage capacity through compression (disk compression and file Compression).	LectureMethodusing ICT Tools,ppts	ToLearnabout- Characteristics and limitations of computers Block diagram of a computer	Debate in advantages and disadvantages of computer
II.	**UNIT – II** **Operating Systems:** meaning, definition, FunctionsTypes of operating systems: Desktop OS, Server OS, Mainframe OS, Hand-held OS & Embedded OSMulti Tasking and Multi threadingMiscellaneous tasksBatch Processing systemsReal time systems, Time sharing systems **User Interfaces:** GUI, Pen based,	Chalk and board method	Types of operating systems: Desktop OS, Server OS, Mainframe OS, Hand-held OS & Embedded OSMulti Tasking and Multi threading	Assignment on operating system and its types

	Touch Screen & Conversational interfacesCommon Operating Systems: DOS, Windows 95/98 and UNIX			
III.	**UNIT – III** **Applications of Information Technology** Application programs Horizontal Market Applications, Vertical Market ApplicationsCustoms Applications, Shareware and Public domain software**Transaction Processing** – Centralized transaction processingClient Server software, Distributed computing and ReplicationInformation tools for management control: DSS, EIS, GIS, OLAPData Warehousing and Data Mining**IT in Business and Industry** – Home and at play, Education and Training, Entertainment and Arts, Science, Engineering and Math, computers in hiding**IT Enabled Services:** BPO, KPO & Call centers	Chalk and board method	Transaction Processing IT in Business and Industry	Interaction section on transaction process
IV.	**UNIT-IV** **Systems Development**: The six phases of Systems Analysis & Design **The challenges of Digital Age:** Security issues: Threats to Computers &CommunicationsSecurity: Safeguarding Computers & CommunicationsQuality of Life IssuesThe ethics of using databases: concerns about accuracy & privacyFive generations of programming languages	Chalk and board method	Systems Development The challenges of Digital Age	Group discussion on the challenges of digital age

Loyola Academy, Alwal, Secunderabad 500 010

YEAR-WISE AND SEMESTER-WISE DISTRIBUTION OF SUBJECTS DEPARTMENT OF COMMERCE – B.COM. (BUSINESS ANALYTICS) THIRD SEMESTER ACADEMIC YEAR 2023-24 OF 2022-25 BATCH (CBCS)

Sl. No.	Part	Subject Code	Title of the Subject	Hours /Week	Duration of Exam (hrs.)	Marks			Credits
						Internal	External	Total	
THEORY									
1	I	G23CA1T	Principles of Insurance (General Elective)	2	3	40	60	100	2
2	I	SECCA23301	Digital Marketing	2	3	40	60	100	2
3	II	BC23012	Advanced Accounting	5	3	40	60	100	5
4	II	CA23302	Fundamentals of Business Analytics	4	3	40	60	100	4
5	II	CA23303	Data Analytics Modelling	5	3	40	60	100	5
6	II	CA23304	Business Statistics – I	4	3	40	60	100	4
PRACTICALS									
7	II	G23CA1P	Principles of Insurance Lab (General Elective)	2	3	40	60	100	1
8	II	CA23305	Fundamentals of Business Analytics Lab	2	3	40	60	100	1
9	II	CA23306	Business Statistics – I	2	3	40	60	100	1
TOTAL				**28**	**-**	**320**	**480**	**800**	**25**

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER III

Department: Business Analytics **Class & Section: General Elective** **Course Code: G23CA1T**

Name of the Faculty Member: Mr. Bala Praveen **Course Title: Principles of Insurance**
No Of hours taken: (26+24)

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Risk Management-Types of Risks, Actual and Consequential Losses, Management of Risk by Individuals and Insurers, Different Classes of Insurance, Importance of Insurance, Insurance Terminology-Fixing of Premiums- - Rider Premiums, surrender value, Paid up value, Reinsurance, Role of Insurance in Economic Development and Social Security	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To evaluate the growth and Development of Insurance Business	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
II.	Insurance Contract Terms, History of insurance, Principles of Insurance: Principle of Insurable Interest, Principle of Indemnity. Principle of Subrogation, Principle of Contribution, Relevant, Information Disclosure, Principle of utmost Good Faith, Relevance of Proximate Cause, Types of insurance (Personal, Commercial, Health, Life, etc.), Types of Insurance companies- Insurance Life Cycle (Underwriting, Policy Servicing, Claims, etc.)	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To understand the working and functioning of the Insurance Sector.	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)

III.	Meaning and evolution, growth, and principles of Life Insurance, Life Insurance Organizations in India, Competition and Regulation of Life Insurance, Types of Life Insurance Policies – Term, Whole Life, Endowment, Unit Linked and with or without Profit Policies, Insight into Annuity-Concept of Annuity – Types of Annuities- Fixed Annuity, Fixed Index Annuity, Variable Annuity, Insight into Group Insurance	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To study the inter-relationship between Insurance & Risk Management	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
IV.	Concept of Non-Life Insurance, Types of Non-Life Insurance products, non-life policies features and Benefits, Working of Healthcare Insurance, Key Challenges of Healthcare Industry, Difference Between Life Insurance and Non-Life Insurance	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To analyze the Role of Insurance Business Intermediaries	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
V.	Role of Insurance in Economics Development and social security, Constituents of Insurance Market-Operation of Insurance companies, Operation of intermediaries- Specialist Insurance Companies, Role of regulators and other bodies	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To obtain an overview of Regulatory Framework of Insurance Sector.	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)

List of References (Book / ICT / Weblinks):

1. Principles of Insurance : A Publication of the Insurance Institute of India
2. Principles of Insurance : Telugu Academy, Hyderabad

Name of the faculty member & Signature:

P. Bala Praveen

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

III SEMESTER

Department: B. Com Business Analytics **Class & Section: NCBA** **Course Code: SECCA23301**

Name of the Faculty Member: T. Swarna **Course Title: DIGITAL MARKETING**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Introduction of the digital marketing • Digital vs. Real Marketing • Digital Marketing Channels • Creating initial digital marketing plan • Content management - SWOT analysis • Target group analysis	Flipped Classroom Contextual Learning	The aim of the Digital Marketing Course is to provide students with the knowledge about business advantages of the digital marketing and its importance for marketing success; to develop a digital marketing plan.	• Assigned to get Digital marketing strategies of existing companies. • Debate About the Elements of Marketing
II.	• Email marketing tools and setup • Email marketing segmentation, personalization, and mobile friendly design • Content marketing foundations • Blogs for content marketing	Smart board Power point presentations Black board	How to manage customer relationships across all digital channels and build better customer relationships, to create a digital marketing plan.	• EXERCISE: Define a target group (working in groups) • Keyword research using Google AdWords.

	• Content marketing for staying relevant • Newsletters for content marketing – Mobile marketing foundations.			
III.	▪ SEO Optimization ▪ Writing the SEO content ▪ On-Page Optimization ▪ Off-Page Optimization-Link Building-Using classified for inbound traffic	Class Rotation- Class rotation involves one of two options: the entire class can switch between online and classroom activities (whole class rotation) or the students can be divided into groups, and each group was given a different activity (group rotation). In the second option, the teacher visits each group individually.	How to integrate different digital media and create marketing content, how to SEO optimization.	Evaluating the Influence of Ads on Target Markets
IV.	• Introduction to Social media marketing • Importance of SMM • SMM vs SMO • type of Social Media Marketing • google AdSense	Differentiated Learning - Differentiated learning recognizes that each student has their own individual style of learning.	Differentiate the digital marketing strategies among different digital and social media platforms	Make a Marketing Plan for department social media handles.
V.	• Introduction to SEM- Campaign Creation • Google AdWords-Ad Creation, Approval & Extensions • Site Targeting • Keyword Targeting Demographic Targeting/ Bidding	Contextual Learning-Contextual learning opens the classroom, allowing students to apply the knowledge they learn in class to the real world around them. It helps students understand concepts like cause and effect and the interconnectivity.	Analyzing consumer behavior and developing segmentation targeting and positioning strategies.	Media Literacy Activity- In this media literacy activity, children learn to be more discerning consumers of various media forms, such as television, print media, and the internet. Tim and Moby from BrainPOP guide kids through a process of understanding advertising, recognizing persuasive techniques, and separating facts from opinions. By learning these strategies, children can better decode and

				analyze content from TV shows, newspapers, and websites.

List of References (Book / ICT / Weblinks):

1. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns by Ian Dodson, Wiley
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia, Pearson
3. Foundations of Digital Marketing: Dr. K.V. Nagaraj Usha Rani - PBP
4. Digital Marketing by Vandana Ahuja, Oxford
5. Digital Marketing by Seema Gupta, McGraw Hill
6. Digital Marketing for Dummies by Ryan Deiss and Russ Henneberry
7. https://www.youtube.com/watch?v=IWeCs6oNeks
8. https://www.youtube.com/watch?v=FimmXmlNnyY

Name of the faculty member & Signature: T. SWARNA

Approved by Head of the Department: T. SWARNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

III SEMESTER

Department: B.COM (BUSINESS ANALYTICS) **Class & Section: NCBA** **Course Code: BC23012**

Name of the Faculty Member: K. RAJITHA **Course Title: ADVANCED ACCOUNTING**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	BRANCH ACCOUNTS Introduction-Features-Types-Methods of accounts-Debtor's system-cost and Invoice Price-Stock and debtor's system-goods charged to branch at CP and SP	White board Block board Projector	State various methods for preparing branch accounts	Solving Problems using the basic instructions
II.	DEPARTMENTAL ACCOUNTS Need-Features-Basis for allocation of expenses-Distinction between departmental and branch accounts (theory)-Treatment of inter departmental transfers at CP or SP-treatment of expenses that cannot be allocated-preparation of departmental profit and loss account(problems)	White board Block board Projector	Describe the allocation and interdepartmental transfer of expenses	Solving Problems using basic instructions.
III.	ACCOUNTING OF NON-PROFIT ORGANIZATIONS Introduction-Receipts and Payments account-Income and Expenditure account-Differences-problems on income and expenditure account and balance sheet-problems in preparation of receipts and payments	White board Block board Projector	Analyze the financial position of non-trading concerns.	Solving Problems using basic instructions.

	account when income and expenditure and balance sheet is given.			
IV.	COMPANY ACCOUNTS Issue of shares ar par, premium and at discount ,forfeiture and reissue of shares-Recording of transactions relating to issue,forfeiture and reissue of sharesincluding problems.-Issue of Bonus shares-SEBI guidelines-Rights issue and surrender of shares (including simple problems)	White board Block board Projector	evaluate the different situation of capital issue to public issue of shares at par, premium and forfeiture.	Quiz competition for learning journal entries.
V.	ISSUE AND REDEMPTION OF DEBENTURES Introduction to Debentures-Features and Kinds of Debenture) Accounting treatment for issues and redemption of debenture Redemption out of profits - Sinking fund method- Account Introduction to Debentures-Features and Kinds of Debenture) Accounting treatment for issues and redemption of debenture Redemption out of profits - Sinking fund method- Accounting Treatment-(Simple Problems (Excluding ex-interest and cumulative interest problems)	White board Block board Projector	Explain about sources of funds through issue of debentures and various methods of redemption.	Solving Problems by giving guidelines.

List of References (Book / ICT / Weblinks):

1. Jain,S.P&Narang, K.L.2011. FINANCIAL ACCOUNTING
2. ADVANCED ACCOUNTING 11TH REVISED EDITION (KALYANI PUBLISHERS)
3. MUKHERJEE, A AND HANEEF, MODERN ACCOUNTANCY-VOLUME 1
4. S.P. JAIN AND NARANG 2012, CORPORATE ACCOUNTING (KALYANI PUBLISHERS)
5. MAHESHWARI, S.N AND MAHESHWARI, S.K.2005. Corporate ACCOUNTING. 4TH REVISED EDITION.
6. New Delhi Vikas Publishing House Private Limited
7. https://youtu.be/Y-n0-UMB9vY?si=ktwCRUvFbI08qYT3
8. https://youtu.be/gORYZEOgEOA?si=7DrZIdOREb42EAnr
   https://youtu.be/jagao8xP2Kc?si=z58eHUSdmCdCpnDo
   https://youtu.be/v5oRgGohsu0?si=9vJ7OSsDt1WF6Kra

Name of the faculty member & Signature: K. RAJITHA

Approved by Head of the Department: T. SWARNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - III

Department: B.Com Business Analytics **Class & Section: NCBA** **Course Code:CA21302**

Name of the Faculty Member: V ANUSHA **Course Title: Fundamentals of business analytics**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to R: What is R. Features of R, Simple Math, R as a Calculator Reading and Getting Data into R: Reading Data, Reading a File of Data from a Disk, Reading Bigger Data Files The read.csv () Command, Alternative Commands for Reading Data in R Data Types in R	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn about basic concept of R.	Practical Test.
II.	Series and Control Statements : If statement, If-else statement, If-else function, Nested if-else statement, Switch statement, For loop, While loop, Repeat loop, Break statement, Next statement Vectors: Definition, Declaration, Generating, Indexing, Naming, Adding, and Removing Elements Operations on Vectors: Recycling, Special Operators, Functions for Vectors Missing Values, Null Values, Filtering and Sub setting Creating Arrays, Dimensions and Naming, Indexing and Naming, Functions on Arrays	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn about programming concepts and data structures in R	Computer Based test.
III.	Creating Matrices, Adding Rows/Columns, Removing Rows/Columns Reshaping Operations, Special Functions Creating, Naming, Accessing Elements, Adding, Removing, Special Functions, Recursive Lists	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to Analyse large problem by sub dividing it into smaller components using functions	Offline Quiz.

	Creating, Naming, Accessing, Adding, Removing, Special Functions, Merging Exercises data frames			
IV.	Descriptive Statistics – central tendency(mean, median, mode, geometric mean and harmonic mean) Variability, Range, quartile deviation, mean deviation, standard deviation, Variance, Summary function Correlation and covariance Graphics: Introduction, Types, Packages, Basic Graph, Histograms, Bar and Pie Chart, Line Chart, Scatter Plots	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn about Choose an appropriate graphic for analysis and analyse data using summary And Choose the type of regression based on data set.	Written Test.
V.	Need for Data -driven decision making: Solving the business problem using Analytics Overview of the Business Analytics Cycle Understanding Business Analyst Roles and responsibilities - Identify the Popular Business Analytics Tools.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To learn how to use the various decision making tools of business analysis to solve real life problems.	Written Test.

Listof References (Book/ICT/ Weblinks):

1. Data Analytics with R by Bharati Motwani ,Wiley publication
2. Cotton, Richard. 2013. Learning R. USA: O'Reilly
3. Matlof, Norman. 2011. The Art of R Programming. 1st Edition. San Francisco: No Starch Press.
4. Purohi, Sudha G. Gore, Sharad D. and Deshmukh, Shailaja R. 2015. Statistics using R. 2nd Edition. New Delhi: Narosa Publishing House
5. https://www.youtube.com/watch?v=_V8eKsto3Ug
6. https://www.youtube.com/watch?v=eR-XRSKsuR4

V. Anusha V.

Name of the faculty member & Signature:

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

ODD SEMESTER

Department: B.COM. BUSINESS ANALYTICS **Class & Section: NCBA** **Course Code:** CA22303

Name of the Faculty Member: D.BANU KRANTHI **Course Title:** DATA ANALYTICS MODELING

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Understanding your business** 1. Identify Business Value - Determine how business and corporate drivers impact the strategic direction of business 2. Analyse different project processes used in working with data - Compare different types of data	Lecture Method using ICT Tools Lecture Method	Evaluate business and corporate drivers to determine their influence on strategic decisions and business value. Analyze and compare diverse data project processes, showcasing a nuanced understanding of different data types.	Quiz, Solving Problems using interactive teaching section.
II.	• **Data Profiling & Cleansing** 1.Data Profiling: Identify core data profiling tasks 2.Identify Outliers - Use tools for data profiling 3.Data Cleansing: Identify core data cleansing tasks - Use tools for cleansing	Lecture-Based Teaching Experiential Learning Lecture Method using ICT Tools	Master data profiling tasks and tools to identify patterns and outliers for robust data analysis. Acquire skills in core data cleansing tasks and tool usage for enhancing data quality and integrity.	Quiz, interactive methods like group discussion and PPT presentations.
III.	• **ETL (Extract, Transform, And Load):** 1. Data Quality and MDM: Identify role of data quality in organization 2. Identify role of MDM in organization - Use tools for data quality and MDM 3. ETL Tools: Distinguish between ETL processes - Use Talend Data Integration 4. Use MSSQL SSIS	Lecture-Based Teaching Flipping method-review materials independently before class Lecture Method using ICT Tools	By the end of the ETL course, participants will adeptly employ data quality and MDM tools, alongside mastering ETL processes using Talend Data Integration and MSSQL SSIS for efficient data extraction, transformation, and loading.	Interactive methods like group discussion and PPT presentations

IV.	• **Data Warehousing**: 1. Identify purpose of Data Warehousing - Identify between key components of a data warehouse 2. Distinguish between Data Warehouses and Data Lakes - Determine the role of different warehousing techniques 3. Differentiate between utility of relational DW, cubes, and in-memory scenarios 4. Compare techniques for data integration with regards to warehousing - Use warehousing Tools Use integration tools for warehousing.	Lecture Method using ICT Tools Lecture-Based Teaching	Grasp the purpose and key components of Data Warehousing. Differentiate between Data Warehouses and Data Lakes, while understanding various warehousing techniques and integration tools.	Interactive methods like group discussion and PPT presentations,
V.	• **Identify data roles in the organization** – 1. Determine how data moves through the data lifecycle 2. 2. Data Modeling: Identify the role of data modeling in the organization Analyze data modeling techniques 3. Use tools for data modeling - Structured Data Tools: Identify core tools for RDBMS's (Structured storage) 4. Use SQL to perform CRUD tasks against a database - Unstructured Data Tools: Identify tools in unstructured stack - Use tools for unstructured data management	Lecture Method using ICT Tools Lecture-Based Teaching Flipping method-review materials independently before class	Master the data lifecycle, from creation to disposal, and comprehend diverse data modeling techniques for organizational use. Demonstrate proficiency in employing core RDBMS tools for structured data modeling and manipulation, while also utilizing tools for effective unstructured data management.	Interactive methods like group discussion and PPT presentations, seminars by students.

List of References (Book / ICT / Weblinks):

1. Fundamentals of Business Analytics, 2nd Edition; R N Prasad, Seema Acharya; Wiley
2. Data Analytics Modeling Certificate; AICPA
3. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson

Name of the faculty member & Signature: D. Bamu Kranthi

D. Bamu 13/11/23.

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - III

Department: Business Analytics **Class & Section: NCBA** **Course Code: CA23304**

Name of the Faculty Member: R.Srinivasa rao **Course Title : Business Statistics**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Origin and Development of Statistics – Definition - Importance and Scope - Limitations of Statistics - Collection of primary and secondary data - classification and Tabulation of data - Frequency distribution. DIAGRAMMATIC AND GRAPHIC PRESENTATION: Simple bar diagram- subdivided bar diagram- multiple bar diagram- percentage bar diagram- pie diagram- histogram- frequency polygon- frequency curve- Ogives	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	To learn merits and limitations in using the statistical data.	Offline Quiz.
II.	Meaning -Types - Correlation and Causation – Methods: Scatter Diagram - Karl Person's Coefficient of Correlation – Spearman's Rank Correlation coefficient- Linear and Non-Linear Regression – Correlation Vs. Regression - Lines of Regression - Using Regression.	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Describe how correlation is used to identify relationships between variables. Describe how regression analysis is used to predict outcomes.	Written Test.

	Introduction - Components – Methods-Semi Averages - Moving Averages – Least Square Method - Deseasonalisation of Data – Uses and Limitations of Time Series	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	define time series components. Explain time series with different structures. Explain trend, seasonality, cyclical irregularity .	Written Test.
IV.	Hypothesis- Null and alternative hypothesis- type I and type II errors- critical region and level of significance (Excluding Derivations) **Tests of significance of large samples-** test of significance for single mean and difference of means-- test of significance for single proportion and difference of proportions **Tests of significance of small samples-** Tests of significance based on Chi-square, t and F distributions: Chi-square test for Population Variance, Goodness of fit & test for independence of attributes. t-test for single mean, difference of means, paired t-test. F-test for Population Variances	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Student would be able to calculate mean and proportions and can make important decisions from few samples which are taken out of unmanageably huge populations.	Written Test./viva
V.	Introduction- assumptions of ANOVA- one way classification- two-way classification- advantages and disadvantages	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	Student would be able to calculate ANOVA by one way and two-way classification.	Written Test.

2023-2024

List of References (Book/ICT/ Weblinks):

i. Statistics for Management: Levin & Rubin, Pearson
ii. Fundamentals of Statistics: Gupta S.C, Himalaya
iii. Statistics: E. Narayanan Nadar, PHI Learning
iv. Business Statistics –I: Dr. Obul Reddy, Dr. D. Shridevi - PBP
v. Business Statistics: Dr. J. K. Thukral, Taxmann Publications
vi. Business Statistics: K. Alagar, Tata McGraw Hill
vii. Fundamentals of Statistical: S. P Gupta, Sultan Chand
viii. Business Statistics: J. K. Sharma, Vikas Publishers
ix. Business Statistics: S. L Aggarwal, S. L. Bhardwaj, Kalyani Publications
x. Statistics-Problems and Solutions: Kapoor V.K, S. Chand
xi. Statistics - Theory, Methods, and Applications: Sancheti D.C. &Kapoor V.K12. Business Statistics: S. K. Chakravarty, New Age International Publishers
xii. Statistics: Andasn, Sweenly, Williams, Cingage.

R. Srinivasa Rao
R.S.Rao

Name of the faculty member&Signature:

Approved by Head of the Department:

Loyola Academy Degree and PG College, Secunderabad 500 010

YEAR-WISE AND SEMESTER-WISE DISTRIBUTION OF SUBJECTS
DEPARTMENT OF COMMERCE - B.COM. (BUSINESS ANALYTICS)
FIFTH SEMESTER
ACADEMIC YEAR 2023-24 OF 2021-2024 BATCH (CBCS)

Sl. No.	Part	Subject Code	Title of the Subject	Hours /Week	Duration of Exam (hrs.)	Marks			Credits
						Internal	External	Total	
THEORY									
1	II	BC 18013 BC 18014	a). Marketing Management b). International Business **DSE-1**	4	3	40	60	100	4
2	II	BC 18019 BC 18008	a) International Marketing & Export Management b) Corporate Governance & Business Ethics **DSE-2**	4	3	40	60	100	4
3	II	CA 22501	Financial Decision Making-I **SEC – 2**	6	3	40	60	100	4
4	II	CA 22502	Advanced Data Visualization **Core-15**	3	3	40	60	100	3
5	II	CA 22503	International Financial Reporting-I **Core-16**	6	3	40	60	100	4
6	II	CA 22504	Financial Planning & Performance **SEC-3**	4	3	40	60	100	3
PRACTICALS									
7	II	CA 22505	Advanced Data Visualization Practical	2	3	40	60	100	1
TOTAL				**29**	**-**	**280**	**420**	**700**	**23**

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER- V

Department: B.Com Business Analytics		**Course Code: BC 18013**
Name of the Faculty Member: **Dr S. Chiranjeevi**	**Class & Section: DCBA & DBPM**	**Course Title: Marketing Management**

Unit	Topics to be Covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** Concept of Marketing-Evolution-Definitions -Nature & Scope of Marketing-Significance of Marketing --Marketing Concept Vs Selling Concept-Role of Marketing in Developing Economy- Marketing Environment - Meaning- Microenvironment-Macro Environment **(12 hours)**	Lecture Method and PPT	the students will learn the concept of marketing and sketches the marketing environment.	Conducted Quiz
II.	**Market Segmentation and Targeting** Identification of market segments- segmenting consumer markets -Segmentation basis-selecting target markets -Developing and communicating a positioning strategy **(12 hours)**	Lecture Method and PPT	Classify the market and identifies the various market segments.	Conducted Seminar
III.	**Product & Price** Product-definition-levels of product-classification of products-branding New product development–stages-product life cycle-stages involved Price-concept-importance of pricing-factors influencing pricing decisions. **(12 hours)**	Lecture Method and PPT	Point out the marketing mix with reference to product and price	Conducted Test
IV.	Place & Promotion	Lecture	Analyze the promotion mix and	Conducted Test

	Channels of Distribution-number of channel levels-channel design Promotion mixes variables-the communication process Advertising – designing effective advertising programs **(6 hours)**	Method and PPT	the channels of distribution.	
V.	**Consumer Behavior & Services Marketing** Consumer behavior- definition-factors influencing consumer behavior Consumer buying roles-stages in buyer decision process Service marketing-concept-reasons for growth of services-role of services in economy **(6 hours)**	Lecture Method and PPT	. Explain service marketing mix and points out the importance of direct and online marketing.	Conducted Test

List of References (Book/ICT/ Web links):

1. Kotler Philip, Gary and Armstrong. **Principles of Management.** 13th Edition. New Delhi: Ehsanul Haque Publications.
2. Kotler Philip. 2007. **Marketing Management.** New Delhi: Pearson Publications.
3. Sherlekar, S.A. 2011. **Marketing Management.** 13th Revised Enlarged Edition. Mumbai: Himalaya Publications.
4. Karunakaran, K. **Marketing Management.** 3rd Revised and Enlarged Edition.

Name of the faculty member & Signature: Dr.Salluri. Chiranjeevi

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- V

Department: DCBA | **Class & Section: DCBA** | **Course Code: BC18019**

Name of the Faculty Member: Mr. Bala Praveen

No Of hours taken: 63

Course Title: INTERNATIONAL MARKETING AND EXPORT MANAGEMENT

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Nature of International Marketing -Process, International dimensions of Marketing, Domestic Marketing Vs International Marketing, Growing Importance of International, Marketing Framework of International Marketing – Objectives of International Business Reasons/Basis of international Trade and Marketing Benefits of International Marketing & International Marketing Decisions, Growth, trends, composition and direction – Assessment of Prospects, Evaluation of Exim policy, Problems of India's export sector— Exploit promotion and incentives EOU's & EPZ's -Export Procedures.	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To analyze the process of international marketing and classify India's export trade.	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
II.	Economic and Trade environment— Social, Cultural and Regional Trading Rocks economic Integration, Marketing Research and Information System - Market Selection and Segmentation, Market Analysis and Foreign Market Entry Strategies, Organization for International Marketing & International Marketing, Coordination &Control	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To describe the important factors of international marketing environment, Differentiate marketing research, market selection and segmentation	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
III.	Basic decisions and Product Planning, New Product Development: Product Positioning & Product Adoption, Theory of International Product Life Cycle Product Standardization Vs. Product Adaptation, Marketing of	Lecture Method using ICT Tools Daily briefing and recapping and slip	To analyze the importance of production and distribution strategies.	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions

	services - Branding, Packaging & Labelling Decisions, Channels of Distribution - Direct and indirect selling channels, Types of Intermediaries in Direct and Indirect Channels	test for important concepts of the unit		(Interpersonal skills), Personal assignment (Writing skills)
IV.	Promotion and Communication – Promotion Mix, International Advertising, Patterns of Advertising Expenditure, Advertising and Types of Intermediaries in Direct and Indirect Channels, regulations, Advertising Media, Standardized International Advertising – Case Studies,, Basic decisions - The role of Price - Price standardization, Pricing decisions Alternative pricing strategies, Dumping - Price distortion - Inflation - Transfer pricing - Counter Trade, Price Quotation - Terms of Sale - Methods of Finance and Means of Payment	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To differentiate the need for promotion, mix strategies and pricing decisions.	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
V.	Foreign Exchange - Meaning – Importance, Determination of Foreign Exchange Demand for and Supply of Foreign Exchange, Equilibrium rate of Foreign Exchange Theories of Foreign Exchange: Purchasing Power Parity Theory, Mint Parity Theory – Effect & Importance, Balance of Payments Vs. Balance of Trade, Causes for Disequilibrium in Balance of Payments Removal of disequilibrium, International Economic Organizations	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To explain foreign exchange strategies, differentiate balance of payments balance of trade and interpret international economic organizations.	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)

ist of References (Book / ICT / Weblinks):

1. Francis Cherunilam. **International Marketing (including export management).**
2. P. Subbarao. **International Business.**

ame of the faculty member & Signature:

Ir. Bala Praveen

pproved by Head of the Department

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

VSEMESTER

Department:B.Com Business Process Management

Class&Section: DBPM-DCBA

CourseCode: BC18008

Nameofthe FacultyMember:
Dr. Sofia Ahmed Sait.

CourseTitle:Corporate Governance and Business Ethics

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	INTRODUCTION Values – Importance Sources of values system Types, values, loyalty Ethical behavior Values across culture Business Ethics – nature Characteristics and Needs Ethical practices in management	White board, Projector, Case studies, Group Discussion.	To identify and explain the importance of values and ethics.	Analyzing the case studies, Conducted debates, Group discussions.
II.	THE ETHICAL VALUE AND SYSTEM Universalism theory Utilitarianism theory Distributive justice theory Social contracts theory Individual freedom of choice – the concept Professional codes in the corporate Relational ship between cultures and ethics Ethical values in different cultures Relationship between culture and individual ethics	White board, Projector, Case studies, Group Discussion	To analyze and interpret the various theories of ethical value system.	Practice on Ethical decision making frameworks.

III.	LAW AND ETHICS Meaning of law and ethics Relationship between law and ethics Other bodies in enforcing ethical business behavior Impact of law and business ethics Social responsibility of business Environmental protection Fair trade practices Fulfilling all national obligations under various laws Safeguarding of health and well-being of the customer.	White board, Projector, Case studies, Group Discussion	To point out the relationship between law and ethics and understand the impact of law on business.	Analyzed real legal cases that involves ethical dilemmas, explored the role of ethics in creation of laws
IV.	CORPORATE GOVERNENCE Meaning of Corporate governance Issues and needs Corporate governance code Transparency and disclosure in the corporate Role of auditors Board of directors Shareholders	White board, Projector, Case studies, Group Discussion	To explain the various corporate governance codes, transparency and disclosure in the corporate.	Analyzed corporate governance codes and regulations to understand their importance.
V.	ISSSUES OF GOVERNANCE Global issues of governance Accounting and regulatory frame work Corporate scams Committees in India and abroad dealing with corporate governance Corporate social responsibility Introduction to company act 2013-Provision relating to Corporate Governance	White board, Projector, Case studies, Group Discussion	To identify and point out the global issues of governance.	Analyzed government policies Analyzed governance risk

Listof References (Book/ICT/ Weblinks):

1. Fernando, A.C.2006 Business Ethics Corporate Governance. 1st edition New Delhi: Pearson Publication.
2. Dr. Senthil, Kumar and Rajan 2006. Business Ethics and Values.
3. Mumbai: Himalayan Publication.
4. Sarker, Jayati 2012. Corporate Governance in India, Mumbai. 2nd edition Mumbai: Kalyani Publication.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

V SEMESTER

Department: B. Com Business Analytics | **Class & Section: DCBA** | **Course Code: CA22501**

Name of the Faculty Member: T. Swarna | **Course Title: FINANCIAL DECISION MAKING- I**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	▪ Basic Financial Statement Analysis: Common Size Financial Statements - Common Base Year □ Financial Statements ▪ Financial Ratios: Liquidity - Leverage - Activity – Profitability Market Profitability Analysis: Income Measurement Analysis - Revenue Analysis - Cost of Sales Analysis - Expense Analysis - Variation Analysis ▪ Special Issues: Impact of Foreign Operations - Effects of Changing Prices and Inflation - Off Balance Sheet Financing ▪ Impact Of Changes in Accounting Treatment ▪ Accounting And Economic Concepts of Value and Income - Earnings Quality	Flipped Classroom Contextual Learning	To identify relevant financial data used in making business decisions.	Assigned to get financial reports of existing companies.

II.	▪ Risk & Return: Calculating return - Types of risk - Relationship between risk and return ▪ Long-term Financial Management: Term structure of interest rates - Types of financial Instrument ▪ Cost of capital ▪ Valuation of financial instruments	Smart board Power point presentations Black board	Examine the financial accounting elements to be considered when making a decision that impacts an entity's financial position.	Quiz on basic accounting terms and knowledge.
III.	▪ Raising Capital: Financial markets and regulation ▪ Market efficiency ▪ Financial institutions ▪ Initial And Secondary Public Offerings ▪ Dividend policy and share repurchases. Lease financing	Class Rotation	Understand the financial market structure and its impact on the financial structure of a company.	Class rotation involves one of two options: the entire class can switch between online and classroom activities (whole class rotation) or the students can be divided into groups, and each group was given a different activity (group rotation). In the second option, the teacher visits each group individually.
IV.	• Cash management • Marketable securities management • Accounts Receivable Management • Inventory Management • Short-term Credit: Types of short-term credit • Short-Term Credit Management	Differentiated Learning - Differentiated learning recognizes that each student has their own individual style of learning.	To demonstrate the techniques of working capital management.	Group activity on accounting standards
V.	• Bankruptcy • Other forms of restructuring • International Finance: Fixed, flexible, and floating exchange rates • Managing transaction exposure. • Financing International Trade Tax implications of transfer pricing.	Contextual Learning	To appraise mergers and acquisitions for restructuring of corporation.	Contextual learning opens the classroom, allowing students to apply the knowledge they learn in class to the real world around them. It helps students understand concepts like cause and effect and the interconnectivity.

List of References (Book / ICT / Weblinks):

1. Wiley CMAexcel Learning System, Part 2: Strategic Financial Management
2. Interpretation and Application of International Financial Reporting Standards; Mackenzie, Bruce, Coetsee, Danie, Njikizana, Tapiwa, Chamboko, Raymond, Colyvas, Blaise, Adhanom, Brandon; Wiley
3. Financial Reporting & Analysis, 13th edition; Gibson, Charles H.; South-Western Cengage Learning
4. Financial Statement Analysis, 10th edition; Subramanyam, K.R., and Wild, John L.; McGraw Hill
5. Principles of Corporate Finance, 11th edition; Brealey, Richard, A., Myers, Stewart C., and Allen, Franklin; McGraw Hill
6. Fundamentals of Financial Management, 13th edition; Van Horn, James, C., and Wachowicz, John M. Jr.; FT / Prentice Hall
7. https://youtu.be/0zM-W499LT8?si=3kYguo9KaU4-YGDh
8. https://youtu.be/Ylns92QNHio?si=DeAR4oNQiCh-VqbI

Name of the faculty member & Signature: T. SWARNA

Approved by Head of the Department: T. SWARNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER - IV

Department: B.Com(Business Analytics) **Class & Section: DCBA** **Course Code: 21037**

Name of the Faculty Member: B Venkataratnam

Course Title: B.Com(Business Analytics) Advanced data visualisation.

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	DATA VISUALIZATION . • Ways of Representing Visual Data • Techniques Used for Visual Data Representation • Types of Data Visualization • Applications of Data Visualization, Visualizing Big Data • Tools Used in Data Visualization • Tableau Products **(9Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the DATA VISUALIZATION 1. Ways of Representing Visual Data 2. Techniques Used for Visual Data Representation 3. Types of Data Visualization 4. Applications of Data Visualization, Visualizing Big Data 5. Tools Used in Data Visualization 6. Tableau Products	Quiz
II.	DATA VISUALIZATION USING EXCEL • Creating Combination of Charts, Creating a Combo Chart with Secondary Axis • Discriminating Series and Category Axis • Chart Elements and Chart Types, Data Labels, Quick Layout, Using Pictures in Column Charts • Band Charts, Thermometer Chart • Gantt Charts, Waterfall Chart • Sparklines, Pivot Charts, Pivot Charts with Pivot Tables, Pivot Charts without Pivot Tables	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the DATA VISUALIZATION USING EXCEL 1. Creating Combination of Charts, Creating a Combo Chart with Secondary Axis 2. Discriminating Series and Category Axis 3. Chart Elements and Chart Types, Data Labels, Quick Layout, Using Pictures in Column 4. Data Driven Decision Making: cultural barriers 5. Band Charts, Thermometer Chart, Gantt Charts, Waterfall	Seminar

	(9Hrs.)		Chart, Sparklines, Pivot Charts, Pivot Charts	
III.	PLOTTING AND VISUALIZATION ▪ A Brief Matplotlib API Primer ▪ Plotting with Pandas and Seaborn ▪ Python Visualization Tools2 ▪ BASIC VISUALIZATION USING R ▪ Pie Chart, Bar Chart, Histogram, Line Chart, Kernal Density Plot ▪ QQ Plot, Box & Whisker Plot, Violin Plot, Dot Chart, Bubble plot **(9Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the PLOTTING AND VISUALIZATION 1. A Brief Matplotlib API Primer 2. Plotting with Pandas and Seaborn 3. Python Visualization Tools2 4. BASIC VISUALIZATION USING R 5. Pie Chart, Bar Chart, Histogram, Line Chart, Kernal Density Plot 6. QQ Plot, Box & Whisker Plot, Violin Plot, Dot Chart, Bubble plot	Group Discussion
IV.	CREATING YOUR FIRST VISUALIZATIONS AND DASHBOARDS. ▪ Connecting to Data ▪ Foundations for Building Visualizations ▪ Visualizing Data ▪ Creating Bar Charts, Line Charts ▪ Geographic Visualizations Using Show Me, Bringing Everything Together **(9Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the CREATING YOUR FIRST VISUALIZATIONS AND DASHBOARDS 1. Connecting to Data 2. Foundations for Building Visualizations 3. Creating Bar Charts, Line Charts 4. Geographic Visualizations Using Show Me, Bringing Everything Together	Group Discussion
V.	WORKING WITH DATA IN TABLEAU. ▪ The Tableau Paradigm, Connecting to Data ▪ Managing Data Source Metadata ▪ Working with Extracts instead of Live Connections ▪ Tableau File Types ▪ Joins and Blends ▪ Filtering Data **(9Hrs.)**	Lecture Method using ICT Tools: Block Board, Projector	To Learn about the WORKING WITH DATA IN TABLEAU 1. The Tableau Paradigm, Connecting to Data 2. Managing Data Source Metadata 3. Tableau File Types 4. Joins and Blends 5. Filtering Data	Seminar

List of References (Book / ICT / Weblinks):

1. DT Editorial Services. 2016. Big Data Black Book. Dreamtech Press.
2. Shai Vain Gast. 2014. Beginning Python Visualization Crafting Visual Transformation Scripts. 2nd Edition. Aprés
3. White, Tom. 2012. Hadoop: The Definitive Guide. 3rd Edition. O'Reilly Media
4. Wes, Mc Kinny. 2012. Python for Data Analysis. 1 st Edition. O'Reilly Media

Name of the faculty member & Signature: B Venkataratnam

Approved by Head of the Department: **Swarna**

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

V th III SEMESTER

Department: B. Com Business Analytics **Class & Section: DCBA** **Course Code: CA22503**

Name of the Faculty Member: K.RAJITHA **Course Title: INTERNATIONAL FINANCIAL REPORTING- I**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	General Purpose of Financial Accounting and Reporting as per US GAAP AND IFRS Conceptual framework: Standard Setting Bodies & Hierarchy Elements of F/S Primary objectives of financial reporting - Qualitative Characteristics of F/S Fundamental Assumptions & Principles Accounting Cycle & Preparation of F/S General-purpose financial statements: Balance sheet – Income statement - Statement of comprehensive income - Statement of changes in equity - Statement of changes cash flows Public company reporting requirements: SEC Reporting Requirements - Interim Financial	Smart board Power point presentations Black board	To critically analyze the International Accounting Standards and their implication in financial statements.	Quiz on basic accounting terms and knowledge.

	Reporting Segment Reporting Revenue recognition: 5-Step approach to Revenue Recognition Certain Customer's Rights & Obligations - Specific Arrangements - Long Term Construction Contracts			
II.	CURRENT ASSETS AND CURRENT LIABILITIES AS PER US GAAP AND IFRS Notes Transfers & Servicing of Financial Assets Monetary Current Assets & Current Liabilities: Cash & Cash Equivalents - Accounts Receivable - Accounts Payable - Employee-related Expenses Inventory: Determining Inventory & Cost of Goods Sold - Inventory Valuation - Inventory Estimation Methods	Smart board Power point presentations Black board	To understand the structure of the framework of international accounting.	Assigned to get financial reports of existing companies.
III.	FINANCIAL INVESTMENTS AND FIXED ASSETS AS PER IS GAAP AND IFRS Financial Investments: Investments in Equity Securities - Investment in Debt Securities Financial Instruments Tangible Fixed Assets: Acquisition of Fixed Assets - Capitalization of Interest Costs Incurred After Acquisition - Depreciation - Impairment - Asset Retirement Obligation Disposal & Involuntary Conversions Intangible Assets: Knowledge-based intangibles (R&D, software)	Smart board Power point presentations Black board	To learn Disclosure requirements for companies in the form of financial notes and reports.	Preparation of Financial Reports

	Legal rights-based intangibles			
IV.	FINANCIAL LIABILITIES AS PER US GAAP AND IFRS Bonds Payable: Types of Bonds Convertible bonds vs. Bonds with detachable warrants Bond Retirement - Fair Value Option & Fair Value Election Debt Restructuring: Settlement - Modification of terms	Smart board Power point presentations Black board	To examine the fundamental requirements of IFRS on a standard-by-standard basis.	Group activity on accounting standards
V.	SELECT TRANSACTIONS AS PER US GAAP AND IFRS Fair value measurements: Valuation techniques - Fair value hierarchy - Fair value concepts Accounting changes and error correction: Changes in accounting estimate - Changes in accounting principle - Changes in reporting entity - Correction of an error Contingencies: Possibility of occurrence (remote, reasonably possible or probable) Disclosure vs. Recognition Derivatives and Hedge Accounting: Speculation (non-hedge) - Fair value hedge - Cash flow hedge Nonmonetary exchanges: Exchanges with commercial substance - Exchanges without commercial substance Leases: Operating lease - Finance lease - Sale leaseback	Smart board Power point presentations Black board	To provide guidance on how to use IFRS in practice.	Analysis on financial reports of MNCs

List of References (Book / ICT / Weblinks):

1. Miles CPA Review Concept Book: Financial Accounting and Reporting, Miles Education
2. Wiley CPA Excel Exam Review Course Study Guide: Financial Reporting, Wiley
3. IFRS &US GAAP Best Practices in Accounting World: GAAP Analysis, Rajesh Dhawan
4. Transparency in Financial Reporting: A concise comparison of IFRS and US GAAP 1st Edition, Ruth Ann McEwen, Harriman House Ltd.,
5. IFRS & US GAAP: A comprehensive Comparison, Steven Shamrock, Wiley
6. Wiley GAAP: Interpretation and Application of Generally Accepted Principles, Barry Epstein and Ralph Nach,Wiley
7. IFRS Simplified with Practical Illustration Part 1&2, Rammohan Bhave and Dr.Mrs.Anjali RammohanBhave, CNBC
8. https://youtu.be/0zM-W499LT8?si=3kYguo9KaU4-YGDh
9. https://youtu.be/Ylns92QNHio?si=DeAR4oNQiCh-VqbI
10. https://youtu.be/zTON38L3ro4?si=fTzdww4Y9EfW5DZU

Name of the faculty member & Signature: K. RAJITHA

Approved by Head of the Department: T. SWARNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- V

Department: Business Analytics
Name of the Faculty Member:
Mr. P Bala Praveen
No of hours taken: 73

Class & Section: DCBA

Course Code: CA 22504
Course Title: FINANCIAL PLANNING & PERFORMANCE

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Strategic planning: Analysis of external and internal factors affecting strategy Long-term mission and goals - Alignment of tactics with long-term strategic goals Strategic planning models and analytical techniques Characteristics of successful strategic planning process, Annual profit plan and supporting schedules: Operational budgets - Financial budgets - Capital budgets, Top-level planning and analysis: Pro forma income - Financial statement projections - Cash flow projections	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To understand the nuances in the strategic planning process	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
II.	Budgeting Concepts: Operations and performance goals, Characteristics of a successful budget process, Resource allocation, Forecasting techniques: Regression analysis - Learning curve analysis – Expected value, Budgeting Methodologies: Annual business plans (master budgets), Project budgeting – Activity based budgeting - Zero-based budgeting - Continuous (rolling) budgets - Flexible budgeting	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To learn the techniques of drafting all kinds budget and their role in financial goal setting.	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)

III.	Cost and Variance Analysis: Comparison of actual to planned results, Use of flexible budgets to analyze performance, Management by exception, Standard Cost System: Use of standard cost systems, Analysis of variation from standard cost expectations	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To examine the importance and application of crucial cost controlling methodologies	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
IV.	Performance Measures: Product profitability analysis - Business unit profitability analysis, Customer profitability analysis - Return on investment - Residual income, Investment base issues – Key performance indicators (KPIs) - Balanced scorecard, Responsibility Centers and Reporting Segments, Types of responsibility centers - Transfer pricing - Reporting of organizational segments	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To demonstrate the various performance measures and its implication on company's profitability	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
V.	Information Systems: Accounting information systems, Enterprise resource planning systems, Enterprise performance management systems, Data Governance: Data policies and procedures, Data Governance: Data policies and procedures, Development Life Cycle - Process automation - Innovative applications, Data analytics: Business intelligence - Data mining - Analytic tools - Data visualization	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	To understand computerized techniques to analyze the financial performance	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)

List of References (Book / ICT / Weblinks):

1. Wiley CMA Excel Learning System, Part 1: Planning, Performance & Analytics Data analytics: Business intelligence - Data mining - Analytic tools - Data visualization
2. Strategic Management and Business Policy: Globalization, Innovation and Sustainability, 15th edition; Wheelen, Thomas L., et. al.; Prentice Hall

Name of the faculty member & Signature:

Mr. Bala Praveen

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-IV

Department: B.Com Business Analytics **Class: DCBA** **Course Code:ES23401**

Name of Faculty Member: Dr. Veera Swamy **Course Title: Human Resource Management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Human Resource Management** **Definition and scope of HRM** **Evolution of HRM** **Importance of HRM in organizations** **Challenges and trends in HRM**	Lecture Method using Board	Understand the importance of HRM its provide students or participants with a foundational understanding of the principles, concepts, and practices of HRM.	typically covers a wide range of topics related to managing people within organizations
II.	**Strategic HRM, Link between HRM and organizational strategy** **Strategic planning process** **HR's role in formulating and implementing strategy** **Strategic HRM models and frameworks**	Lecture Method using ICT Tools and Board	Understand the human resource practices with the strategic goals and objectives of the organization. Here are the key objectives of SHRM:	. Here's a general outline of what might expect to find in a typical HRM
III.	HR Planning process and Job Analysis. Job analysis techniques Job design. **Recruitment and Selection** Recruitment process Recruitment sources and methods Selection process Selection tests and interviews	Lecture Method using Board	Apply the HR Planning and Recruitment and Selection processes encompass strategic alignment, forecasting skills, talent development, resource optimization, effective sourcing strategies, screening and evaluation skills, candidate experience management, diversity and inclusion awareness, and legal compliance.	Oral question and answers To understand the HR Planing and Recruitment and selection

IV.	*Training and Development* Training assessment, Training methods, Employee development programs, Career development and management, Evaluation of training effectiveness. Performance Management and Appraisal, Performance management methods	Lecture Method using ICT Tools and Board	Identify the Training and Development and Performance Management contribute to individual growth, organizational effectiveness, and the achievement of strategic goals. They empower employees to perform at their best, continuously improve their skills, and contribute to the overall success of the organization.	Oral question and answers To understand students' sensibility with regard to Training methods and techniques Career development and management training effectiveness and Performance management process.Performance appraisal methods
V.	International HRM: Challenges of managing a global workforce Expatriate management Cross-cultural management International HRM strategies. Recent trends in HRM and E-HRM Employer Branding, Knowledge Management, BPO . E-Recruitment, E-Selection, E-Performance management, E-HR Records, E-HR Audit, Learining Organisation, Role of leader in Learining Organisation	Lecture Method using ICT Tools and Board	Understand the ways ultimately supporting organizational success and competitiveness.International Human Resource Management (IHRM) and Electronic Human Resource Management (E-HRM) are both crucial aspects of managing human resources in contemporary organizations, each with its own outcomes and impacts.	To expose the students Overall, both IHRM and E-HRM contribute to the effective management of human resources in a globalized and digitalized business environment.

List of References (Book / ICT / Weblinks):

Human Resource Management" by Gary Dessler
"Human Resource Management: Theory and Practice" by John Bratton and Jeffrey Gold
"Strategic Human Resource Management" by Jeffrey A. Mello
"Managing Human Resources" by Scott A. Snell, Shad S. Morris, and George W. Bohlander
"Human Resource Management: Gaining a Competitive Advantage" by Raymond A. Noe, John R. Hollenbeck, Barry Gerhart, and Patrick M. Wright

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-IV

Department: B.Com Business Analytics **Class: DCBA** **Course Code:ES23401**

Name of Faculty Member: Dr. Veera Swamy **Course Title: Human Resource Management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Human Resource Management** **Definition and scope of HRM** **Evolution of HRM** **Importance of HRM in organizations** **Challenges and trends in HRM**	Lecture Method using Board	Understand the importance of HRM its provide students or participants with a foundational understanding of the principles, concepts, and practices of HRM.	typically covers a wide range of topics related to managing people within organizations
II.	**Strategic HRM, Link between HRM and organizational strategy** **Strategic planning process** **HR's role in formulating and implementing strategy** **Strategic HRM models and frameworks**	Lecture Method using ICT Tools and Board	Understand the human resource practices with the strategic goals and objectives of the organization. Here are the key objectives of SHRM:	. Here's a general outline of what might expect to find in a typical HRM
III.	HR Planning process and Job Analysis. Job analysis techniques Job design. **Recruitment and Selection** Recruitment process Recruitment sources and methods Selection process Selection tests and interviews	Lecture Method using Board	Apply the HR Planning and Recruitment and Selection processes encompass strategic alignment, forecasting skills, talent development, resource optimization, effective sourcing strategies, screening and evaluation skills, candidate experience management, diversity and inclusion awareness, and legal compliance.	Oral question and answers To understand the HR Planing and Recruitment and selection

	Training and Development *Training* assessment, Training methods, Employee development programs, Career development and management, Evaluation of training effectiveness. Performance Management and Appraisal, Performance management methods	Lecture Method using ICT Tools and Board	Identify the Training and Development and Performance Management contribute to individual growth, organizational effectiveness, and the achievement of strategic goals. They empower employees to perform at their best, continuously improve their skills, and contribute to the overall success of the organization.	Oral question and answers To understand students' sensibility with regard to Training methods and techniques Career development and management training effectiveness and Performance management process.Performance appraisal methods
V.	International HRM: Challenges of managing a global workforce Expatriate management Cross-cultural management International HRM strategies. Recent trends in HRM and E-HRM Employer Branding, Knowledge Management, BPO . E-Recruitment, E-Selection, E-Performance management, E-HR Records, E-HR Audit, Learining Organisation, Role of leader in Learining Organisation	Lecture Method using ICT Tools and Board	Understand the ways ultimately supporting organizational success and competitiveness.International Human Resource Management (IHRM) and Electronic Human Resource Management (E-HRM) are both crucial aspects of managing human resources in contemporary organizations, each with its own outcomes and impacts.	To expose the students Overall, both IHRM and E-HRM contribute to the effective management of human resources in a globalized and digitalized business environment.

List of References (Book / ICT / Weblinks):

Human Resource Management" by Gary Dessler
"Human Resource Management: Theory and Practice" by John Bratton and Jeffrey Gold
"Strategic Human Resource Management" by Jeffrey A. Mello
"Managing Human Resources" by Scott A. Snell, Shad S. Morris, and George W. Bohlander
"Human Resource Management: Gaining a Competitive Advantage" by Raymond A. Noe, John R. Hollenbeck, Barry Gerhart, and Patrick M. Wright

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

VI SEMESTER

Department:B.com (Business Analytics) **Class&Section:DCBA** **CourseCode: BC18026**

Nameofthe FacultyMember: Dr. SrinivasBolagani **CourseTitle:Consumer Behavior**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction** Direct and Indirect Taxes – Canons of Taxation - Features and History of Income Tax in India – Definitions and Basic Concepts of Income Tax: Assessee – Deemed Assessee – Assessee-in-default – Assessment Year – Previous Year - Person – Agricultural Income – Heads of Income – Gross Total Income – Total Income — Incomes Exempt from Tax. Residential Status and Scope of Total Income: Meaning of Residential Status – Conditions applicable to an Individual Assessee – Incidence of Tax – Types of Incomes. (Theory only)	LectureMethodusing ICT Tools Daily briefing and recapping and slip test for important concepts of the unit.	ToLearnaboutthe basic concepts of direct taxation and tax system in India.	Quiz (Memory) Giving presentation to the classmates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing Skills)

II.	**INCOME FROM SALARIES** Definition of 'Salary' – Characteristics of Salary – Computation of Salary Income: Salary u/s 17(1) – Annual Accretion – Allowances – Perquisites – Profits in lieu of Salary – Deductions u/s. 16 – Problems on computation of Income from Salary.	LectureMethodusing ICT Tools Daily briefing and recapping and slip test for important concepts and of the unit.	ToLearnaboutthe brand loyalty and internal influencing factors on consumer behavior.	Quiz (Memory) Interpreting problems and discussing solutions through problem solving.
III.	**INCOME FROM HOUSE PROPERTY** Definition of 'House Property' – Exempted House Property incomes– Annual Value – Determination of Annual Value for Let-out House and Self-occupied House – Deductions u/s.24 – Problems on computation of Income from House Property.	LectureMethodusing ICT Tools Daily briefing and recapping and slip test for important provisions and discuss solutions of the unit.	ToLearnaboutthe practical problems, assess the income from house property and tax planning.	Quiz (Memory) Interpreting problems and discussing solutions through problem solving. Group Discussion of case laws.
IV.	**PROFITS AND GAINS OF BUSINESS OR PROFESSION:** Definition of 'Business and Profession' – Procedure for computation of Income from Business – Revenue and Capital nature of Incomes and Expenses – Allowable Expenses u/s. 30 to 37 – Expenses expressly disallowed – Deemed Profits – Miscellaneous provisions u/s 44. Depreciation: Meaning – Conditions for charge of depreciation – Problems on computation of Income from Business. Income from Profession: Rules– procedure – problems on computation of Income from Profession.	LectureMethodusing ICT Tools Daily briefing and recapping and slip test for important concepts and provisions of the unit.	ToLearnaboutthe practical problems, assess the profits and gains of business or profession and tax planning.	Quiz (Memory) Interpreting problems and discussing solutions through problem solving. Group Discussion of case laws.
V.	**CAPITAL GAINS AND INCOME FROM OTHER SOURCES:** Introduction - Meaning – Scope of charge – Basis of charge – Short term and Long term Capital Assets – Transfer of Capital Asset – Deemed Transfer – Determination of Cost of Acquisition – Procedure for computation of Longterm and Short-term Capital	LectureMethodusing ICT Tools Daily briefing and recapping and slip test for important concepts and provisions of the unit.	ToLearnaboutthe practical problems, assess the capital gains and income from other sources and tax planning.	Quiz (Memory) Interpreting problems and discussing solutions through problem solving. Group Discussion of case laws.

	Gains/Losses – Exemptions in respect of certain Capital Gains u/s. 54 – Problems on computation of capital gains - General Incomes u/s. 56(1) – Specific Incomes u/s. 56(2) – Dividends u/s. 2(22) – Winnings from lotteries Puzzles, crown world puzzles, Races – Interest on Securities – Gifts received by an Individual – Casual Income – Family Pension– Rent received on let out of Furniture- Plant and Machinery with/without Building – Deductions u/s. 57. (Theory only)			

Listof References (Book/ICT/ Weblinks):

Gupta, S.L. and Pal, Sumitra. 2001. _**Consumer Behavior – An Indian Perspective'** **& Cases**. S. Chand and Sons: NewDelhi.

Chunawall, SA. 2000. _**Commentary on Consumer Behavior'**. Himalaya Publishers: Mumbai &Hyderabad.

Schiffinan, Leon &Kanuk, Leslie. 2002. _**Consumer Behavior' (6th edition)** PHI:USA.

Nair, R.Suja, 2003. _**Consumer Behavior in Indian Perspective'**. Himalaya publishing house: Mumbai &Hyderabad.

Nameofthefacultymember&Signature:

Dr. Srinivas Bolagani

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER VI

Department:B.com Businessprocess management

Class&Section:DBPM &DCBA

CourseCode: BC18022

Nameofthe FacultyMember:N SUJITHA

CourseTitle:Auditing &accounting standards

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction ,definition of auditing objectives of audit, scope ofauditing advantages and limitations of an audit-types ofaudit fraud and error basic concepts in auditing (audit evidence, auditor, independence materiality). Qualities and classification of auditors.	Lecture method	To understand the basic concepts of auditing and the nature and scope of auditing	Observation method
II.	Audit process , procedure &techniques • planning- programed . audit working papers and audit note book . test checking (its features, advantages and limitations) • Audit sampling (methods of sampling). Vouching &Verification: Vouching or cash payments . Purchase of goods, assets, payment of taxes, traveling expenses salaries &W ages , Vouching of cash receipts (cash sales, rental receipts, sale of assets, income from investments)	Lecture method	To organize the various steps in an auditing process and point out the techniques of vouching of cash payments and receipts	Presentations
III.	• Definitionof internal control objectives &environment of internal controls features and limitations of internal controls. Internal check (meaning and featurcs) Advantages	Lecture method	To analyze the features and importance of internal control, check and audit	Observation method

	&disadvantages Internal audit (meaning and objectives) Advanlagedisadvantages "			
IV.	Appointment of auditor qualification and disqualification of auditor duties and rights of auditor procedure for removal of auditor Audit reports (clean report, qualified report, adverse report &disclaimer of opinion).	Lecture method	To prepare different types of audit reports and explain the procedure for appointment and removal of a company auditor	Observation
V.	Meaning of accounting standards . Objectives of accounting standards Advantages of setting accounting standards. The accounting standard board -objectives of accounting standard board Functions of accounting standard board. Applicability and scope of accounting standards. . Importance of accounting standards. Responsibility of management and auditor's responsibility . Abrief introduction to list of accounting standards issued by Institute of Chartered . Accountants of India (AS-1 to AS-29)	Lecture method	To understand the regulatory framework in which accounting standards are formulated and operated	Presentations

Listof References (Book/ICT/ Weblinks):

1.Tondan,BN Sudarsanam.S,&sundharabahu.S.2006. A Handbook of practical

2. Auditing S.chand publication

Nameofthefacultymember&Signature:

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER – IV

Department: B.Com(Business Analytics)

Class & Section: NCBA **Course Code: CA23403**

Name of the Faculty Member: Paduchuri Sushma

Course Title: Forecasting and Predictive Analytics

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT – I** **Regression, Forecasting & Distance:** Regression Analysis, Linear Regression Multiple Linear Regressions Logistic Regression and Business Problems Forecasting in time: Identify the components of a time forecast to predict future values from a model Differentiate seasonal variations from trends to improve prediction of future values from a model	Lecturing using traditional methods, Lecturing Method using ICT Tools, Interactive Learning Problem-Solving	Understand the regression concepts	PPT presentation , Seminars and assignments

	Measuring Distance: Identify the meaning of dimensionality and its implications in analytics			
II.	**UNIT – II** **Classification:** Classification Introduction KNN algorithm with fixed variable number Naive Bayes Classification, Support Vector Machines-SVC Decision Tree algorithm	Lecturing using traditional methods, Lecturing Method using ICT Tools	Apply data classification techniques	PPT presentation , Seminars and assignments
III.	**UNIT – III** **Clustering:** Introduction to Clustering Determine core aspects and types of Clustering to properly apply the algorithms to business problems Apply various clustering algorithms to data sets to solve common, applicable business problems.	Lecturing using traditional methods, Lecturing Method using ICT Tools	Demonstrate clustering mechanism	PPT presentation , Seminars and assignments

IV.	**UNIT-IV** **Optimization:** Identify the goals and constraints of a linear optimization Calculate a linear optimization to solve a business problem.	Lecturing using traditional methods, Lecturing Method using ICT Tools	Explain the concepts of linear optimization	PPT presentation , Seminars and assignments
V.	**UNIT – V** **Simulation:** Use data analysis performed on historical data and any applicable theory to 6 construct a model Use a Monte Carlo analysis with the model in order to generate and assess 6 the likelihood of predictions from the model.	Lecturing using traditional methods, Lecturing Method using ICT Tools	Apply data analytical techniques on sample data model	PPT presentation , Seminars and assignments

ESSENTIAL READING

1. Fundamentals of Business Analytics, 2nd Edition; R N Prasad, Seema Acharya; Wiley

Name of the faculty member & Signature: Paduchuri Sushma

Approved by Head of the Department

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Plan for the Academic Year 2023 – 2024

SEMESTER

Department ENGLISH **Class & Section:** ACM, ACSF, ACBA **Course Code:** BE 23201

Name of the Faculty Member: G.R.Nikitha **Course Title:** BUSINESS ENGLISH-II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT-I** **Claim and Adjustment E- Mails -9Hrs** • Hints for Drafting Claim and Adjustment E- Mails (2) • Elements of Claim and Adjustment E- Mails (2) • Specimen Claim and Adjustment E-Mails (5)	Lecture Method using ICT Tools	To learn to write claim and adjustment e-mails, which could be prove to be useful during a business correspondence.	**Writing Skill Activity**-Developing effective writing skills, by making the students write claim and adjustment e-mails. Students are taught as to how to frame the introduction, body and the concluding paragraphs for these e-mails.
II.	**UNIT-II** **Grammar in Business Correspondence-9Hrs** • Commonly Misused Prepositions (3) • Subject- Verb Agreement (3) • Articles (3)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	**Speaking Skills and Writing Skills-** Developing effective speaking and writing skills, by ensuring that the students learn the grammar rules for articles, subject-verb agreement in order to communicate well and write with clarity.
III.	**UNIT-III** **Job Applications Letters and Resume writing 9Hrs** • Importance and Functions of an Application Letter (1) • General Guidelines to write Application Letters and Resumes (1) • The Form and Content of an Application Letter (1) • Preparing a Resume (2) • Specimen Application Letter and	Lecture Method using ICT Tools	To be able to draft a lucid job application letter and a resume effectively: both of which are extremely important for students to draft immediately after their graduation.	**Writing skill activity:** To write job application letters effectively, having understood the role of the introductory, body and conclusion paragraphs in building this letter. To draft a resume, highlighting well the candidate's achievements, technical skills and soft skills.

	• Preparing a Resume (2) • Specimen Application Letter and Resume (4)			candidate's achievements, technical skills and soft skills.
IV.	**UNIT-IV** **Report Writing – I (Business Report) 9Hrs** • Characteristics of a good Business Report (1) • Importance of Business Reports (1) • Types and Functions of Business Reports (2) • Preparing a Business Report and Specimen (2) • Specimen Business Report (3)	Lecture Method using ICT Tools	To be able to learn the structure, types and importance of a report and to draft a business report effectively	**Writing Skill Activity:** Students were given assignment topics to draft a business report. Also, students were taught the writing skill of framing a questionnaire.
V.	**UNIT-V** **Language Proficiency in Business Communication 9Hrs** • Framing Questions (2) • Active and Passive Voice (2) • Punctuations (2) • Paragraph Writing (3)	Lecture Method using ICT Tools	To write grammatically correct sentences and to be able to draft a grammatically and syntactically correct paragraph. Students also learn to converse in the right manner having understood the grammatical rules of the language.	**Writing Skill Activity-** Students were taught to draft a complete paragraph and to frame a formal paragraph having clearly understood the functions of the topic, supporting and closing sentence. Students are also made to solve several grammar worksheets in order to enable a thorough understanding of the grammatical topics in the unit. **Speaking Skills-**Students are taught the grammatical rules for active-passive voice, framing questions and punctuations, to be able to converse effectively in varied business scenarios.

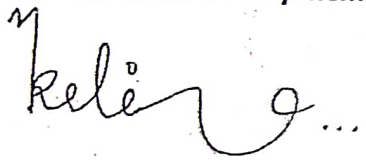
List of References (Book / ICT / Weblinks):

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.

SUGGESTED READING:

1. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.
2. Gruscendorf, Marion. 2007. **English for Presentations.** U.K: Oxford Publication Oxford.
3. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.
4. Rai, Urmila., and Rai, S.M. 2002. **Business Communication**. Mumbai: Himalaya Publishing House.
5. Guy Brook-Hart. **Business Benchmark-Workbook**. Cambridge University Press.
6. Dr. Francis M.Peter S.J. **Business English Communication.**
7. Leo Jones and Richard Alexander. **New International Business English-Workbook**. Cambridge University Press.

Name of the faculty member & Signature: G.R.Nikitha



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - II

Department: B.Com Business Analytics

Class & Section: ACBA

Course Code:CA22201

Name of the Faculty Member: V ANUSHA

Course Title: Data analytics essentials

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	VARIABLES FOR DATA ANALYTICS: Types of Variables: Determine the nature of variables in data analysis - Differentiate between numerical and categorical. Distinguish between nominal and ordinal variables - Differentiate between interval and ratio - Distinguish between continuous and discrete	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To learn about the variables for data analytics	Offline quiz.
II.	ESSENTIAL STATISTICS DATA ANALYTICS: Central Tendency of Data: Identify the components of central tendency - Calculate mean/median/mode Identify the steps in calculating weighted/geometric/harmonic means - Measurement and Variability: Determine core aspects of measurement and variability Calculate range - Calculate quartiles - Calculate interquartile range - Calculate variance - Calculate standard deviation Analyse permutation with repetition - Analyse combinations without repetition	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn about how to calculate measures of central tendency and dispersion	Computer Based test.

III.	PROBABILITY FOR DATA ANALYTICS: Basic Probability: Uses of probability - Differentiate between sample space, event, independent and dependent Calculate probability - Probability and Ven Diagramming: Analyze "this" OR "that" diagram - Analyze "this" AND "that" diagram Analyze exclusive diagram - Joint probability - Conditional probability - Calculating Probability: Calculate P using a contingency table - Calculate P from trees - Calculate Bayes' theorem - Calculate the mean in terms of probabilities - Calculate the variance and standard deviation in terms of probabilities - Calculate conditional probability	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to analyse probability for data analytics.	Offline Quiz.
IV.	DISTRIBUTIONS: Distributions: Analyse distributions - Discrete distributions - Binomial distributions - Poisson distributions Continuous Distributions: Identify continuous distributions - Calculate continuous distributions - Identify cumulative distributions - Identify normal distributions - Calculate normal distributions - Compare quartiles and normal distributions - Identify skew	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To learn about nature of the statistical data using distributions	Written Test.
V.	CASE STUDIES USING R: Statistics in R Case Study: Apply Vectors in R - Use Data Frames in R - Use data from an external file in R Apply mean/median/standard deviation in R Distributions in R Case Study: Use Normal distribution function in R - Use Poisson distribution function in R Apply Scatter plot in R - Apply Histogram	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn about basic concept of R. To Learn about Choose an appropriate graphic for analysis and apply vectors in R	Practical Test.

	in R - Apply Box Plot in R - Fraud Detection Case Study: Apply scripts in R - Create reusable, user defined function in R - Use Bayes' Theorem in R - Choose a function flexible to allow for different input parameters			

Listof References (Book/ICT/ Weblinks):

1. Data Analytics with R by Bharati Motwani ,Wiley publication
2. Cotton, Richard. 2013. Learning R. USA: O'Reilly
3. Matlof, Norman. 2011. The Art of R Programming. 1st Edition. San Francisco: No Starch Press.
4. Purohi, Sudha G. Gore, Sharad D. and Deshmukh, Shailaja R. 2015. Statistics using R. 2nd Edition. New Delhi: Narosa Publishing House
5. Fundamentals of Statistics: Gupta S.C, Himalaya
6. Statistics: E. Narayanan Nadar, PHI Learning
7. Business Statistics: Dr. J. K. Thukral, Taxmann Publications
8. Business Statistics: K. Alagar, Tata McGraw Hill
9. Fundamentals of Statistical: S. P Gupta, Sultan Chand
10. Business Statistics: J. K. Sharma, Vikas Publishers
11. Business Statistics: S. L Aggarwal, S. L. Bhardwaj, Kalyani Publications
12. https://www.youtube.com/watch?v=X48cZ6DGaSw
13. https://www.youtube.com/watch?v=06lxbMpYxm4
14. https://www.youtube.com/watch?v=_V8eKsto3Ug
15. https://www.youtube.com/watch?v=eR-XRSKsuR4

V. Anusha (V. Anusha)

Name of the faculty member & Signature:

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER II

Department:B.com (Business Analytics) **Class&Section:ACBA** **CourseCode:BC2202**

Nameofthe FacultyMember:K.Rajitha **Course Title: Financial Accounting II**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Partnership – Admission** • Legal provisions in the absence of a partnership deed (1) • Fixed and fluctuating capitals (2) • Preparation of final accounts with adjustments (2) • Profit and loss appropriation account – methods of calculating good will – treatment of good will • Calculation of sacrificing, new profit-sharing ratio, and admission of a partner. (4)	1.Lecture method 2. ICT	• To impart the skills of preparation of final accounts of partnership organizations, admission.	Solving different types of problems And conducted seminars.
II.	**Partnership–Retirement and Death** • Treatment of goodwill (2) • Methods of calculating good will (2) • Calculation of gaining ratio, new profit-sharing ratio (1) • Retirement of a partner (3) • Death of a partner (3) • Including joint life policy (1)	Lecture method and ICT	To impart the skills of preparation of final accounts of partnership (Retirement and Death)	Solving different types of problems and conducted GD
III.	**Partnership – Dissolution and Insolvency** • Dissolution of partnership (4) • Insolvency of a partner (4) • Insolvency of firm (excluding sale to firm, company, and amalgamation) (4)	Lecture method and ICT	To impart the skills of preparation of final accounts of partnership(Dissolution and Insolvency)	Solving different types of problems And conducted slip tests.

IV.	**Single Entry System** • Single Entry- Features -Books and Accounts maintained (2) • Preparation of Statement of affairs-Difference between statement of affairs and Balance Sheet • Recording of transactions- Ascertainment of profits under Single entry system (Statement of affairs method) -Problems	Lecture method and ICT	• To provide knowledge on single entry system and on special transactions .	Solving different types of problems and conducted slip tests.
V.	• Consignment Meaning – features – Pro-forma Invoice – Account sales Delcredere commission 3 • Accounting treatment in the books of consignor & consignee 3 • Valuation of stock – treatment of normal & abnormal loss 3 • Invoice of goods at a price higher than cost price (simple problems) 3	Lecture method and ICT	To provide knowledge on Consignment business	Solving different types of problems and conducted seminars.

Listof References (Book/ICT/ Weblinks):

1. Jain, S.P&Narang, K.L. 2012. **Financial Accounting (Advanced Accounting). (12th Revised and updated edition)** New Delhi: Kalyani Publishers.
2. Maheswari, S.N&Maheswari, S.K. 2004. **Advanced Accountancy – Volume-I. (9thedition)** New Delhi: Vikas Publishing House.
3. Gupta, R.L&RadhaSwamy, M. 2001. **Advanced Accountancy – Volume-I. (10thedition)** New Delhi: Sultan Chand & sons.

Nameofthefacultymember&Signature: K.RAJITHA

Approvedby HeadoftheDepartment: T.SWARNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for theAcademicYear 2023–2024 SEMESTER

Department: B.Com Business Analytics **Class&Section:ACBA** **Course Code:BC22084**

Name of the Faculty Member:Pathri Shirisha **CourseTitle:Fundamentals of Business Mathematics**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Quadratic Equations:** ▪ Solution of a quadratic equation- Factorization method (2) ▪ Problems (2) ▪ Sum and product of roots- Discriminant and Nature of roots (2) ▪ Problems(2) ▪ Formation of quadratic equation.(2) ▪ Problems(2)	Discussion and Demonstration, Practical problems, whiteboard, Marker, PPT Presentation, Projector.	Construct algebraic models and use the quadratic formula to describe real-life situations. Be able to decide what type of model fits the situation best:	Written test, Case Study
II.	**Matrices–I** ▪ Introduction (2) ▪ Definition of matrix (2) ▪ Types of matrices- Algebra of matrices- Addition, subtraction, Multiplication (2) ▪ Transpose of a matrix (1) ▪ Problems(2) ▪ Determinant of a Square matrix – Calculation of values of determinants up to third order (3)	Discussion and Demonstration, Practical problems, whiteboard, Marker, PPT Presentation, Projector.	Analyze and use linear models to answer questions about the situations they represent knowledge including the mathematical notation and terminology used in Matrices.	Group Discussion
III.	**Matrices–II** ▪ Ad joint of a matrix- inverse of a matrix through ad joints (2) Problems(2) ▪ Simultaneous Linear Equations-	Discussion and Demonstration, Practical problems, whiteboard, Marker, PPT Presentation, Projector	Construct mathematical expressions that involve matrices and linear systems of linear equations.	Written Test, Group Discussion

	Rule (2) Problems (2) ▪ Matrix Inversion Method(2) Problems (2)			
IV.	**Indices and Arithmetic progression** ▪ Indices- laws of indices- Simple problems (4) ▪ General term- Sum of n- terms- Arithmetic mean (4) ▪ Application of Arithmetic progression(4)	Discussion and Demonstration, Practical problems, whiteboard, Marker, PPT Presentation, Projector	Apply index laws to simplify and evaluate arithmetic expressions. Understand types of sequences called arithmetic progression and also find arithmetic mean (A.M) between two given numbers.	Case study
V.	**Logarithms** ▪ Introduction- Laws of operations (4) ▪ Operations with logarithms- Compound Interest- Depreciation. (4) ▪ Percentages- Profit Loss- Ratio, properties of ratio-proportion properties of proportion. (4)	Discussion and Demonstration, Practical problems, whiteboard, Marker, PPT Presentation, Projector	Solve by converting the logarithmic equations to exponential equations. Evaluate the impact of compound interest on simple financial decisions.	Oral Test

Listof References (Book/ICT/ Weblinks):

1. Sancheti, D.C, &Kapoor, V.K **Business Mathematics**, Sultan Chand & Sons: New Delhi
2.Goel, Ajay &Goel, Alka. 2007. **Mathematics & Statistics**, 4 th Edition. Taxman Publications
3.Dr. Dikshit, Amarnath&Dr. Jain, Jitendra Kumar. 2005. **Business Mathematics**. Himalaya publishing House: Mumbai
4.Zameeruddin, Qazi&Khanna, Vijay. 2013. **Business Mathematics**, Vikas Publishing House: New Delhi
5.Dubey Anup, Thakur Vishal. **Quantitative Aptitude**. Taxman's Publications.

Name of the faculty member & Signature: PATHRI SHIRISHA

P. Shirisha

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 --24

SEMESTER

Department: B.Com Business Analytics

Class & Section: ACBA

Course Code: VE18201

Name of the Faculty Member: Larissa Sequeira

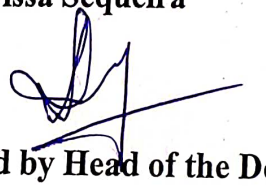
Course Title: Value Education and Personality Development

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Ethics	Lecture Method	To Learn to differentiate between accepted and Counter norms and to be able to identify the various Dimensions of Human Development	Group discussion to understand the value system in the society.
II.	Approach to Life	Lecture Method	To Learn to demonstrate Love and experience of God and to be able to identify the Basic issues of Life and the Happiness as Life's goal.	Debate on the topics covered
III.	Concern for others	Lecture Method	To Understand the importance of concern for others and critic the various problems that deter the growth of the society	Scenario discussion
IV.	Transformation of Self	Lecture Method	To be able to recognize the traits of a good personality and practice self exploration	Self reflection and discovery of one's true self.
V.	Life Enrichment Skills	Lecture Method	To learn to be able to interpret the purpose of life and goal setting and demonstrate self management.	Exploring of personal skills through peer discussions.

List of References (Book / ICT / Weblinks):

1. *Human Values* – Development Programme – AIACHE
2. *In Harmony* – Value Education at College level. By a Team of Ethics Teachers (G.M. James , B.J JAYARAJ , K.CANDASSAMY, BERNARD D'SAMI , S.J.A PACKIARAJ)

Name of the faculty member & Signature:
Mrs. Larissa Sequeira



Approved by Head of the Department:



LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

VI SEMESTER

Department: B. Com Business Analytics | **Class & Section: ACBA** | **Course Code: CA 22203**

Name of the Faculty Member: T. Swarna | **Course Title: MANAGERIAL ECONOMICS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Managerial economics-meaning, definition, nature and scope Concepts of managerial economics-incremental principle, opportunity cost Relation of managerial economics with other disciplines	Flipped Classroom Contextual Learning	Students will understand the meaning, definition, nature, and scope of managerial economics.	Ask to read various Business newspapers,Balance sheets,Trend analysis of companies.
II.	Demand-meaning, types, determinants Law Of demand Revealed preference theory Elasticity of demand-meaning, types, methods to measure ED Demand forecasting methods	Smart board Power point presentations Black board	Students will grasp the meaning, types, and determinants of demand.	Simulated market is created by students to understand factors affecting demand.
III.	Production function with one variable input Production two inputs Returns to scale Economies and diseconomies of scale Short run cost Long run cost	Class Rotation	Students will learn the meaning and types of production functions .	Greetings workshop was conducted by students where they manufactured cards.
IV.	Types of market Features of market Price determination in markets Price discrimination	Differentiated Learning - Differentiated learning	Students will understand the meaning and features of different market structures: perfect competition, monopoly, oligopoly, and monopolistic competition.	Group activity on Market structures.

		recognizes that each student has their own individual style of learning.		
V.	Capital budgeting process and importance Cost of capital signifiacance Theories of profit	Contextual Learning	Students will grasp the meaning and nature of profit and explore different profit theories such as the innovation theory of profit, risk-bearing theory of profit, and uncertainty- bearing theory of profit.	Contextual learning opens the classroom, allowing students to apply the knowledge they learn in class to the real world around them. It helps students understand concepts like cause and effect and the interconnectivity.

List of References (Book / ICT / Weblinks):

1. Yogesh Maheshwi "Managerial economics"
2. D.N. Dwiedi" managerial economics"
3. A.R.Aryasri" managerial economics and financial accounting" tata McGraw hill education private limited **h.L. Ahuja "Managerial economics", Chand publications**

T. Swarna

Name of the faculty member & Signature: T. SWARNA

Approved by Head of the Department: T. SWARNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER IV

Department: B.Com (Business Analytics) **Class&Section: NCBA** **CourseCode:BC23015**

Nameofthe FacultyMember: K.RAJITHA **CourseTitle:CORPORATE ACCOUNTING**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Company Final Accounts and profits prior to incorporation company final accounts** • Introduction to Company Final Accounts. • Format of Profit & Loss A/c and Balance Sheet • Treatment/Provisions relating to preparation of Final Accounts- • Statement of Profits and Balance Sheet (problems) • profits prior to incorporation • Profits prior to incorporation- Meaning and Methods of computing Profits prior to	Lecture Method and ICT	Understand the various types of capital structures of the company and their representation in the balance sheet, preparation of financial statements with profits before incorporation.	Different types of problems solved and GD
II.	**Valuation of Goodwill and Shares** • Need and methods of Valuing Goodwill- Average profit method • Super profit method	Lecture Method and ICT	To know the valuation of shares	Different types of problems solved and

	• Capitalization method (Problems) • Valuation of shares • Need for valuation- Methods of valuation Net assets method • Yield Basis Method • Fair Value Method (Problems)		and goodwill.	seminars
III.	**Amalgamation and Internal Reconstruction** **Amalgamation of Companies** • Amalgamation: Meaning, Definition, Features- Types of Amalgamation • Amalgamation in merger and purchase Treatment in the books of Transferor and Transferee • Problems on Amalgamation in merger and purchase • (As per accounting Standard 14, Excluding inter-company holdings) • Internal Reconstruction of Companies • Internal Reconstruction: Meaning of Internal reconstruction • Capital Reduction and Reconstruction • Accounting Treatment in Internal reconstruction • Preparation of post reconstruction Final statements - Problems on Internal Reconstruction.	Lecture Method and ICT	Analyse amalgamation in merger and purchase and accounting treatment for internal reconstruction.	Different types of problems solved and seminars
IV.	**Bank Accounts** • Accounting system of a banking company • Registers to be maintained by banks • Slip system of posting • Rebate on bills discounted • Advances classification of Bank advances	Lecture Method and ICT	Accounting systems of a banking company under the guidance of RBI.	Different types of problems solved and GD

	• Non-Performing assets Legal provisions and guidelines for preparation of Form A and Form B Problems on banking companies (final accounts			
V.	**Accounts of Insurance Companies** **Life Insurance Companies** • Meaning of Life Insurance • Legal provisions relating to Preparation of Revenue Account • Profit and loss Account • Balance Sheet and Valuation Balance sheet Problems on Life insurance General Insurance: • Meaning of General Insurance • Legal provision regarding preparation of Final Accounts of GIC • Revenue A/C, P&L A/c, and Balance Sheet with special reference to • (Fire& Marine insurance only) • Problems on GIC	Lecture Method and ICT	Accounting system of Insurance companies under IRDA	Different types of problems solved and GD

Listof References (Book/ICT/ Weblinks):

1. Jain, S.P.and Narang. 2012. **Accountancy–III**. New Delhi: Kalyani Publishers.
2. Haneef and Mukherjee.2004. **Modern Accountancy–I**. 2nd edition. New Delhi: Tata McGraw Hill Publication.
3. Maheshwari S.N. and Maheshwari S.K. **Advanced Accountancy-I**. New Delhi: Vikas Publishing House Private Limited.
4. Jain, S.P. &Narang, K.L. 2012. **Corporate Accounting.** 11th edition. New Delhi: Kalyani Publishers.
5. Manual of Wings, Tally and Focus Accounting Package
6. Goyal, V.K. **Corporate Accounting**. Excel.
   Verma, K.K. **Corporate Accounting**. Excel.

Nameofthefacultymember&Signature: K.RAJITHA

Approvedby HeadoftheDepartment:T.SWARNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-III

Department: Environmental Science | **Class: B. Com -NCBA** | **Course Code:ES23301**

Name of Faculty Member: Dr.G.Sudhakar | **Course Title: EVS&GS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable & Non-Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of naturalresources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earthquakes, and Cyclones**	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge onsolid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	**Rainwater Harvesting, Water-shed Management** **Global Warming Ozone depletion, and Acid rains Environmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	Lecture Method using ICT Tools and Board	Apply environmental science knowledge to improve the resources. Evaluate and understand the sustainable environmental conditions and control methods	Oral question and answers To understand the environmental policies and regulations

IV.	**Why should we study gender issues?** **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	Lecture Method using ICT Tools and Board	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	Oral question and answers To develop students' sensibility regarding issues of gender in contemporary India
V.	**Sexual harassment** **Say no eve teasing.** **Caste-based violence.** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act (2005)**	Lecture Method using ICT Tools and Board	Understand gender problems and ways of addressing them, including interactionsacross local to global scales in communities and overcome inequalities with legislation.	Oral question and answers To expose the students to debate on politics and economic works and on genderviolence.

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition.Chennai: Oxford University Press.
Dr D K Asthana and Dr Meera Asthana. 2014.
2.**A Textbook of EnvironmentalStudies** Revised Edition. New Delhi: S. Chand & Company
3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomen in the Telangana People's Struggle**. New Delhi: Kali for Women.
4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.** Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993

Name of the faculty member & Signature: (Dr. G.SUDHAKAR)

Approved by Head of the Department:

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

VI SEMESTER

Department:B.com (Business Analytics) **Class&Section:DCBA** **CourseCode: BC18026**

Nameofthe FacultyMember: Dr. SrinivasBolagani **CourseTitle:Consumer Behavior**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction** Nature-scope-marketing concept Role of consumer- Consumer decision process. Learning theories- behavioral learning theory, cognitive learning theory. Learning Process-Drives, Cues, Stimuli Role of reinforcement-extinction. Generalization, discrimination-advertising effect.	LectureMethodusing ICT Tools Daily briefing and recapping and slip test for important concepts of the unit.	ToLearnaboutthe basic learning theories and learning process in consumer behavior.	Quiz (Memory) Giving presentation to the classmates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing Skills)
II.	**Brand Loyalty** Perception-Concept-Role Perceptual Mapping- Perceived Risk and Cognitive Processes, Attribution Process. Consumer motivation- Freudian theory, stimulus-response, and trail approach-theories.	LectureMethodusing ICT Tools Daily briefing and recapping and slip test for important concepts of the unit.	ToLearnaboutthe brand loyalty and internal influencing factors on consumer behavior.	Quiz (Memory) Giving presentation to the classmates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing Skills)

	Personality types, self-concept- life style- social character.			
III.	**ATTITUDES** Concept- components of attitudes- development of attitudes- Functional nature of attitudes. Attitudes models- Tri-component model, multi-component model, Attitude towards the Ad model	LectureMethodusing ICT Tools Daily briefing and recapping and slip test for important concepts of the unit.	ToLearnaboutthe attitudes of the consumers and Attitude models.	Quiz (Memory) Giving presentation to the classmates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing Skills
IV.	**GROUP CONFIRMITY** Reference groups and their relevance- Opinion leadership- Class and culture- Social stratification, social class and consumer behavior.	LectureMethodusing ICT Tools Daily briefing and recapping and slip test for important concepts of the unit.	ToLearnaboutthe Group behavior as well as impact on consumer. Impact of class culture on consumer behavior.	Quiz (Memory) Giving presentation to the classmates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing Skills
V.	**CONSUMER BEHAVIOR MODELS** Maslow's hierarchy of needs, Consumer-decision process model, Howard-Sheth model, Buyer behavior model, Contemporary models- Nicosia model and Engel-Blackwell Miniard model.	LectureMethodusing ICT Tools Daily briefing and recapping and slip test for important concepts of the unit.	ToLearnaboutthe consumer behavior models and contemporary models.	Quiz (Memory) Giving presentation to the classmates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing Skills

Listof References (Book/ICT/ Weblinks):

Gupta, S.L. and Pal, Sumitra. 2001. _**Consumer Behavior – An Indian Perspective' & Cases**. S. Chand and Sons: NewDelhi.

Chunawall, SA. 2000. _**Commentary on Consumer Behavior'**. Himalaya Publishers: Mumbai &Hyderabad.

Schiffinan, Leon &Kanuk, Leslie. 2002. _**Consumer Behavior' (6th edition)** PHI:USA.

Nair, R.Suja, 2003. _**Consumer Behavior in Indian Perspective'**. Himalaya publishing house: Mumbai &Hyderabad.

Approved by Head of the Department:

Name of the faculty member &Signature:

Dr Sanjay Bolagani

&

B Sivaiah

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: B. Com Business Analytics **Class & Section: DCBA** **Course Code:** BC18023

Name of the Faculty Member: Mr. Bala Praveen
No Of hours taken: 51

Course Title:
Entrepreneurship and Development

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Entrepreneurship – meaning, definition of entrepreneur, entrepreneurship. Characteristics, classification and functions of an entrepreneur, Entrepreneurs VS Entrepreneurship –Entrepreneurial environment, Women Entrepreneurs – concept support and assistance, problems and measures, Role of entrepreneur in Economics Development.	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	Understand the nature and basic concept of entrepreneur and entrepreneurship	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
II.	Entrepreneurial Development & Training – meaning, need and objectives of EDP, Entrepreneurial Training – meaning, importance objectives and methods, Institutions assisting entrepreneurs, Financial assistance to entrepreneurs, Types and sources of finance	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	Demonstrate the knowledge of entrepreneurship development programmes	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
III.	Project – meaning and definition, Project classification, project identification and its importance, Project formulation – concept, need and significance, project feasibility and its aspects, contents, reason for Project report failure of a project, Review Techniques – PERT and CPM method.	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	Recognize the need for project report and analyze the concepts of project formulation	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal

				assignment (Writing skills)
IV.	Factor design & layout – meaning, importance and Factors affecting factory design, Factory layout – meaning, considerations in factory layout, Standardization – meaning, objectives, types and advantages / importance, Quality control – meaning and importance.	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	Interpret factory design and factory layout and identify the importance of standardization and quality control	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)
V.	Small scale industries – concept, meaning and definition, Classification and characteristics. Difference between large scale and small-scale industries, Financial schemes and policies for SSI – problems of SSI, Sickness of small-scale industries reasons and remedies	Lecture Method using ICT Tools Daily briefing and recapping and slip test for important concepts of the unit	Differentiate small- and large-scale industries and identify the reasons for sickness of small-scale industries	Quiz (Memory) Giving Presentation to the class mates with PPT (Communication skills), Group Discussions (Interpersonal skills), Personal assignment (Writing skills)

List of References (Book / ICT / Weblinks):

1. Srinivasan& Gupta. 2007. "Entrepreneurship Development". (5th edition) Sultan Chand & Co: New Delhi.
2. Desai, Vasant. 2010. "The dynamics of Entrepreneurial Development & Management". (6th edition) Himalaya Pub.

Name of the faculty member & Signature:

Name of the faculty member & Signature:

Mr. P. Bala Praveen

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER VI

Department:B.Com (Business Analytics) **Class&Section: DCBA** **CourseCode:CA22603**

Nameofthe FacultyMember: K.RAJITHA **CourseTitle: INTERNATIONAL FINANCIAL REPORTING II**

Unit	Topicsto becovered	Teaching Pedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**: PENSIONS & POST-EMPLOYMENT BENEFITS (AS PER US GAAP & IFRS):** ▪Defined Contribution Pension Plans ▪Defined Benefit Pension Plans: Pension Obligations ▪Pension Plan Assets ▪Net Pension Expense ▪Other Post -Retirement Benefits	Lecture method and ICT	To critically analyze the International Accounting Standards and their implication in the financial statements.	Debate on the topics covered
II.	**INCOME TAXES (AS PER US GAAP & IFRS):** ▪Income tax expense: Current income tax expense - Deferred income tax expense Deferred taxes on balance sheet: Deferred tax assets - Deferred tax liabilities Specific accounting - considerations: Net Operating Losses (NOL) - Investee's undistributed dividends ▪Other Post -Retirement Benefits	Lecture method and ICT	To understand the structure of the framework of international accounting	Conducted seminars
III.	**EQUITY (AS PER US GAAP & IFRS):** ▪Equity accounts: Common Stock - Preferred Stock - Additional Paid-In Capital ▪Retained Earnings - Accumulated Other Comprehensive Income - Treasury Stock - Specific accounting considerations: Share-based Payments to Employees - Equity Securities Classified as Debt Presentation of	Lecture method and ICT	To learn Disclosure requirements for companies in the form of financial notes and reports.	Preparation of financial Reports

	Equity: On Balance sheet - On Statement of Changes in Equity ▪Earnings per Share (EPS): Basic EPS - Diluted EPS			
IV.	**UNIT IV: SELECT TRANSACTIONS (AS PER US GAAP & IFRS):** ▪Business Combinations and Consolidations: Acquisitions ▪Non-controlling Interest - Intercompany Transactions ▪Variable Interest Entities (VIE) - Foreign currency: Remeasurement– Translation Remeasurement– Translation	Lecture method and ICT	To examine the fundamental requirements of IFRS on a standard-by-standard	Financial reports **16Hrs** 5 5 6
V.	**UNIT V: NOT-FOR-PROFIT AND GOVERNMENTAL ACCOUNTING AND REPORTING (AS PER US GAAP):** ▪Not-for-Profit (NFP) Entities: NFP Financial Statements ▪Contribution Revenue ▪Specific Accounting Considerations - Colleges and Universities - Voluntary Health, Welfare Organizations and Health Care Organizations ▪Governmental Entities: Fund types (Governmental funds, Proprietary funds, Fiduciary funds) ▪Modified Accrual Accounting - Inter-fund transactions ▪Government Financial Reporting	Lecture method and ICT	To examine the fundamental requirements of IFRS on a standard-by-standard and how to use IFRS in practice	Seminars and GD **16Hrs** 5 3 2 3 2 1

Listof References (Book/ICT/ Weblinks):

1. Miles CPA Review Concept Book: Financial Accounting & Reporting, Miles Education
2. Wiley CPA Excel Exam Review Course Study Guide: Financial Accounting and Reporting, Wiley
3. IFRS & US GAAP Best Practices in Accounting World: GAAP Analysis, Rajesh Dhawan 4.Transparency in Financial Reporting: A concise comparison of IFRS and US GAAP 1st Edition, Ruth Ann McEwen, Harriman House Ltd.
5. IFRS and US GAAP: A Comprehensive Comparison, Steven E. Shamrock, Wiley
6. Wiley GAAP: Interpretation and Application of Generally Accepted Principles, Barry J. Epstein and Ralph Nach, Wiley
7. IFRS Simplified with Practical Illustration Part 1 & 2, MrRammohanBhave and Dr Mrs Anjali RammohanBhave, CNBC TV 18

Nameofthefacultymember&Signature:K.RAJITHA

Approvedby HeadoftheDepartment:T.SWARNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

VI SEMESTER

Department: B. Com Business Analytics

Class & Section: DCBA

Course Code: CA 22601

Name of the Faculty Member: T. Swarna

Course Title: FINANCIAL DECISION MAKING- II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Cost/volume/profit analysis: Breakeven analysis - Profit performance and alternative operating levels - Analysis of multiple products • Marginal Analysis: Sunk costs, opportunity costs and other related concepts • Marginal costs and marginal revenue • Special orders and pricing – Make versus buy - Sell or process further - Add or drop a segment Capacity considerations	Flipped Classroom Contextual Learning	Examine the marginal costing techniques wide the production and sale aspects.	Assigned to get income statements of existing companies and assess their BEP,Profit changes,Sales.
II.	• Pricing decisions: Pricing methodologies - Target costing	Smart board Power point presentations Black board	Understand the influence of price on the behavior of market demand and supply.	Quiz on basic economics terms and knowledge.

• Elasticity of demand • Product life cycle Considerations – Market structure considerations			
• Enterprise Risk: Types of risk • Risk identification and assessment • Risk mitigation strategies Managing risk	Class Rotation	Demonstrate the role of risk under financing.	Class rotation involves one of two options: the entire class can switch between online and classroom activities (whole class rotation) or the students can be divided into groups, and each group was given a different activity (group rotation). In the second option, the teacher visits each group individually.
• Capital budgeting process • Stages of capital budgeting • Incremental cash flows • Income tax considerations • Evaluating uncertainty • Capital investment method analysis: Net present value - Internal rate of return ,Payback Period, Discounted Pay back Comparison of investment analysis methods	Differentiated Learning - Differentiated learning recognizes that each student has their own individual style of learning.	Understand the implications of capital budgeting.	Group activity on calculation of ROI n various investment oppurtunities in market.
• Business ethics: Moral philosophies and value • Ethical decision making – Ethical considerations for management accounting and financial	Contextual Learning	Understand the importance of values and ethics in the financial decision-making process.	Contextual learning opens the classroom, allowing students to apply the knowledge they learn in class to the real world around them. It helps students understand concepts like cause and effect and the interconnectivity.Website of CMA is shown.

	management professionals • IMA's Statement of Ethical Professional Practice - Fraud triangle • Ealuation and resolution of ethical issues • Ethical considerations for the organization: Organizational factors and ethical culture • IMA's Statement on Management Accounting • Values and Ethics: From Inception to Practice • Ethical leadership - Legal compliance - Responsibility for ethical conduct – Sustainability and social responsibility.			

List of References (Book / ICT / Weblinks):

1. Wiley CMAexcel Learning System, Part 2: Strategic Financial Management
2. Interpretation and Application of International Financial Reporting Standards; Mackenzie, Bruce, Coetsee, Danie, Njikizana, Tapiwa, Chamboko, Raymond, Colyvas, Blaise, Adhanom, Brandon; Wiley
3. Financial Reporting & Analysis, 13th edition; Gibson, Charles H.; South-Western Cengage Learning
4. Financial Statement Analysis, 10th edition; Subramanyam, K.R., and Wild, John L.; McGraw Hill

5. Principles of Corporate Finance, 11th edition; Brealey, Richard, A., Myers, Stewart C., and Allen, Franklin; McGraw Hill
6. Fundamentals of Financial Management, 13th edition; Van Horn, James, C., and Wachowicz, John M. Jr.; FT / Prentice Hall
7. https://youtu.be/0zM-W499LT8?si=3kYguo9KaU4-YGDh
8. https://youtu.be/Ylns92QNHio?si=DeAR4oNQiCh-VqbI

T. Swarna

Name of the faculty member & Signature: T. SWARNA

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5. *Principles of* Corporate Finance, 11th edition; Brealey, Richard, A., Myers, Stewart C., and Allen, Franklin; McGraw Hill
6. *Fundamentals of* Financial Management, 13th edition; Van Horn, James, C., and Wachowicz, John M. Jr.; FT / Prentice Hall

7. https://youtu.be/0zM-W499LT8?si=3kYguo9KaU4-YGDh
8. https://youtu.be/Ylns92QNHio?si=DeAR4oNQiCh-VqbI

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

VI SEMESTER

Department: B. Com Business Analytics | **Class & Section: DCBA** | **Course Code: CA 22602**

Name of the Faculty Member: T. Swarna | **Course Title: RESEARCH METHODOLOGY**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• Definition of Research – meaning – nature – scope and objectives of research • Basic Research terms – types of research • Research Problem defined – necessity • Factor to be considered while defining research problem – procedure and pre-requisites	Flipped Classroom Contextual Learning	To understand and interpret the basic meaning of research, to define the research problem at hand and construct the procedure for undertaking research.	Ask to read various research papers and identify gap.
II.	• Hypothesis and related terms • Formation of Hypothesis – characteristics of good hypothesis • Fundamentals of Research Design – significance – features – steps • Types of Research	Smart board Power point presentations Black board	TTo formulate hypothesis and develop an appropriate research design.	Quiz on basic research terms and knowledge.Systematic ROL

Design • Review of Literature-need-sources-literature planning-review work and note-taking			
• Data Collection and Measurement – definition and characteristics of data • Sources of Data-Primary data and Secondary data – characteristics – advantages and disadvantages • Methods of data collection • Observation Method – personal interview – forms, schedules and • Questionnaire method –drafting the questionnaire, pre-testing the questionnaire and specimen questionnaire. • Documented sources of data • Case study method	Class Rotation	To classify the different sources of data and analyze the various methods of data collection.	Class rotation involves one of two options: the entire class can switch between online and classroom activities (whole class rotation) or the students can be divided into groups, and each group was given a different activity (group rotation). In the second option, the teacher visits each group individually. Like draft a questionnaire,interviewing method.
• Sampling and Sampling Design – definitions – variables	Differentiated Learning - Differentiated learning recognizes that each	To develop the most appropriate sample size and design as well as determination of	Group activity on sampling techniques.

	• Methods of Sampling of sampling size • Sampling and Non-Sampling Errors	student has their own individual style of learning.	sampling and non-sampling errors.	
V.	• Attitude Measurement and Scales – definition of attitude – importance – measurement of attitudes • Concept of Scale – basis for scale classifications – attitude scales	Contextual Learning	To classify the various types of attitude measurement scales and applies the principles and format of report writing and presentation.	Contextual learning opens the classroom, allowing students to apply the knowledge they learn in class to the real world around them. It helps students understand concepts like cause and effect and the interconnectivity.

List of References (Book / ICT / Weblinks):

1. Kothari, C.R. 2013 print. **Research Methodology.** New Delhi: Sage publications.
2. Swamy Krishna, R. and Ranganathan, M. 2008. **Methodology of Research in Social Sciences.** 1st edition. 2nd revised reprint. Mumbai: Himalaya Publications.
3. Sachdeva, J.K. 2008. **Business Research Methodology.** 1st edition. Mumbai: Himalaya Publications.
4. Malhotra, K.Naresh and Dash, Satyabhushan. 2002. **Marketing Research – An Applied Orientation.** Noida, U.P: Pearson Publications.
5. Tull, S. Donald and Hawkins. D. 2000. **Marketing Research**. New Delhi : Ashok K

T. Swarna

Name of the faculty member & Signature: T. SWARNA

Approved by Head of the Department: T. SWARNA

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER

Department: BBA **Class & Section: ABBA** **Course Code:** BB18106

Name of the Faculty Member: Dr. J Ramachander **Course Title: FIT**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to the computers, Definition, Characteristics and limitations of computers, Block diagram of a computer, CPU primary and secondary storage, Input devices output devices, Data representation and storage, Data representation in computer, Bits and bytes, Number systems (binary, octal, hexadecimal), Conversion from decimal to binary, Conversion from octal to hexadecimal, Conversion from binary to decimal & hexadecimal to octal, Secondary storage, Random v/s sequential access, Track and sectors, Storage characteristics, Increasing data storage capacity through compression (disk compression file compression)	Lecture Method using ICT Tools	To learn the inner working of a computer, data representation and storage unit of a computer	Solving Problems on data representation
II.	Operating systems, Meaning definition, functions, Types of Operating systems, User interfaces, touch screen and common OS	Lecture Method using ICT Tools	To learn the functions and types of OS and user interfaces	Quiz
III.	Application of information technology, Application program, Horizontal market applications, Vertical market applications, Customs applications, Shareware and public domain software, Transaction processing –	Lecture Method using ICT Tools	To learn the role of IT in business and industry and its enabled services.	Quiz

	centralized transaction processing, Client server software, distributed computing and replication, Information tools for management control, IT in business and industry, IT enabled services			
	Systems development- six phases of system analysis and design, The challenges of digital age, Threats to computers and communication, Security – safeguarding computers and communications , Five generations of programming languages	Lecture Method using ICT Tools	To learn six phases of system analysis and design, threats to computers and safe guarding them.	Quiz
V.	Modern communications- FAX, Voice Mail and Information Services, Mailing lists, File exchange, bandwidth Modem, network topologies , types of network	Lecture Method using ICT Tools	To get aware on modern communications, structure and types of network	Quiz

List of References (Book / ICT / Weblinks):

Name of the faculty member & Signature: Dr.J Ramachander

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - I

Department: BBA- GENERAL **Class & Section: ABBA** **Course Code: BB22103**

Name of the Faculty Member: M. SUNANDA **Course Title: FINANCIAL ACCOUNTING - I**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** Need for accounting — definition - Meaning – features – objectives- Functions – systems and bases and scope of accounting. Introduction to Accounting standards – Definition- meaning- list of Accounting Standards issued by ASB- Books keeping and accounting – branches of accounting – advantages – limitations. Basic terminology used – accounting concepts an conventions, Accounting equation Classification of accounts – rules of double entry system, Journalizing – posting to ledgers – balancing of ledgers	Lecture Method using ICT Tools and chalk board.	Describe the need and importance of accounting.	Seminar/ Presentations
II.	**Subsidiary Books** Subdivision of journal – preparation of subsidiary books. Different types of cash book – simple cash book, cash book with cash and discount columns, Cash book with cash and bank columns – cash book with cash discount and bank columns and petty cash book.	Lecture Method using ICT Tools and chalk board.	Explain about subdivision of journal	Presentations
III.	**Bank Reconciliation Statement** Bank reconciliation statement – need – reasons for difference between cash book and pass book balances. Simple problems on favourable balance, Simple problems on overdraft balances. Ascertainment of correct	Lecture Method using ICT Tools and chalk board.	Compare the cashbook and passbook balances to reconcile the difference.	Seminar

	cash book balance.			
IV.	**Trial Balance and Final Accounts** Trial balance – meaning – objectives- Methods of preparation. Final accounts – preparation of manufacturing, trading, profit & loss account and Balance Sheet Adjusting and closing entries.	Lecture Method using ICT Tools and chalk board.	Analyze the financial position of an organization	Presentations
V.	**Rectification of Errors** Errors and their rectification- Types of errors Rectification before and after preparation of final accounts- Suspense account – effect of errors on profit.	Lecture Method using ICT Tools and chalk board.	Identify the mistakes in books of accounts and helps in correcting them.	Seminar

Listof References (Book/ICT/ Weblinks):

1. Jain, S.P. and Narang, K.L. 2011. **Financial Accounting Part-1.** 11th Revised Edition. New Delhi: Kalyani Publishers.
2. Gupta, R.L. and Radha Swamy. 2001. **Advanced Accountancy – Volume-I.** 10th Edition. New Delhi: Sultan Chand & Sons.
3. Maheswari, S. N. and Maheswari, S.K. 2004. **Advanced Accountancy – Volume-I.** 9th Edition. New Delhi: Vikas Publishing House Pvt Ltd.

M-Suvanda.

Name of the faculty member & Signature:

Approved by Head of the Department

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -I

Department: BBA

Class & Section: ABBA (GEN)

Course Code: BB18102

Name of the Faculty Member: DR A Latha

Course Title: Banking theory and Practise

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Banking and SBI** Origin and growth of banking in India – Kinds of banks Unit VS branch , Banking function of commercial banks Nationalization of commercial banking in India Narsimham Committee Report **SBI** – Organization structure – objects – functions Electronic Banking – traditional Vs E – banking – facets of E-banking, E-banking Transactions Models for E-Banking a) Complete Centralised Solution b) Cluster approach c) High Tech banking within bank Advantages & Constraints in E-Banking	PPT Presentation	Identify and illustrate the origin and growth of banking in India	By interacting with one to one and posing questions
II.	**Banker and Customer** Definition of banker and customer – relationship between: banker and customer Special feature of relationship Opening of accounts **Special Types of Customer** Minors, Married women- Companies Partnership firms -Clubs and Non-trading institutions	PPT Presentation and chalk board	Demonstrate and apply the steps involved in opening various types of bank accounts	Seminar and presentation
III.	**Loans & Advances** Loans & Advances. Precautions to be taken while advancing loans against securities– goods Documents of title to goods Real estate- Insurance	PPT Presentation	Appraise and criticize the various types of collateral securities and point out the precautions to be taken by a banker while advancing	Quiz on loans and advances

	policies -Collateral securities Banker's receipts		loans against different types of securities	
IV.	**Co-operative Banks** Co-operative banks – district Co-op banks in India Land development banks – regional rural banks NABARD Central Bank (RBI) Need and importance – constitution – organization structure – management – objectives – functions Credit centre – quantitative and selective credit control methods – critical crossing of RBI its working	PPT Presentation and chalk board	Understand the functions and organizational structure of cooperative banks, NABARD and RBI.	Seminar and presentation
V.	**Negotiable Instruments** Negotiable Instruments – characteristics – types of negotiable instruments Promissory notes – Bills of exchange Cheques – crossing – types of crossing – holder in due course privileges of a holder In due course – endorsement – types of endorsements – presentment dishonour – noting & protest Discharge of parties from liability – duties and responsibilities of paying banker and collecting banker Circumstances under which a banker can refuse payments of cheques – consequences of wrongful dishonor Securities And exchange board of India – Introduction & Functions	PPT Presentation	Interpret the features of various types of negotiable instruments, endorsement,duties of paying and collecting Bannker. Understanding functions of Securities Exchange Board of India	Group Discusssions

List of References (Book / ICT / Weblinks):

1. Srivastava, P.K. 2003. **Banking Theory and Practice.** 9th Revised. Mumbai: Edition Himalaya Publications.
2. Gordon, E. Natarajan, K. 2008. **Banking Theory, Law and Practice.** 21st Revised Edition. Mumbai: Himalaya Publications.
3. Sundaram and Varshney. 2005. **Banking Theory, Law and Practice.** 17th Edition. New Delhi: Sultan Chand & Sons.
4. Shekar and Shekar. 1998. **Banking Theory and Practice.** 18th Revised Edition. New Delhi: Vikas Publications.
5. Ranghanadha Chary, A.V. and Paul, R.R. 2008. **Banking and Financial Systems.** New Delhi: Kalyani Publishers.

Name of the faculty member & Signature: Dr A Latha

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department:BBA **Class&Section: ABBA** **CourseCode:BB18104**

Nameofthe FacultyMember: MARY PATRICIA

CourseTitle:PRINCIPLES OF MANAGEMENT

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction** Management – meaning and definition Nature of Management-Universality of management-Importance of management Principles & Functions of Management Schools of Management thought Scientific management-Meaning – principles -Objectives of Management-Criticisms	Discussion and Demonstration, white board marker, PPT presentation	Identify and interpret the various principles and importance of management	Quiz,presentation by students, assignment on various companies and their management functions
II.	Planning – definition – features Importance -Steps in planning -Types of plans-Limitations of planning-Organizing – authority-Power -Sources of authority-Responsibility & accountability-Delegation of authority Decentralization-Departmentation	Discussion and Demonstration, white board marker, PPT presentation	Explain and demonstrate the uses of planning and organizing	Group discussion
III.	**Coordination & Control** Coordination-Essence of management-Meaning and need of coordination-Principles of coordination-Techniques of controlling-Span of supervision – factors determining span of supervision. Control – definition Process – steps of control Requisites of good control system	Discussion and Demonstration, white board marker, PPT presentation	Classify and combine the various techniques of control and coordination.	Group discussion and seminar

IV.	**Direction & Motivation** Direction – meaning and importance Principles of directing Motivation theory Theories of motivation – Maslow Mc Cleland &Hezberg Importance of motivation and motivational techniques	Discussion and Demonstration, white board marker, PPT presentation	Identify the essence of motivation and direction	Videos on motivation and ted talks by few famous influencers
V.	**Leadership & Communication** Leadership – meaning – importance Styles **Theories of Leadership** Trait theory-Behavioral theory-Situational theory Communication – significance – nature – process-Types of communication Barriers of communication Techniques of building effective communication-Morale – concept and nature-Measurement of morale – morale & productivity -Building high morale	Discussion and Demonstration, white board marker, PPT presentation	Interrelate and understand the essence of leadership and the importance ofcommunication	Group discussion and seminars , videos on famous leaders

Listof References (Book/ICT/ Weblinks):

1. Prasad, L.M. 2001. **Principles and Practice of Management.** 6th edition. New Delhi: Kalyani Publishers.
2. Gupta R.S., Sharma B.D. and Bhalla N.S. 2012. **Principles and Practice of Management.** 8th revised and enlarged edition. New Delhi: Kalyani Publishers.
3. Sharma R.K. and Gupta Shashi K. 2012. **Business Organization and Management.** 3rd revised edition. New Delhi: Kalyani Publishers.
4. Koontz D'Donnel and Weilrich. **Essentials of Management.**9th Edition. New Delhi: Tata McGraw Hill

Nameofthefacultymember&Signature: Mary Patricia Pat

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- I

Department: BBA **Class : ABBA** **Course Code:23101**

Name of the Faculty Member:Dr.K.Musalaiah **Course Title: Indian Heritage and Culture**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation
IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the	Quiz and group presentation.

			constitution.	
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr.K.Musalaiah – Dr. K. Musalaiah.

Approved by Head of the Department:

Mrs. M. H. Mary Patricia

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Plan for the Academic Year 2023 – 2024

SEMESTER

Department ENGLISH **Class & Section:** BBA **Course Code:** BE 23201

Name of the Faculty Member: Fr. Dr AM Joseph kumar **Course Title:** BUSINESS ENGLISH-II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT-I** **Claim and Adjustment E- Mails -9Hrs** • Hints for Drafting Claim and Adjustment E- Mails (2) • Elements of Claim and Adjustment E- Mails (2) • Specimen Claim and Adjustment E-Mails (5)	Lecture Method using ICT Tools	To learn to write claim and adjustment e-mails, which could be prove to be useful during a business correspondence.	**Writing Skill Activity**-Developing effective writing skills, by making the students write claim and adjustment e-mails. Students are taught as to how to frame the introduction, body and the concluding paragraphs for these e-mails.
II.	**UNIT-II** **Grammar in Business Correspondence-9Hrs** • Commonly Misused Prepositions (3) • Subject- Verb Agreement (3) • Articles (3)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	**Speaking Skills and Writing Skills**-Developing effective speaking and writing skills, by ensuring that the students learn the grammar rules for articles, subject-verb agreement in order to communicate well and write with clarity.
III.	**UNIT-III** **Job Applications Letters and Resume writing 9Hrs** • Importance and Functions of an Application Letter (1) • General Guidelines to write Application Letters and Resumes (1) • The Form and Content of an Application Letter (1) • Preparing a Resume (2) • Specimen Application Letter and	Lecture Method using ICT Tools	To be able to draft a lucid job application letter and a resume effectively: both of which are extremely important for students to draft immediately after their graduation.	**Writing skill activity**: To write job application letters effectively, having understood the role of the introductory, body and conclusion paragraphs in building this letter. To draft a resume, highlighting well the candidate's achievements, technical skills and soft skills.

	Resume (4)			
IV.	**UNIT-IV** **Report Writing – I (Business Report) 9Hrs** • Characteristics of a good Business Report (1) • Importance of Business Reports (1) • Types and Functions of Business Reports (2) • Preparing a Business Report and Specimen (2) • Specimen Business Report (3)	Lecture Method using ICT Tools	To be able to learn the structure, types and importance of a report and to draft a business report effectively	**Writing Skill Activity:** Students were given assignment topics to draft a business report. Also, students were taught the writing skill of framing a questionnaire.
V.	**UNIT-V** **Language Proficiency in Business Communication 9Hrs** • Framing Questions (2) • Active and Passive Voice (2) • Punctuations (2) • Paragraph Writing (3)	Lecture Method using ICT Tools	To write grammatically correct sentences and to be able to draft a grammatically and syntactically correct paragraph. Students also learn to converse in the right manner having understood the grammatical rules of the language.	**Writing Skill Activity**- Students were taught to draft a complete paragraph and to frame a formal paragraph having clearly understood the functions of the topic, supporting and closing sentence. Students are also made to solve several grammar worksheets in order to enable a thorough understanding of the grammatical topics in the unit. **Speaking Skills**-Students are taught the grammatical rules for active-passive voice, framing questions and punctuations, to be able to converse effectively in varied business scenarios.

List of References (Book / ICT / Weblinks):

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.

SUGGESTED READING:

1. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.

2. Gruscendorf, Marion. 2007. **English for Presentations**. U.K: Oxford Publication Oxford.
3. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.
4. Rai, Urmila., and Rai, S.M. 2002. **Business Communication**. Mumbai: Himalaya Publishing House.
5. Guy Brook-Hart. **Business Benchmark-Workbook**. Cambridge University Press.
6. Dr. Francis M.Peter S.J. **Business English Communication**.
7. Leo Jones and Richard Alexander. **New International Business English-Workbook**. Cambridge University Press.

Name of the faculty member & Signature: Fr. Dr AM Joseph kumar

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -II

Department: BBA - ED **Class & Section: A BBA** **Course Code: VE18201**

Name of the Faculty Member: Fr. Dr AMJ Joseph kumar

Course Title: Value Education And Personality Development.

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Ethics** Why Value Education?-Reasons to have Ethics for Life-Accepted Norms and Counter Values-Dimensions of Human Development: Physical, Intellectual, Emotional, Moral, Spiritual and Social	PPT Presentation, interacting with the students	Students will be able to identify Accepted norms and Counter values. They will be able to differentiate the various Dimensions of Human Development	Practical learning experience
II.	**Approach to Life** science and Pseudo-Conscience-Happiness as Life-goal-Values revealed and lived in Religions-Experience of God-Love: The three components of Love – Some of the basic stages and issues of life: Family, Love, Sex, Marriage.	PPT Presentation, interacting with the students	Students will be able to demonstrate Love and Experience of God. They will be able to identify the Basic Issues of Life and Happiness as a life goal	Group Discussion
III.	**Concern for Others** and Another-Human Context-Moral Problems of a Society / True Society: Social Desire, Social Fear, Social Silence, Social Indifference	PPT Presentation, interacting with the students	They will able to understand the importance of Concern for others. They will able to critique the various problems that deter the growth of the society.	Presentations

IV.	**Transformation of Self** initions of personality-Characteristics of personality-Elements of personality-Traits of good personality-Self-Identity, self concept-Self-Discovery, self-acceptance-Self-Esteem)RK SHEET (1): Self Estimation .	PPT Presentation, interacting with the students	The students will be able to recognize the traits of a good personality. They will be able identify their personality by Self-Exploration	Case Study
V.	**Life Enrichment Skills** pose of life - Goal setting-Characteristics of Goals-Building Relationships-Time Management-Stress Management-Emotional Management-Conflict Management am Management (Group Dynamics))RK SHEETS (1) & (2): 1) Anger Management 2) Team Management	PPT Presentation, interacting with the students	Students will be able to interpret the Purpose of Life and Goal Setting. They will be able to learn Self-Management.	Assessment

List of References (Book / ICT / Weblinks):

1. E-Retailing: Principles & Practice – 2009-by D. P. Sharma (Author)-Publisher : Himalaya Publishing House.
2. Introduction to ERP -by Rasci publication
3. Computer Skills-by Rasci publication

Name of the faculty member & Signature: Fr. Dr AMJ Joseph kumar

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -II

Department: BBA-REG **Class & Section: ABBA- GENERAL** **Course Code: BB22203**

Name of the Faculty Member: M.SUNANDA **Course Title: FA - II**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Partnership – Admission** Legal provisions in the absence of a partnership deed, fixed and fluctuating capitals, preparation of final accounts with adjustments, profit and loss appropriation account – methods of calculating good will –treatment of Good will. Calculation of sacrificing, new profit sharing ratio and admission of a partner.	Lecture Method using ICT Tools and chalk board	Identify and interpret the various concepts and importance of partnership accounting and admission of a partner.	Seminar
II.	**Partnership – Retirement and Death Treat**ment of good will, methods of calculating good will, calculation of gaining ratio, new profit sharing ratio retirement of a partner, death of a partner including joint life policy.	Lecture Method using ICT Tools and chalk board	Explain and understand the rules for death and retirement of a partner.	Presentations and seminar
III.	**Partnership – Dissolution and Insolvency** **Diss**olution of partnership, insolvency of a partner, insolvency of firm excluding sale to firm, company and amalgamation.	Lecture Method using ICT Tools and chalk board	Classify the various techniques of dissolution and insolvency of a partner.	Group discussion
IV.	**Single Entry System** Single Entry- Features -Books and Accounts maintained, preparation of	Lecture Method using ICT Tools and chalk board	Identify the essence of single entry management system and books of accounting.	seminars

	Statement of affairs-Difference between statement of affairs, and Balance Sheet-recording of transactions- Ascertainment of profits under Single entry system (Statement of affairs method) - (including Problems)			
V.	**Consignment** Meaning – features- Proforma invoice- Account sales – Del credere commission- Accounting treatment in the books of consignor and the consignee – Valuation of consignment stock - treatment of normal and abnormal loss – invoice of goods at a price higher than the cost price. (including problems)	Lecture Method using ICT Tools and chalk board	Interrelate and understand the concept of consignor and consignee and books of accounting.	Student presentations and seminars

Listof References (Book/ICT/ Weblinks):

1. Jain, S.P. and Narang, K.L. 2011. **Financial Accounting Part-1.** 11th Revised edition. New Delhi: Kalyani Publishers.
2. Gupta, R.L. and Radha Swamy. 2001. **Advanced Accountancy – Volume-I**. 10th edition. New Delhi: Sultan Chand & Sons.
3. Maheswari, S. N. and Maheswari, S.K. 2004. **Advanced Accountancy – Volume-I**. 9th edition. New Delhi: Vikas Publishing house Pvt. Ltd.
4. Wings, Tally, Focus – **Accounting packages** – BPB publications.
5. Manual provided by Wings, **Tally solutions and Focus Accounting packages.**

Nameofthefacultymember&Signature: Mrs M. SUNANDA

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -II

Department: BBA **Class & Section: ABBA** **Course Code: BB22204**

Name of the Faculty Member: Dr A Latha **Course Title: Managerial Economics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Nature & Scope of Managerial Economics** Managerial Economics- Nature, Scope and significance -Concepts of economics – (Discount principle, incremental , equi-marginal, time perspective, opportunity cost)-Relation with other branches-managerial decision making process - Capital budgeting & decision making-capital budgeting-need & nature	PPT Presentation, interacting with the students	Understand the basic terms and concepts used in the managerial economics	By interacting with one to one and posing questions
II.	**Demand Analysis** Demand determinants-demand distinctions-Law of demand-Elasticity of demand-Indifference curve analysis-Consumer surplus-Demand forecasting	PPT Presentation, interacting with the students	Appraise the behaviour of consumers through the demand and indifference analysis	Group Discussion
III.	**Production & Cost Analysis** Production function with one variable input & two variable input-Supply analysis-cost concepts & classification - National Income & Measurement -Bench marking & total quality management-break even analysis.	Chalk and Board PPT Presentation, interacting with the students	Interpret the behaviour of producer through supply, production and other related concepts.	Seminar

IV.	**Pricing Methods & Market Structure** Market structure-meaning & classification-price output determination under perfect competition-Monopoly-Monopolistic competition-Oligopoly-Pricing strategies-pricing methods-(cost plus pricing-transfer pricing-marginal cost pricing-administered pricing-pricing of multiple products).	PPT Presentation, Chalk and Board	Differentiate the market forms and the price and output determination under each type of market.	Case Study
V.	**Macro Economics & Business Decisions** Business cycle-Phases, Consequences, measures-Inflation-nature & causes-Fiscal policy-monetary policy-Global financial crisis & impact of global crisis in India-Eurozone crisis- Disinvestment in India	PPT Presentation,	Infer the impact of the macro economic factors on the business concerns.	Assessment

List of References (Book / ICT / Weblinks):

1. Dwivedi, D. M. 2008. **Managerial Economics.** 7th edition. New Delhi: Vikas Publishing house.
2. Mithani, D. M. **Managerial Economics Theory and Applications.**5th edition. Mumbai: Himalaya Publications.
3. Craig Peterson H and Chris Lewis W. **Managerial Economics.** 4th edition. New Delhi: Prentice Hall of India.
4. Varshney, R. L. and Maheswari, K. L. 2010. **Managerial Economics.** 9th edition.New Delhi: Sultan Chand & Sons.
5. John Kennedy M. 2009. **Micro Economics.** 18th revised edition. Mumbai: Himalaya Publications.

Name of the faculty member & Signature:

Dr A Latha

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - II

Department: BBA-REG **Class&Section: ABBA** **Course Code: BB22202**

Name of the FacultyMember:M.Swetha shastry **Course Title: CGBE**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT – I** **Introduction:** Values – Importance Sources of Value Systems Types, Values, Loyalty Ethical Behaviour, Values across Cultures, Business Ethics – Nature Characteristics and Needs, Ethical Practices in ManagemenT.	Lecture Method using ICT Tools and chalk board	Identify and explain the importance of values and ethics.	seminar
II.	**UNIT – II** **The Ethical Value System (Theories)** Universalism Theory Utilitarianism Theory Distributive Justice Theory, Social Contracts Theory Individual Freedom of Choice – the concept, Professional Codes in the corporate, Relationship between culture and Ethics, Ethical Values in different Cultures, Relation between Culture and Individual Ethics	Lecture Methodusing ICT Tools and chalk board	Analyze and interpret the various theories of ethical value system.	Group discussion
III.	**UNIT – III** **Law and Ethics:** Meaning of Law and Ethics Relationship between Law and Ethics Other Bodies in enforcing Ethical Business Behavior (Corporates, government, financial	Lecture Method using ICT Tools and chalk board	Point out the relationship between law and ethics and understand the impact of law on the business.	Group discussion

	institutions and NGO), Impact of Laws on Business Ethics-Social Responsibilities of Business-Environmental Protection Fair Trade Practices, Fulfilling all National obligations under various Laws (implementation of govt act and policies) Safeguarding of health and well being of the customer (marketing)			
IV.	**UNIT – IV** **Corporate Governance:** Meaning of Corporate Governance Issues and need-Corporate governance code - Transparency and disclosure in the corporate-Role of auditors Board of directors -Share holders	Lecture Method using ICT Tools and chalk board	Explain the corporate governance codes, transparency and disclosure in the corporate.	seminar
V.	**UNIT – V** **Issues of Governance** Global issues of governance-Accounting and regulatory frame work- Corporate scams Committees in India and abroad dealing with corporate governance Corporate social responsibility Introduction to Companies Act, 2013 – Provisions Relating to Corporate Governance	Lecture Method using ICT Tools and chalk board	Identify and point out the global issues of governance.	Group discussion

1. Fernando, A. C. 2006. **Business Ethics and Corporate Governance**. 1st Edition. New Delhi: Pearson Publications.
2. Dr. Kumar Senthil, and Rajan Senthil. 2006. **Business Ethics and Values.** 1st Edition. Mumbai: Himalaya Publications.

M. Swetha Shastry

Nameofthefacultymember&Signature:

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Lesson Plan

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-I

Department:BBA-REG

Class&Section:ABBA

Course Code: BB18101

Nameofthe FacultyMember: K. RAJESH KUMAR

Course Title: Fundamentals of Information Technology

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction to Computers** inition - Characteristics and limitations of computers Block diagram of a computer, CPU Primary and secondary storage Input and output devices **Data Representation and Storage** a representation in computers, bits and bytes. Number systems (Binary, Octal and Hexadecimal), Conversion from decimal to binary, octal, hexadecimal and vice versa, Secondary storage Random Vs Sequential access, Tracks and Sectors, Storage characteristics Increasing data storage capacity through compression (disk compression and file Compression)	Lecture Method using ICT Tools and chalk board.	Identify and interpret the various principles and importance of computer systems	Seminar
II.	**Operating Systems:** meaning, definition, Functions, Types of operating systems: Desktop OS, Server OS, Mainframe OS, Hand-held OS & Embedded OS Multi Tasking and Multi threading, Multi User multi processor support, cellaneous tasks Batch Processing systems time	Lecture Method using ICT Tools and chalk board.	Explain and demonstrate the uses of operating system and its importance	Group discussion

	systems, Time sharing systems **User Interfaces:** GUI, Pen based, Touch Screen & Conversational interfaces Common Operating Systems: DOS, Windows 95/98 and UNIX			
III.	**Applications of Information Technology** plication programs Horizontal Market Applications, Vertical Market Applications toms Applications, Shareware and Public domain software**Transaction Processing** – Centralized transaction processing Client Server software, Distributed computing and Replication Information tools for management control: DSS, EIS, GIS, OLAP a Warehousing and Data Mining **IT in Business and Industry** – Home and at play, Education and Training, Entertainment and Arts, Science, Engineering and Math, computers in hiding **IT Enabled Services:** BPO, KPO & Call centers	Lecture Method using ICT Tools and chalk board.	Classify and combine the various techniques and applications	seminar
IV.	**Systems Development**: The six phases of Systems Analysis & Design **The challenges of Digital Age:** Security issues: Threats to Computers & Communications Security: Safeguarding Computers & Communications Quality of Life Issues ethics of using databases: concerns about accuracy & privacy Five generations of programming languages	Lecture Method using ICT Tools and chalk board.	Identify the concepts and programs	Group discussion

V.	**Modern Communications:** Communications, FAX Voice Mail and Information Services, Email **Group Communications:** News groups, Mailing lists, IRC, Network games Video conferencing File exchange, bandwidth Modem, Network topologies work Types – LAN, MAN and WAN Dialup Access	Lecture Method using ICT Tools and chalk board.	Interrelate and understand the essence of communication and internet	Seminar presentations

Listof References (Book/ICT/ Weblinks):

1. Curtin Dennis, P. and Foley Kim. 2000. **Information Technology – The Breaking Wave.** 7th edition. New Delhi: Tata McGraw Hill Publications.
2. Williams Brian, K. and Sawyer Stacey, C. 2007. **Using Information Technology – A Practical Introduction to Computers and Communications.** 6th edition. New Delhi: Tata McGraw Hill Publications.
3. Sinha Pradeep, K. and Sinha Preeti. 2007. **Computer Fundamentals, Concepts, Systems and Applications.** 4th edition. New Delhi: BPB Publications.
4. Rajaraman. 2006. **Fundamentals of Computers.** 4th edition. New Delhi: PHI Publications.
5. Bharihoke Deepak. 2000. **Fundamentals of Information Technology.** 2nd edition. New Delhi: Excel Books.

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LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER - III

Department: BBA GENERAL **Class & Section: NBBA** **Course Code: BB18303**

Name of the Faculty Member: M. SUNANDA **Course Title: RESEARCH METHODOLOGY**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction** Definition of research – meaning – nature – scope and objectives of research- basic research terms – types of research- research problem defined – necessity – factors to be considered while defining research problem procedure and pre-requisites for undertaking research.	Lecture Method using ICT Tools and chalk board.	Understand and interpret the basic meaning of research, to define the research problem at hand and construct the procedure for undertaking research.	Seminar
II.	**Hypothesis and Research Design** Hypothesis and related terms – formation of hypothesis – characteristics of good. Hypothesis- Fundamentals of Research Design – significance – features – steps – types of research. Design- Review of literature – operational definitions	Lecture Method using ICT Tools and chalk board.	Formulate hypothesis and develop an appropriate research design.	Presentations
III.	**Data Collection** Data collection and measurement – definition and characteristics of data – primary data and secondary data – characteristics – advantages and disadvantages- Sources of data – methods of data collection – observation method – personal interview forms, schedules and questionnaire method. Documented sources of data – case study method.	Lecture Method using ICT Tools and chalk board.	Classify the different sources of data and analyze the various methods of data collection.	Seminar/ case studies
IV.	**Sampling** Sampling and sampling design – definitions – variables – methods of sampling – probability sampling methods- simple	Lecture Method using ICT Tools and chalk board.	Develop the most appropriate sample size and design as well as determination of sampling and non sampling errors.	Group discussion/ prsentations

	random sampling – stratified sampling – systematic sampling – multi-stage sampling – non-probability sampling – judgement sampling – convenience sampling – quota sampling – hit or accidental sampling- size of sample – determination of sampling size – sampling and non-sampling errors.			
V.	**Attitude Measurement, Data Processing, Report Writing** Attitude measurement and scales – definition of attitude – importance – measurement of attitudes – concept of scale- basis for scale classifications – attitude scales – Thurston's scale – Likert's scale – Guttman's or cumulative scale – radio scales – opinion scales basic statistical tools. Data Processing – editing – codification – classification and tabulation of data quantitative analysis of data. Report writing and presentation – definition – purpose – report synopsis – types of report – characteristics of a good report – structure of a good research report – writing and formatting of reports.	Lecture Method using ICT Tools and chalk board.	Classify the various types of attitude measurement scales and applies the principles and format of report writing and presentation.	Seminar/ group discussions

Listof References (Book/ICT/ Weblinks):

1. Kothari, C.R. **Research Methodology.** 2013 print. New Delhi: Sage publications.
2. Swamy Krishna, R. and Ranganathan, M. 2008. **Methodology of Research in Social Sciences.** 1st edition. 2nd revised reprint. Mumbai: Himalaya Publications.
3. Sachdeva, J.K. 2008. **Business Research Methodology.** 1st edition. Mumbai: Himalaya Publications.

Nameofthefacultymember&Signature:

M. Sunanda.

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER-III

Department:BBA-REG **Class&Section:NBBA** **CourseCode:BB18305**

Nameofthe FacultyMember:M.SWETHA SHASTRY

CourseTitle:MACRO BUSINESS ENVIRONMENT

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Macro Economic Framework of Indian Economy** Concept of Economic growth and economic development – definition, meaning & differences Determinants of Economic Development Meaning and features of under developed countries Basic characteristics of India Economy National Income – Definition, meaning and concepts Methods of measurement of National Income – Uses and Problems Nature of modern business environment Business Environment – Micro and Macro environment Macroeconomic scenario of Indian Economy	Lecture Method using ICT Tools and chalk board.	Define and explain process of calculating national income.	Seminar
II.	**Anatomy and Functioning of Economy (Macro Economics)** Circular flow of income – 2 & 3 sectors model Keynesian Theory of employment and Income – AD & AS Consumption function Investment function Concept of multiplier Determinants of propensity to consume	Lecture Method using ICT Tools and chalk board.	Describe circular flow of income through various sectors of economy.	Group discussion

III.	**Indian Economic Environment** Economic reforms – origins and concepts of LPG Privatization – meaning, methods and forms of privatization in India Disinvestment in India – causes and forms/ measures Globalization – meaning, measures and impact on India Infrastructure – meaning and types of infrastructure WTO – objectives, features, functions and structure WTO agreements WTO and India – impact	Lecture Method using ICT Tools and chalk board.	Illustrate meaning of inflation and identify different kind of inflation, causes and effects of inflation of different sectors of economy.	seminar
IV.	**Business and Government** Economic Planning in India – meaning, definition, features and types of planning Short term and long term objectives of planning in India Latest five year plan features New IPR, 1991 – features and critical evaluation Inflation – meaning, types Causes of inflation- demand pull and cost push Monetary policy – meaning, objective and instruments Fiscal policies - meaning, objective and instruments	Lecture Method using ICT Tools and chalk board.	Appraise the importance of planning undertaken by government of India and economic reforms adopted by government.	Group discussion
V.	**Indian Industrial and Trade Environment** Industry role in India's development Pattern of Industrial diversification – pre-reform and post-reform era Role of Public sector in India Problems faced by Public sector in India	Lecture Method using ICT Tools and chalk board.	Develop understanding towards role of foreign investment in development of Indian industries.	seminar

	SSI – meaning, definition and importance Problems and measures of SSI Foreign investment – meaning, merits and demerits MNC's – role			

Listof References (Book/ICT/ Weblinks):

1. Mishra and Puri. **Economic Environment of Business** 7th edition. Mumbai: Himalaya Publishers.
2. Mishra and Puri. **Indian Economy** 29th edition. Mumbai: Himalaya Publishers.
3. Jhingan, M. L. **Economics of Development & Planning.** 39th edition. Mumbai: Vrinda Publishers.

Nameofthefacultymember&Signature: M. Swetha Shastry

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER-III

Department:BBA-REG **Class&Section:GE-THEORY** **CourseCode:G18BB1T**

Nameofthe FacultyMember:M.SWETHA SHASTRY **CourseTitle:PRINCIPLES OF MANAGEMENT**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Management – meaning, definition, nature Universality, Importance of management Principles & Functions of Management Schools of Management thought Scientific management, meaning, principles, objectives, criticisms of management	Lecture Method using ICT Tools and chalk board.	Identify and interpret the various principles and importance of management	Seminar
II.	**Planning & Organizing** Planning – definition – features, Importance, Steps in planning Types of plans, Limitations of planning Organizing– authority, power, sources of authority, responsibility & accountability	Lecture Method using ICT Tools and chalk board.	Explain and demonstrate the uses of planning and organizing	Group discussion
III.	**Coordination & Control** Coordination – essence, meaning, need, principles of coordination Techniques of controlling, span of supervision – factors determining span of supervision Control – definition, process – steps of control, requisites of good control system	Lecture Method using ICT Tools and chalk board.	Classify and combine the various techniques of control and coordination	seminar

	Direction & Motivation Direction – meaning and importance, principles of directing, motivation theory Theories of motivation – Maslow, Mc Cleland & Hezberg Importance of motivation and motivational techniques	Lecture Method using ICT Tools and chalk board.	Identify the essence of motivation and direction	Group discussion
V.	**Leadership & Communication** Leadership – meaning – importance, styles, theories of leadership Communication – significance – process, types, barriers, techniques of building effective communication Morale – concept and nature, measurement of morale – morale & productivity, building high morale	Lecture Method using ICT Tools and chalk board.	Interrelate and understand the essence of leadership and the importance of communication	seminar

Listof References (Book/ICT/ Weblinks):

1. Prasad, L.M. 2001. **Principles and Practice of Management.** 6th edition. New Delhi: Kalyani Pubishers.
2. Gupta R.S., Sharma B.D. and Bhalla N.S. 2012. **Principles and Practice of Management.** 8th revised and enlarged edition. New Delhi: Kalyani Publishers.

M. Sudha Shastry

Nameofthefacultymember&Signature:

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LOYOLA ACADEMY

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Teaching

PlanfortheAcademicYear2023–2024

SEMESTER

Department: BBA-REG **Class & Section: NBBA** **Course Code: BB20301**

Name of Faculty Member: Ramesh M **Course Title: Taxation**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** Indian Taxation System. Income Tax: Basic Concepts: Income, Person, Assessee, Assessment Year, Previous Year, Income, Casual Income, PAN, Gross Total Income Residential Status and Incidence of Tax of an Individual (Theory Only). **Income from Salary** Salary meaning, Allowances, Perquisites, Provident Funds. Deductions from Salary Income, Computation of Salary Income, Qualified Savings(simple problems).	Lecture Method using ICT Tools and chalk board.	Understand the basic concepts in Indian taxation system and to calculate income from salary	Seminar, Presentations and solving the problems.
II.	**Income from House Property** Meaning, Annual Value, Let-out House, Self-Occupied House (Theory Only), Deductions from Annual Value, Unrealized Rent, Computation of Income from House Property (Simple Problems) **Income from Business and Profession** Chargeability, Deductions Expressly Allowed and Disallowed. General Deductions, Computation of Profits and Gains from Business and Profession (Simple Problems)	Lecture Method using ICT Tools and chalk board.	Calculation of income from house property and income from business/ profession	Group discussion, Presentations and solving the problems.

	Capital Gains Capital Assets Meaning, Types, Cost of Inflation Index, Transfer Types, Transfer Not Regarded as Transfer, Cost of Acquisition of Various Assets, Deductions from Capital Gains. Exemptions U/S 54, 54B, 54EC Only. Computation of Taxable Capital Gains (Simple Problems) **Income from Other Sources** Interest on Securities, Dividends on Shares, Casual Income, Family Pension, Gifts Received and Other General Incomes Including Deductions, (Simple Problems). Determining of tax liability (individual) as per Old and New Regime	Lecture Method using ICT Tools and chalk board.	Understand various deductions from capital gain and determining income from other sources	Presentations, solving the problems and seminar
IV.	**Deductions from Gross Total Income and Rebates** Aggregation of Incomes, Set off and Carry Forward of Losses. Computation of Total Income and Tax Liability of Individual with Deductions U/S 80C, D, E, G, U Only Assessees (Simple Problems). Assessment Procedure, Filing of Returns, Self-Assessment, Regular Assessment, Best Judgment Assessment, Income Tax Authorities (Theory only).	Lecture Method using ICT Tools and chalk board.	Understand assessment procedure and finding out tax liability of individual	Seminar, Case studies and solving the problems
V.	**Introduction to Goods And Services Tax (GST)** Objectives and basic scheme of GST. Meaning – Salient features of GST. Subsuming of taxes – Benefits of implementing GST. Constitutional amendments - Structure of GST (Dual Model) – Central GST – State / Union Territory GST – Integrated GST - GST Council: Structure, Powers and Functions. Provisions for amendments. Salient features of CGST Act, SGST Act (Telangana State). IGST Act - Meaning and Definition: Aggregate turnover, Adjudicating authority, Agent, Business, Capital goods, Casual taxable person, Composite supply, Mixed supply, Exempt supply,	Lecture Method using ICT Tools and chalk board.	Knowledge on various types of GST and its terminology	Seminar, Group discussion and Activities

	Outward supply, Principal supply, Place of supply. Supplier, Goods, Input service distributor, Job work, Manufacture Input tax, Input tax credit, Person, Place of business, Reverse charge, Works contract, Casual taxable person, Non-resident person			

List of References (Book/ICT/ Web links):

i. Dr. Singhania Vinod, K. and Dr. Singhania, Kapil. Direct Taxes Law and Practice. 48th edition. 2012-13: Taxman Publishers.

ii. Raja Prem, H. 2012. Systematic Study of Income Tax. 27th edition. Bangalore: Sri Hamsrala Publications.

iii. Gaur, V.P., Narang, D.B. and Ghai Puja. 2011. Elements of Income Tax. 26th revised edition. New Delhi: Kalyani Publishers.

iv. Dr. Ahuja Girish and Dr. Gupta Ravi. 2012. Systematic Approach to Income Tax. 27th edition. New Delhi: Bharat Publications.

v. Dr. Bangar Yogendra, Bangar Vandana and Sodhani Vineet, C.A. 2012. Students Guide to Direct Taxes. 16th edition: Aadhya Prakashan Publications.

vi. Raja Prem, H. 2012. Taxation Direct and Indirect Taxes. 4th edition. New Delhi: Sri Hamsrala Publications.

Ramesh. M

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 –

2024 SEMESTER-III

Department: BBA | Class & Section: NBBA(Gen) | Course Code:BB18304

Name of the Faculty Member: Mrs.P.Shirisha | Course Title: Advanced Accounting

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Branch accounts: Introduction, types of branches, features, accounting treatment, methods of dependent branches, Debtors system and stock and debtors method.(cost price and Invoice price)	Lecture Method using ICT Tools and Interaction Method	To Learn about the different types of branches and various methods of preparing branch accounts.	Solving different kinds of problems related to branch accounts.
II.	Departmental accounts: Need, Features, Basis of allocation of expenses, differences between branch and departmental accounts. Accounting treatment and treatment of inter departmental transfer.	Lecture Method and Interaction Method	To Learn about the different types of departments, method of allocation of expenses and inter departmental transfers.	Solving different kinds of problems related to departmental accounts. Allocation of expenses according to the basis.
III.	Accounting of Non-Profit organization: Nonprofit entities-Receipts and payments account-Pro forma, Income and expenditure account-Pro forma, Difference between Receipts and payments account and Income and expenditure account – accounting treatment – Preparation of Income and Expenditure and Balance sheet when receipts and payments account is given and Preparation	Lecture and Discussion Method	To Learn about the nature and formats of receipts and payments accounts and the nature and format of Income and Expenditure account.	Solving problems of different models.

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	of receipts and payments account when Income and expenditure and balance sheet is given.			
IV.	Company Accounts: Issue of shares at par, premium and at discount. forfeiture and reissue of shares, Issue of Bonus shares	Lecture method using ICT tools	To learn about the provisions of company act 2013 regarding the accounting treatment o issue of shares and bonus shares.	Solving the problems of issue, forfeiture and reissue of shares
V.	Issue and redemption of debentures: Introduction to debentures, kinds of debentures, accounting treatment, Redemption out of profits, sinking fund method, Under writing of shares.	Lecture method and discussion method using ICT tools.	To learn about the provisions of company act 2013 regarding the accounting treatment o issue and redemption of debentures and Underwriting of shares..	Solving the problems of issue and redemption of debentures.

List of References (Book / ICT / Weblinks):

1. S.P Jain and Narang ,Kalyani Publishers.

Name of the faculty member & Signature:
P.shirisha.

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER-III

Department:BBA-[General] **Class&Section: NBBA- General** **CourseCode:BBE22301**

Nameofthe FacultyMember:
K.Kiran Kumar

CourseTitle:
Fundamentals of Business Mathematics

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Quadratic Equations Formation of a quadratic equation, Sum and product of roots, Discriminant & Nature of the roots, Solving Quadratic Equations	-LectureMethod- ICT -Chalk & board -Quiz -Group Discussion	ToLearnaboutthequadratic equations, to find the solutionsof various types of quadratic equations and their nature.	Problem Resolving & Problem Solving
II.	Matrix Theory Algebra of matrices, determinant, Matrix Inversions, Solving of linear equations by Matrix Methods	-LectureMethod- ICT -Chalk & board -Quiz -Group Discussion	Able to apply Matrix operations, Computing !nverse of a matrix, Solving of linear equations by Matrix Methods	Problem Resolving & Problem Solving
III.	Set Theory Set operators, Results & ProblemsVenn diagrams-applications. De Morgan's Laws- Applications	Lecture Method - ICT - Chalk and talk - Quiz -Group Discussion	Venn diagrams enable students to organize information visually, so they are able to see the relationships between two or three sets of items.	Problem Resolving & Problem Solving
IV.	Arithmetic Progression, Arithmetic Mean -Problems. Geometric Progression, G.M - Problems	Lecture Method - ICT - Chalk and talk - Quiz -Group Discussion	apply the knowledge of finding n^{th} term and sum of n terms of an progressions in solving day to day life problems.	Problem Resolving & Problem Solving

V.	Differential Calculus- Derivatives of standard functions, rules of differentiation; Substitution Method, Maxima & Minima of functions of degree 2 or 3. Simple problems	Lecture Method - ICT - Chalk and talk - Quiz -Group Discussion	Apply the concept and principles of differential calculus to solve different geometric and physical problems that may arise in business, economics, and life sciences	. Problem Resolving & Problem Solving

Listof References (Book/ICT/ Weblinks):

1. Sancheti. D.C., and Kapoor. 2004; Business Mathematics, New Delhi; S. Chand & Sons.
2. Dr. Dikshit Amarnath and Dr. Kumar Jitendra, 2005, Business Mathematics, Mumbai, Himalaya Publications

Nameofthefacultymember&Signature:
Jagadhish Varanasi

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LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-III

Department: Environmental Science **Class: BBA -NBBA** **Course Code:ES23301**

Name of Faculty Member: Dr.G.Sudhakar **Course Title: EVS&GS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable & Non-Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of naturalresources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earthquakes, and Cyclones**	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge onsolid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	**Rainwater Harvesting, Water-shed Management** **Global Warming Ozone depletion, and Acid rains Environmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	Lecture Method using ICT Tools and Board	Apply environmental science knowledge to improve the resources. Evaluate and understand the sustainable environmental conditions and control methods	Oral question and answers To understand the environmental policies and regulations

IV.	**Why should we study gender issues?** **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	Lecture Method using ICT Tools and Board	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	**Oral question and answers** **To develop students' sensibility regarding issues of gender in contemporary India**
V.	**Sexual harassment** **Say no eve teasing.** **Caste-based violence.** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act (2005)**	Lecture Method using ICT Tools and Board	Understand gender problems and ways of addressing them, including interactionsacross local to global scales in communities and overcome inequalities with legislation.	**Oral question and answers** To expose the students to debate on politics and economic works and on genderviolence.

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition.Chennai: Oxford University Press.

Dr D K Asthana and Dr Meera Asthana. 2014.

2.**A Textbook of EnvironmentalStudies** Revised Edition. New Delhi: S. Chand & Company

3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). **Print. We Were Making History...Life Stories ofWomen in the Telangana People's Struggle**. New Delhi: Kali for Women.

4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.** Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993

Name of the faculty member & Signature: (Dr. G Sudhakar)

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: BBA **Class & Section:NBBA** **Course Code CH18302**

Name of the Faculty Member:Ruchika murthy **Course Title: E-COMMERCE**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Electronic Commerce** Electronic Commerce Framework electronic commerce and media convergence The anatomy of E-Commerce applications Electronic commerce consumer applications Electronic commerce organization applications **Electronic Commerce and World Wide Web** Architectural framework for electronic commerce World Wide Web (WWW) as the architecture Web background Hypertext publishing Technology behind the web Security and the web	Lecture Method using ICT Tools	To Learn about the **Electronic Commerce**	Quiz on Framework electronic commerce and media convergence
II.	**Consumer – Oriented Electronic Commerce** • Consumer – oriented applications • Mercantile process models • Mercantile models from the merchant's perspective **Electronic Payment System** • Types of electronic payments • Digital token-based electronic payment systems • Smart cards and electronic payment systems • Credit card-based electronic payment systems • Risk and electronic payment systems	Chalk and board method	To learn Mercantile process models Types of electronic payments	Group discussion Types of electronic payments

III.	**EDI Implementation, MIME and Value Added Networks** Standardisation and EDI • EDI Software Implementation • EDI envelope for message transport • Value Added Networks (VANs) • **Intra-OrganizationalElectronic Commerce** • Internal information systems • Macro-forces and internal commerce • Work flow automation and co-ordination • Customization and internal commerce • Supply chain management	Ppt and ict tools	Standardisation and EDI EDI Software Implementation	Assignment on market basket model and a-prior algorithm
IV.	**The Corporate Digital Library** Dimensions of internal electronic commerce systems • Making a business case of document library • Types of digital documents • Issues behind document infrastructure • Corporate data warehouses **Advertising and Marketing on the Internet** • The new age of information – based marketing • Advertising on the internet • Charting the on-line marketing process • Market research	Chalk and board method	Making a business case of document library Types of digital documents	Case study on Issues behind document infrastructure Corporate data warehouses
V.	**Consumer Search and Resource Discovery** Search and resource discovery paradigms Information search and retrieval Electronic commerce catalogues or directories Information filtering, consumer Data interface emerging tools **On Demand Education and Digital Copyrights** Computer based education and training Technological components of education on demand Digital copy right and E-Commerce	Ict tools	Electronic commerce catalogues or directories Information filtering, consumer	Class activity Information filtering, consumer

List of References (Book / ICT / Weblinks):

1. Kalkota, Ravi. Whinstone,Andrew B. **Frontiers of Electronic Commerce.** International Student edition. 2009 Impressed edition. New Delhi: Pearson Publication.
2. Treese, G. Winfield and Stewart, Lawrence C. 1998. **Designing Systems for Internet Commerce.** Low priced edition. Addison-Wesley-Tokyo Publications.

Name of the Faculty member & Signature:RUCHIKA MURTHY

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-IV

Department: BBA **Class & Section:NBBA** **Course Code: BB18402**

Name of the Faculty Member: P.Shirisha **Course Title: Corporate Accounting**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to company final accounts, Format of Profit and loss a/c, Preparation of Final accounts, Profit prior to incorporation	Lecture Method using Black board and Interaction method	To learn about the formats of profit and loss a/c and final accounts of company according to the provisions of companies act 2013.	Solving different kind of problems relating to joint stock companies.
II.	Valuation of Goodwill: Need and methods of valuing goodwill Valuation of shares: Need and methods of valuing shares.	Lecture method and Interaction method.	To learn about the different methods of valuation of goodwill and shares.	Solving different kinds of problems in consideration with different methods of valuation of goodwill and shares.
III.	Amalgamation of companies, Types of amalgamation, amalgamation in nature of merger and purchase, calculation of purchase consideration, treatment in the books of transferor and transferee Internal reconstruction- Meaning, accounting treatment, preparation of post reconstruction financial statements.	Lecture method and discussion method	To learn about the meaning of external and internal reconstruction, accounting treatment under amalgamation and internal reconstruction.	Solving different kinds of problems in the books of transferor and transferee in consideration with the types of amalgamation and internal reconstruction
IV.	Bank accounts, registers to be maintained by banks, slip system of posting, rebate on bills discounted, classifications of bank advances, Non-performing assets, provisions, and problems on banking companies.	Lecture method using ICT tools	To learn about the provisions relating to banking companies, learning the formats of bank accounts	Solving different kinds of problems relating to bank accounts

V.	Accounts of Insurance companies- Life Insurance Companies, Meaning, legal provisions relating to revenue account, profit and loss account, Balance sheet, valuation balance sheet, problems on Life Insurance. General Insurance, Meaning, Legal provisions relating to revenue a/c, profit and loss a/c and balance sheet , Problems on GIC	Lecture method using ICT tools	To learn about the provisions relating to Insurance companies given by IRDA. Learning the formats of life insurance and general insurance.	Solving different kinds of problems relating to life insurance and general insurance.

List of References (Book / ICT / Weblinks):

1. S.P Jain and K.L Narang, Kalyani publishers

Name of the faculty member & Signature:

P.Shirisha

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - IV

Department: BBA-GENERAL **Class &Section: NBBA-GENERAL** **Course Code: BB23403**

Course Title: FINANCIAL MANAGEMENT

Name of the Faculty Member:
Mrs. M.SUNANDA

Unit	Topics to be covered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction to Financial Management** Meaning of Finance and Financial Management, Types of Finance-Public and Private Finance, Classification of Private Finance, Personal Finance, Business Finance and Finance of Non-Profit Organization, Importance and Scope of Financial Management, Approaches to Finance Function, Relationship of Finance with Other Business Functions, Objectives of Financial Management, Profit Maximization and Wealth Maximization - Merits and Criticisms, Financial Decisions, Internal Relation of Financial Decisions, Factors Influencing Financial Decisions, Functions, Areas of Financial Management, Functions of a Finance Manager.	Discussion and Demonstration, white board marker, PPT presentation	Identify and interpret the various concepts and importance of financial management	Quiz, presentation by students, assignment on various companies and their financial functions
II.	**Cost of Capital** Concept and Significance of the Cost of Capital, Specific Cost of Capital, Various Sources of Finance, Cost of Debt (Including Simple Problems),	Discussion and Demonstration, white board marker, PPT presentation	Explain and demonstrate the uses of various sources of cost of capital and leverages.	Student seminars

	Cost of Preference Capital (Including Simple Problems), Cost of Equity (Including Simple Problems), Book Value Weights Vs. Market Value Weights. Computation of overall cost of capital. **Leverages** Financial Leverages (Including Simple Problems), Operating Leverages (Including Simple Problems), Combined Leverages (Including Simple Problems)			
III.	**Capital Budgeting** Concept of Capital Budgeting – Importance of Capital Budgeting Kinds of Capital Budgeting Decisions, Methods of Appraisal – Non DCF and DCF Techniques of Appraisal, Payback – Discount Payback (Including Simple Problems), Accounting Rate of Return (Including Simple Problems), Net Present Value (Including Simple Problems), Internal Rate of Return and Profitability Index (Including Simple Problems)	Discussion and Demonstration, white board marker, PPT presentation	Classify and combine the various techniques of capital budgeting and effectiveness.	Group presentations and seminar
IV.	**Working Capital Management** Meaning of Working Capital, Types of Working Capital, Working Capital Cycle, Adequate Working Capital, Determinants of Working Capital, Estimation of Working Capital. Management of Cash, Cash Budget (Including Simple Problems)	Discussion and Demonstration, white board marker, PPT presentation	Identify the essence of working capital management and cash budgeting.	Videos on budgeting and importance and influence of working capital in the organization.
V.	**Receivables Management** Management of Receivables, Objectives of Receivables Management, Optimum Credit Policy-Aspects of Credit Policy, Credit Terms–Credit Standards–Collection Policy (Theory Only), Management of	Discussion and Demonstration, white board marker, PPT presentation	Interrelate and understand the essence of receivables, inventory and dividend policies and its relevance in the business.	Group discussion and seminars , videos on the concept related.

	Inventory (Theory Only), **Dividend Policy Decisions** Meaning, Kinds, Determinants of Dividend Policy Decisions			

Listof References (Book/ICT/ Weblinks):

1. Pandey, I.M. **Financial Management.** 10th Edition. New Delhi: Vikas Publishing House Pvt Ltd.
2. Khan, M.Y. and Jain, P.K. **Financial Management.** 6th Edition. New Delhi: Tata McGraw Hill Publications.
3. Shashi Gupta, K. and Sharma, R.K. **Financial Management.** 7th edition. New Delhi: Kalyani Publishers.
4. Kulkarni, P.V. And Satya Prasad, B.G. 2004. **Financial Management.** Mumbai:Himalaya Publishing House.
5. Maheswari,S.N. 2001. **Financial Management.** New Delhi:Sultan Chand & Sons Publishers.

Name of the faculty member & Signature: Mrs. M.SUNANDA

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: BBA GENERAL **Class & Section: NBBA** **Course Code: BB23404**

Name of the Faculty Member: Mary Patricia **Course Title: MARKETING MANAGEMENT**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Marketing** Concept of marketing – evolution – definitions Nature and scope-significance of marketing Marketing management tasks, Distinction between marketing concept and selling concept Role of marketing in developing economy Marketing of Non-profit organizations **Marketing Environment** Micro environment – meaning Factors influencing micro environment – company consumers – competitors – suppliers – marketing intermediaries Macro environment – meaning Factors influencing macro environment – cultural / social environment – demographic environment – physical / natural – legal / political – economic – technological environment SWOT Analysis (with reference india)	Lecture method-	Explain the concept of marketing and sketches the marketing environment.	Quiz on logos

II.	**Market Segmentation and Targeting** Identification of Market Segments – Segmenting Consumer Markets - Segmentation Basis Selecting Target Markets Segmentation and Targeting as a basis for strategy formulation Developing and communicating a positioning strategy	Lecture – PPT	Classify the market and identify the various market segments.	Quiz on segmentations
III.	**Marketing Mix** **Product** Definition of product – levels of product – classification of products Product-mix decisions – product-life decisions Brand decisions – packaging and labeling decisions New product development – stages in new product development process Product life cycle – stages involved **Price** Concept – meaning of price and pricing – importance of pricing Pricing objectives – factors influencing pricing Price setting procedure – selecting a price method – adapting the price Geographical pricing – price discounts and allowances Promotional pricing – discriminating price	Lecture – PPT- Case study	Point out the marketing mix with reference to product and price	Asked students to come out with various new products and product life cycle of various brands
IV.	**Channels of Distribution** Marketing channels – number of channel levels Channel design – channel dynamics **Promotion** Promotion mix variables The communication process Advertising – designing effective advertising programmes	Lecture – PPT- Case study	Analyze the promotion mix and the channels of distribution.	Quiz- showed various types of advertisements like (slice of life- fantasy- musical-scientific evidence etc)

	Deciding on the media Sales promotion – purpose Major decisions in sales promotion			
V.	**Digital Marketing** Fundamentals of Digital marketing & Its Significance Traditional marketing Vs Digital Marketing Evolution of digital marketing-Digital marketing landscape Key drivers, digital consumer & communities Gen Y & Netizen's expectation & influence with respect to Digital Marketing **Direct and Online Marketing** Direct Marketing-Meaning-importance forms of dircet marketing (direct mail marketing, catalog marketing, direct-response television marketing, kiosk marketing)-Online marketing-meaning and importance marketing and the internet -domains of online marketing the promise and challenges of online marketing	Lecture – PPT- Case study	Explain service marketing mix and points out the importance of direct and online marketing.	Presentation done by students on various direct and online marketing

List of References (Book/ICT/ Weblinks):

1. Kotler Philip, Gary and Armstrong. **Principles of Management.** 13th Edition. New Delhi: Ehsan eUl Haque Publications.
2. Kotler Philip. 2007. **MarketingManagement.** New Delhi: Pearson Publications.
3. Sherlekar, S.A. 2011. **Marketing Management.** 13th Revised Enlarged Edition. Mumbai: Himalaya Publications.
4. Karunakaran, **K. Marketing Management.** 3rd Revised and Enlarged Edition. Mumbai: Himalaya Publications.

Name of the faculty member & Signature:

Mary Patricia

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER – IV

Department:BBA-REG **Class&Section: NBBA** Coursecode: BB23405

Name of the FacultyMember:M.Swetha shastry **CourseTitle:HRM**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Human Resource and Personnel Management** Introduction - Personnel Vs. Human Resources - Nature and Scope of HRM Features - Objectives - Importance of HRM - Role of HRM Functions of HRM -Managerial & Operative functions Meaning of Organizational Policies, Procedures & Programmes Organization of HRM, Role of Personnel/HR managers Qualifications and Qualities of Personnel/HR Managers Origin & Development of HRM	Lecture Methodusing ICT Tools and chalk board	Understand the concept of HRM, functions and changing role of a hr manager	seminar
II.	**Job Analysis and Design** Job Analysis - Need, Technology, Process, Uses of Job Analysis Job Description and Job Specification Job Design, Job rotation, Job enlargement,JobEnrichment **Recruitment, Selection, Induction,** The Recruitment Process, Methods of Recruiting. The Selection Process, Type of tests,Induction and Placement **Promotion, Transfer & Demotion** Promotion - Meaning - Purpose - Basis – Benefits - Problems - Promotion Policy Transfer-Meaning - Purpose - Types - Reasons – Benefits – Problems Demotion - Meaning - Need	Lecture Methodusing ICT Tools and chalk board	Distinguish between the various methods of job design and interpret the techniques of acquisition of human resource.	Group discussion

III.	**HR Planning** HR Planning – Introduction - Objectives, Definitions - Need for HRP Benefits of HRP - Factors affecting HRP Process of HRP - Problems & Limitations of HRP **Performance Management and Appraisal** Performance Management-HRD approaches for Work life balance Performance Appraisal - Meaning of Performance Appraisal - Need – Objectives Methods - Uses of Performance Appraisal – Limitations **Job Evaluation** Job evaluation – Definition – Objectives - Methods/Techniques of Job evaluation Limitations & Problems of job evaluation	Lecture Method using ICT Tools and chalk board	Explain the importance of HRP and point out the various HRD approaches for Work life balance and describe the concept of job evaluation.	Group discussion
IV.	**Human Resource Development** Meaning - Definitions – Principles of HRD Core concepts for improvement & development HRD **Career Planning & Development** Career Planning - Meaning - Need – Purpose-Career Development - Actions - Advantages of Career Planning & Development.	Lecture Method using ICT Tools and chalk board	Analyse the core concepts of HRD, TQM and understand the concept of career development.	seminar
V.	**Trade Unions & Industrial Relations** Concept of Trade Union – Objectives-Problems Collective Bargaining - Features- Types - Process of Collective Bargaining Employee Grievances and Discipline Industrial Conflict – Resolution **Worker's Participation** Definition – Objectives, Forms of Participation - Quality Work life	Lecture Method using ICT Tools and chalk board	Explain the various concepts of worker's participation and quality of work life.	Group discussion

1. **Listof References (Book/ICT/ Weblinks):1.** Subba Rao, P. 2012. **Essentials of Human Resource Management and Industrial Relations.** 3rd edition. Mumbai: Himalaya Publications.
2. Dassler Gary. **Human Resource Management**. 10th edition. New Delhi: Pearson Publications.

Nameofthefacultymember&Signature: M.Swetha shastry
Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: BBA **Class&Section: DBBA -A& B** **CourseCode:BB18505**

Nameofthe FacultyMember: MARY PATRICIA

Course Title: STRATEGIC MANAGEMENT

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**UNIT-I** **Strategic Management** Introduction, Definition Strategic Management Process Strategic intent, Hierarchy of Strategic intent Developing a strategic Vision, Mission Statement Establishing objectives, Crafting Strategies	Discussion and Demonstration, white board marker, PPT presentation	Explain the strategic management process and craft strategies.	Quiz,presentation by students, assignment on various companies
II.	**UNIT-II** **Environmental Analysis - Components of External and Internal Environment** Industry Analysis - Significance and framework for Industry Analysis- Michael Porter's five force model Competitive Analysis-Forces shaping competition in an Industry Competitor Analysis-Strategic groups, Framework for competitor analysis	Discussion and Demonstration, white board marker, PPT presentation	Analyse the components of environment analysis in depth.	Presentation by students on various companies and their strategies.

List of References (Book/ICT/ Weblinks):

1. Arthur A Thompson Jr, Strickland A. J., John E. Gamble and Arun K. Jain. **Crafting and Executing Strategy, - The Quest for Competitive Advantage - Concepts and Cases.** Tata McGraw Hill Education Private Limited: New Delhi.
2. Subba Rao, P. 2010. **Business Policy and Strategic Management (Text and Cases).** Himalaya Publications: Mumbai.
3. Rao, V.S.P. and Hari Krishna, V. 2010. **Strategic Management - Text and Cases.** Excel Books: New Delhi.
4. Charles W. L. Hill and Gareth R. Jones. 2009. **An Integrated Approach to Strategic Management.** Cengage Learning: New Delhi.

Mary Patricia Pais

Nameofthefacultymember&Signature:

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Approvedby HeadoftheDepartment:

	UNIT-III **Strategy Formulation** Corporate level strategy - Balanced Score card-GrandStrategies-Strategic Alternatives–Growth/Expansion Strategies--Strategic Growth options – Ansoff's Growth Vector, Diversification Strategies,Related and unrelated diversificationVertical Integration strategies,Stability Strategy-Retrenchment Strategies-CombinationStrategies-Portfolio Analysis -BCG Matrix and GE nine cell matrix-Business Level Strategy-Creating and Sustaining Competitive Advantages	Discussion and Demonstration, white board marker, PPT presentation	Formulate the various corporate strategies.	Seminar and group discussion
IV.	**UNIT-IV** **Tailoring Strategy to Fit Specific Industry and Company Situations** Industry Life Cycle Stages: -Strategies for competing in Emerging industries Turbulent and high velocity markets, Maturing Industries, Stagnant industries, and Fragmented industries.	Discussion and Demonstration, white board marker, PPT presentation	Plan and produce strategies tailoring to fit specific industry.	Seminar
V.	**UNIT-V** **Strategic Implementation and Control** Structural issue-Matching structure with strategy-Behavioural issue-Empowerment as a way of influencing behavior Managing political behaviour-Strategic Leadership and competitive advantage, Ethics and strategy Creating a strategy -supportive culture and Strategic Control	Discussion and Demonstration, white board marker, PPT presentation	Explain the various issues and importance of strategic leadership.	Group discussion

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Teaching

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SEMESTER

Department:BBA-REG **Class&Section:DBBA-A** **CourseCode:BB21504**

Nameof FacultyMember:M.Swetha Shastry **CourseTitle: BUSINESS LAWS**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Contract Act** Agreement and contract – Definition, meaning – Essentials of a valid contract – types of contracts Offer and acceptance – definition – essentials of a valid offer and acceptance – communication and revocation of offer and acceptance Consideration – definition and importance – essentials of a valid consideration – the doctrines of 'stranger to contract' and 'No consideration – No contract' Capacity to contract – special rules regarding minors agreements Consent – free consent – flaw in consent – coercion – undue influence – fraud – misrepresentation and mistake Introduction to labour law-introduction to factories act 1949-objects of labour- meaning- definition-	Lecture Method using ICT Tools and chalk board.	Demonstrate an understanding of the legal environment of the business	Seminar

	provisions regarding health and safety of workers.			
II.	**Discharge of Contract** Legality of object and consideration – illegal and immoral agreements – agreements opposed to public policy Agreement expressly declared to be void-wagering agreements and contingent contracts Discharge of a contract – various modes of discharge of a contract breach of contract – types remedies for breach of a contract	Lecture Method using ICT Tools and chalk board.	Explain legality of object and consideration, discharge of a contract and remedies available.	Group discussion
III.	**Sale of Goods Act** Contract of sale: definition: features – definition of the term goods – types of goods – rules of transfer of property in goods Differences between sale and agreement to sell – Rights of an unpaid seller Conditions and warranties – meaning and distinction – express and implied conditions and warranties – sale by non-owners – auction sale	Lecture Method using ICT Tools and chalk board.	Identify the recognition of transactions involving the sales of goods act.	seminar
IV.	**Consumer Protection Act** Definitions of the term consumer – structure of Consumer Protection Act 1986 - unfair trade practices - restrictive trade practices and	Lecture Method using ICT Tools and chalk board.	Dramatize the application of consumer protection act.	Group discussion

	complaints Rights of consumers – consumer protection council Consumer redressal agencies – penalties for violation			
V.	**Intellectual Property Rights** Meaning – need and objectives – Meaning of the terms industrial property, literary property, copy right, patents, trade marks, trade names, trade secrets, industrial designs, geographical indications Information Technology act 2000: Aims & objectives – a brief overview of the Act Introduction and Information on Right to Information Act Introduction to Competition Law	Lecture Method using ICT Tools and chalk board.	Recognize intellectual property rights and introduction to IT act 2000 and right to information act.	seminar

Listof References (Book/ICT/ Weblinks):

1. Garg, K.C., Sareen, V.K., Sharma Mukesh and Chawla R.C. 2010. **Business Law.** 7th revised edition. 2013 reprint. Kalyani Publishers: New Delhi.
2. Kapoor, N.D. **Business Laws.** 5th revised edition. Reprint 2011. Sultan Chand & Sons: New Delhi.

Nameofthefacultymember&Signature: M. Sneetha Shastry

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - III

Department: BBA **Class & Section: DBBA-A** **Course Code: BB18502**

Name of the Faculty Member: V ANUSHA **Course Title: Operations Research**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to OR- origin, nature, applications and limitations Linear programming Non-linear programming Integer programming Goal programming Dynamic programming	Discussion and Demonstration, whiteboard, Marker, PPT Presentation, Projector.	To learn how to use the various decision making tools OR to solve real life problems.	Computer Based test.
II.	Transportation problem and its applications IBFS- using north west corner rule Matrix minimum method Vogel's approximation method Unbalanced transportation problem Degeneracy Optimality test	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn about basic feasible solution using various methods and describe suitable method for maximizing the objective function.	Offline Quiz.
III.	Assignment problem- Hungarian method Balanced and unbalanced AP-problems Restricted AP Travelling sales man problem	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn how to formulate and solve the assignment problem.	Offline Quiz.
IV.	Introduction to network analysis Fulkerson's rule- critical path method	Discussion and Demonstration, Practical activity,	To Learn the algorithm for a shortest path problem like CPM and PERT to improve decision	Written Test.

	PERT –Beta distribution Crashing	whiteboard, Marker, PPT Presentation, Projector.	making and develop critical thinking and objective analysis of decision problems.	
V.	Queuing theory- concepts of queue/ waiting line-general structure of queuing system Operating characteristics of queues, deterministic queuing models Probabilistic queuing model- cost analysis Single channel queuing model- Poisson arrival and exponential service times with infinite population	Discussion and Demonstration, Practical activity, whiteboard, Marker, PPT Presentation, Projector.	To Learn the nature and scope of queuing system and demonstrate the knowledge of various queuing models.	Written Test.

Listof References (Book/ICT/ Weblinks):

1. Vohra, N. D, Quantitative Techniques in Management, 4th Ed, Tata McGraw Hill, 2010.
2. Gupta, P. K., & Hira, D. (2010). Operations Research. S. Chand & Company Ltd.
3. Sharma, J. K. (2013). Operations Research (5th ed.). Mcmillan Publishers IndiaLtd.
4. Taha : An Introduction to Operations Research, PHI
5. https://youtu.be/1CnFjNOewEU
6. https://youtu.be/ILWbaWrjgU4
7. https://www.youtube.com/watch?v=z3zjieArlAE
8. https://www.youtube.com/watch?v=rrfFTdO2Z7I
9. https://www.youtube.com/watch?v=WrAf6zdteXI
10. https://www.youtube.com/watch?v=-Kza-8JmqHU

Name of the faculty member & Signature: V. Anuha V.

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -I

Department: BBA

Class & Section: DBBA-A

Course Code: BB18503

Course Title: Cost Accounting

Name of the Faculty Member: Katha Praveen Kumar

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** Meaning of Costing, Cost Accounting & Cost Accountancy Scope & objectives of cost accounting Costing-An aid to Management Cost accounting Vs. Financial accounting Advantages & limitations of cost accounting Characteristics of ideal costing system Installation of costing system, steps for installation Cost Unit, Methods & techniques of costing Elements of cost Cost Sheet or Statement of Cost, Treatment of Stock (Simple Problems)	PPT Presentation	Understand importance of cost accounting in organization.	By interacting with one to one and posing questions
II.	**Material Control, Techniques, Losses** Material Control – Meaning & Need Purchase Control – Functions of Purchase Department Stores Control - classification & codification of stores Stores or Material Records-Bin cards & stores ledger Methods of Valuing Material Issues (problems FIFO, LIFO, Simple, Weighted average, and base stock	PPT Presentation and Chalk and Board	Apply the principles of managing inventories of materials and the procedures for accounting inventory.	Seminar and Presentations

	method). Techniques of Material Control – Level Setting, Economic Order Quantity (Problems on calculation of Minimum, maximum, recorder levels and EOQ) Inventory control through ABC & VED analysis, perpetual inventory system Material Losses – Waste, Scrap, Defectives,Spoilage (Theory)			
III.	**Labour Cost – Computation & Control** Types of labour – Direct & Indirect Labour costs, Control over labour costs Labour turnover – causes and effects – measures to reduce labour turnover Time Keeping Department – Time Keeping & Time Booking Idle Time – Control of Idle Time Overtime – Control over overtime work **Remuneration & Incentives** Systems of Wage payment – time wage & piece rate system Straight Piece Rate System,Taylor's Differential & Merrick's Multiple piece rate system Computation of Labour Cost (Simple Problems) Premium & Bonus Plan – Halsey Premium Plan, Rowan Plan (Simple Problems)	PPT Presentation and Chalk and Board	Apply the principles and practice of costing labour to a business.	Solving Problems
IV.	**Overhead – Classification, Apportionment, Absorption** Definition of Overhead – Importance of Overhead Cost Steps in Overhead Accounting – Collection of Production Overhead Classification of Overhead Costs Allocation and apportionment of overheads to Cost Centers Bases and principles of apportionment of	PPT and Chalk and Board	Apply the principles and process of overhead cost analysis.	Case -study and Solving Problems

	overhead costs Methods of re-apportionment or re-distribution of service department costs to production departments (Simple Problems) Calculation of Machine Hour Rate (Simple Problems Under-absorption and over-absorption of overheads (theory only)			
V.	**Unit or Output Costing & Process Costing** Collection of Costs Preparation of Statement of Cost & Profits Tenders or Quotations Treatment of Scrap Features & application of Process costing Preparation of Process Cost Accounts – treatment of process losses, scrap & waste - (excluding calculation of equivalent production units & Inter process profits) Accounting for Joint Products & By-products	PPT and Chalk and Board Presentation	Apply the operation of unit or output costing and process costing methods.	Solving Problems and Group Discussion

List of References (Book / ICT / Weblinks):

1. Jain, S.P. and Narang, K.L. 2012. **Cost Accounting Principles and Practices.** 23rd edition. Kalyani Publishers: New Delhi.
2. Arora, M.N. 2010. **Cost Accounting Principles and Practices.** 11th edition. Vikas Publishing House Pvt Ltd: New Delhi.
3. Arora, M.N. 2010. **Cost and Management Accounting (with lab work).** 2nd revised edition. Himalaya Publications: Mumbai.
4. Made Gowda, J. 2001. **Advanced Cost Accounting.** 1St edition. Himalaya Publishing house: Mumbai.
5. Bhar, B.K. 1993. **Cost Accounting (Methods and Problems).** 9Th edition. Academic publishers: Calcutta.
6. Gauri Shankar. 2003. **Practical Costing (self-tutor).** 1St edition. Himalaya publishing house: Mumbai.

Name of the faculty member & Signature: Katha Praveen Kumar

Approved by Head of the Department:

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching Plan fortheAcademicYear2023–2024

ODD SEMESTER

epartment: BBA General

Class & Section: DBBA-B

Course Code: BB21504

Course Title: BUSINESS LAWS

ame of the Faculty Member: Dr. Sangeeta Peter

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Agreement and contract – Definition, meaning – Essentials of a valid contract – types of contracts Offer and acceptance – definition – essentials of a valid offer and acceptance – communication and revocation of offer and acceptance Consideration – definition and importance – essentials of a valid consideration – the doctrines of 'stranger to contract' and 'No consideration – No contract' Capacity to contract – special rules regarding minors agreements Consent – free consent – flaw in consent – coercion – undue influence – fraud – misrepresentation and mistake Introduction to labour law- introduction to factories act 1949- objects of labour- meaning- definition- provisions regarding health and safety of workers.	Interactive Learning Lecture using -chalkboard -ICT Tools	Understand the legal environment of the business.	Quiz
II.	Legality of object and consideration – illegal and immoral agreements – agreements opposed to public policy Agreement expressly declared to be void- wagering agreements and contingent	Interactive Learning Lecture using -chalkboard -ICT Tools	Explain legality of object and consideration, discharge of a contract and remedies available.	Quiz

	contracts Discharge of a contract – various modes of discharge of a contract breach of contract – types remedies for breach of a contract			
III.	Contract of sale: definition: features – definition of the term goods – types of goods – rules of transfer of property in goods Differences between sale and agreement to sell – Rights of an unpaid seller Conditions and warranties – meaning and distinction – express and implied conditions and warranties – sale by non-owners – auction sale	Interactive Learning Lecture using -chalkboard -ICT Tools	Identify the recognition of transactions involving the sales of goods act.	Quiz, Presentations
IV.	Definitions of the term consumer – structure of Consumer Protection Act 1986 - unfair trade practices - restrictive trade practices and complaints Rights of consumers – consumer protection councils Consumer redressal agencies – penalties for violation	Interactive Learning Lecture using -ICT Tools	Understand the application of consumer protection act.	Presentations
V.	Meaning – need and objectives – Meaning of the terms industrial property, literary property, copy right, patents, trademarks, trade names, trade secrets, industrial designs, geographical indications Information Technology act 2000: Aims & objectives – a brief overview of the Act Introduction and Information on Right to Information Act Introduction to Competition Law	Interactive Learning Lecture using -ICT Tools	Recognize intellectual property rights and introduction to IT act 2000 and right to information act.	Presentations, Viva

List of References (Book/ICT/ Weblinks):

1. Garg, K.C., Sareen, V.K., Sharma Mukesh and Chawla R.C. 2010. Business Law. 7th revised edition. 2013 reprint. Kalyani Publishers: New Delhi.
2. Kapoor, N.D. Business Laws. 5th revised edition. Reprint 2011. Sultan Chand & Sons: New Delhi.
3. Kapoor, N.D. 2009. Elements of Mercantile Law. 31st revised edition. Sultan Chand & Sons: New Delhi.
4. Bulchandani, K.R. 2006. Business Law for Management. 4th edition. 4. Himalaya Publishing House: Mumbai.
5. Gulshan, S.S. 2004. Mercantile Law. 2nd edition. Excel Books: New Delhi

DR-SANGEETA PETER. 15/11/23

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -I

Department: BBA **Class & Section: DBBA-B** **Course Code: BB18503**

Name of the Faculty Member: DR A LATHA **Course Title: Cost Accounting**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** Meaning of Costing, Cost Accounting & Cost Accountancy Scope & objectives of cost accounting Costing-An aid to Management Cost accounting Vs. Financial accounting Advantages & limitations of cost accounting Characteristics of ideal costing system Installation of costing system, steps for installation Cost Unit, Methods & techniques of costing Elements of cost Cost Sheet or Statement of Cost, Treatment of Stock (Simple Problems)	PPT Presentation	Understand importance of cost accounting in organization.	By interacting with one to one and posing questions
II.	**Material Control, Techniques, Losses** Material Control – Meaning & Need Purchase Control – Functions of Purchase Department Stores Control - classification & codification of stores Stores or Material Records-Bin cards & stores ledger Methods of Valuing Material Issues (problems FIFO, LIFO, Simple, Weighted average, and base stock method). Techniques of Material Control – Level Setting, Economic Order Quantity (Problems on calculation of Minimum, maximum,	PPT Presentation and Chalk and Board	Apply the principles of managing inventories of materials and the procedures for accounting inventory.	Seminar and Presentations

	recorder levels and EOQ) Inventory control through ABC & VED analysis, perpetual inventory system Material Losses – Waste, Scrap, Defectives,Spoilage (Theory)			
III.	**Labour Cost – Computation & Control** Types of labour – Direct & Indirect Labour costs, Control over labour costs Labour turnover – causes and effects – measures to reduce labour turnover Time Keeping Department – Time Keeping & Time Booking Idle Time – Control of Idle Time Overtime – Control over overtime work **Remuneration & Incentives** Systems of Wage payment – time wage & piece rate system Straight Piece Rate System,Taylor's Differential & Merrick's Multiple piece rate system Computation of Labour Cost (Simple Problems) Premium & Bonus Plan – Halsey Premium Plan, Rowan Plan (Simple Problems)	PPT Presentation and Chalk and Board	Apply the principles and practice of costing labour to a business.	Solving Problems
IV.	**Overhead – Classification, Apportionment, Absorption** Definition of Overhead – Importance of Overhead Cost Steps in Overhead Accounting – Collection of Production Overhead Classification of Overhead Costs Allocation and apportionment of overheads to Cost Centers Bases and principles of apportionment of overhead costs Methods of re-apportionment or re-distribution of service department costs to production departments (Simple Problems) Calculation of Machine Hour Rate (Simple Problems Under-absorption and over-absorption of	PPT and Chalk and Board	Apply the principles and process of overhead cost analysis.	Case -study and Solving Problems

	overheads (theory only)			
V.	**Unit or Output Costing & Process Costing** Collection of Costs Preparation of Statement of Cost & Profits Tenders or Quotations Treatment of Scrap Features & application of Process costing Preparation of Process Cost Accounts – treatment of process losses, scrap & waste - (excluding calculation of equivalent production units & Inter process profits) Accounting for Joint Products & By-products	PPT and Chalk and Board Presentation	Apply the operation of unit or output costing and process costing methods.	Solving Problems and Group Discussion

List of References (Book / ICT / Weblinks):

1. Jain, S.P. and Narang, K.L. 2012. **Cost Accounting Principles and Practices.** 23rd edition. Kalyani Publishers: New Delhi.
2. Arora, M.N. 2010. **Cost Accounting Principles and Practices.** 11th edition. Vikas Publishing House Pvt Ltd: New Delhi.
3. Arora, M.N. 2010. **Cost and Management Accounting (with lab work).** 2nd revised edition. Himalaya Publications: Mumbai.
4. Made Gowda, J. 2001. **Advanced Cost Accounting.** 1St edition. Himalaya Publishing house: Mumbai.
5. Bhar, B.K. 1993. **Cost Accounting (Methods and Problems).** 9Th edition. Academic publishers: Calcutta.
6. Gauri Shankar. 2003. **Practical Costing (self-tutor).** 1St edition. Himalaya publishing house: Mumbai.

Name of the faculty member & Signature: Dr. A. Latha

Approved by Head of the Department:

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Teaching Plan fortheAcademicYear2023–2024

ODD SEMESTER

epartment: BBA General

Class & Section: DBBA (DSE)

Course Code: BB18501B

ame of the Faculty Member: Dr. Sangeeta Peter

Course Title: Talent & Knowledge Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Talent Management – Overview Scope of Talent Management Need of Talent Management Talent Development Approaches Talent Management Assessment Tools Steps to Creating Talent Management System	Interactive Learning Lecture using -chalkboard -ICT Tools	Understand the basic concepts of talent management	Quiz
II.	Finding & Hiring Fast-Track Talent Selection through Talent Management Model Talent Planning-Defining Optimal Talent Portfolio The coaching process Categories of Leaders and Attributes of coaching Issues surrounding coaching Training and Development - Using Compensation Plans Using Information Technology for Support	Interactive Learning Lecture using -chalkboard -ICT Tools	Understand the importance of recruitment, coaching, training and development	Quiz, Case study
III.	Knowledge- Meaning, Hirearchy Tactic Knowledge Vs Explicit Management Individual Knowledge Conversion Process Organizational Knowledge Creation Process What is Knowledge Management? Process of Knowledge Management Benefits of Knowledge Management	Interactive Learning Lecture using -chalkboard -ICT Tools	Understand the importance of knowledge management	Quiz, Presentations, Case Study

IV.	Knowledge-Based Systems Virtual Organization and HRM Characteristics of Virtual Organizations HR Trends in Virtual Organizations Employee Features in Virtual Organizations	Interactive Learning Lecture using -ICT Tools	Understand the relationship between Virtual Organization and HRM	Presentations, Case study
V.	**Learning Organizations** Need for Learning Organizations Managing Innovations in Organizations Continuous learning Managing Knowlwdge as a business strategy The RICE Model: Responsiveness, Innovation, Competency, Efficiency Knowledge Management – Cross Functional Areas Knowledge Management in Finance Knowledge Management in Marketing	Interactive Learning Lecture using -ICT Tools	Understand the need for learning organization	Viva

List of References (Book/ICT/ Weblinks):

1. Lance A. Berger & Dorothy R. Berger, 2004. **Talent Management Handbook.** Delhi: Tata McGraw-Hill Publications.
2. Rao Subba, P. 2012. **Essentials of Human Resource Management and Industrial Relations.** 3rd edition. Mumbai: Himalaya Publications.
3. Jawadekar S Waman. 2011. **Knowledge Management Text and Cases.** Delhi: Tata McGraw-Hill Publications.
4. Warier E Sudhir. 2009. **Knowledge Management.** 3rd edition. Noida: Vikas Publishing House.
5. Rathan Reddy, B. 2009. **Knowledge Management Tools for Business Development.** 2Nd edition. Mumbai: Himalaya Publications.

Dr. Sangeeta Peter 16/12/23

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

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Teaching PlanfortheAcademicYear2023–2024

SEMESTER - IV

Department: BBA GENERAL **Class & Section: DBBA – A & B** **Course Code: BC18019**

Name of the Faculty Member: M. SUNANDA **Course Title: IMEM**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction** Nature of international markets-process, International dimensions of Marketing-domestic vs international Importance and framework of International marketing, Objectives of international business, Reasons and benefits of international Trade International marketing decisions **India's Export Trade:** Growths trend, composition direction-assessment of prospectus, Evaluation of exim policy- problems of India export sector, Export promotion and incentives EOU & EPZ- Export procedure.	Lecture Method using ICT Tools and chalk board.	Analyze the process of international markets and classify India's export trade	Seminar
II.	**International Marketing Environment** Economic and trade environment-social, culture and demographic environment – political and legal movement Technologies environment Regional trading blocks- economic integration, Planning For International Market, Marketing Research and information system Market selection	Lecture Method using ICT Tools and chalk board.	Describe the important factors of international marketing environment and differentiate marketing research, market selection, and market segmentation	Group discussion

	and Segmentation, Market analysis and foreign market strategies, Organization and international marketing coordination & control			
III.	**Product Strategies-** Basic decisions and product planning, Product-new product development – Product positioning Product planning and adoption- Theory of International Product life cycle, Product standardization Vs. Product Adaptation marketing of services - Branding packaging and labeling decisions. **Distribution:** Channels of distribution- direct and indirect, Types of intermediaries in direct and indirect channels, Channel development - Channel adaptation and channel decisions, Determination of channel types, physical distribution – transportation- cargo and marine Insurance – packaging, Agents of importers and exporters documentation.	Lecture Method using ICT Tools and chalk board.	Analyze the importance of product and distribution strategies	seminar
IV.	**Promotional Strategies** Promotions and communication-promotion mix, Personal selling – publicity Sales promotion international advertising-patterns, Advertising regulations-Advertising media, Standardized international advertising-case studies **Pricing Strategies:**Basic Decisions-role of price and price standardization, Pricing decisions-alternative pricing strategies-dumping Pricing distortion-inflation- transfer pricing – counter trade, price quotation-terms of sale-methods of finance and payment.	Lecture Method using ICT Tools and chalk board.	Differentiate the need for promotion mix strategies and pricing decisions	Group discussion

V.	**Special Topics** Foreign exchange-meaning-importance Determination of Foreign exchange-demand for and supply of Foreign Exchange, Equilibrium rate of foreign exchange Theories of Foreign Exchange, purchasing power parity theory-Balance of payments theory Devaluation of currency, Balance of payments- concept-importance, Balance of payments vs balance of trade, Causes for Disequilibrium in balance of payments – removal of disequilibrium. International economic organizations-World bank, IMF, IDA, IFC and WTO.	Lecture Method using ICT Tools and chalk board.	Explain foreign exchange strategies, differentiate balance of payments and balance of trade, and interpret international economic organizations	seminar

Listof References (Book/ICT/ Weblinks):

1. SakOnkvisit& John J. Shaw. International Marketing (Analysis and strategy).
2. Rathore, B.S. & Rathore, J.S. 2010. Export Marketing (3rd Edition).
3. Francis Cherunilam. International Marketing (including export management).

Nameofthefacultymember&Signature: M. Sunanda

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LOYOLA ACADEMY

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Teaching

PlanfortheAcademicYear2023–2024

SEMESTER

Department: BBA-REG **Class & Section: DBBA-A&B** **Course Code: BC18014**

Name of Faculty Member: Ramesh M **Course Title: International Business**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Global Imperative** An overview-International Business: A global perspective-Emergence of Globalization. Drivers of Globalization-Internationalization Process. Stages in International Business-Approaches to International Business. The World of International Business: Regional and Global Strategy. The Multinational Enterprise-Triad and International Business International Trade Theories. Environment of International Business-Cultural Environment and Political Environment	Lecture Method using ICT Tools and chalk board.	Understand the basic concepts in international business and environment of global business	Seminar, Case studies
II.	**Global Business and National Regulation** Rationale for Government Intervention-Forms of Trade Regulation at National Level- Tariff and Non -Tariff Barriers. Regional Economic Integration: Levels of Economic Integration. Benefits & Costs of Economic Integration – Major Trading Blocks: EU, NAFTA, ASEAN and SAARC. Multilateral Regulation of Trade and Investment-Basic Principles of Multilateral Trade Negotiations. GATT and its early Rounds-World Trade Organization-Structure and	Lecture Method using ICT Tools and chalk board.	Knowledge on major trading blocks and WTO	Group discussion, Presentations.

	functions. TRIPs & TRIMs-WTO & India-UNCTAD.			
III.	**Global Business and Entry Strategies** Global Market Entry Strategies-Exporting, Licensing, Franchising, Contract Manufacturing. Global Ownership Strategies: Strategic Alliance Types of Strategic Alliances. Selection of Strategic Alliance Partner, managing and sustaining Strategic Alliance- Cost and Benefit Analysis of Entry Strategies. Entry Analysis and Entry strategy configuration	Lecture Method using ICT Tools and chalk board.	Develop global market entry strategies and strategic alliances	Seminar, Presentations
IV.	**Global E-Business** Conceptual Framework of E-business-Prerequisites for Effective E-business Transactions. E-enabled Business Process Transformation and Challenges. E-business Technology and Environment- E-Business Applications-E- Business Models. Alternative E-business Strategies-Global E- Marketing Electronic Processing of International Trade Documents. Policy Framework for Global E-business	Lecture Method using ICT Tools and chalk board.	Application of e business and alternative e business starategies	Group discussion, Activities and Case studies
V.	**Managing Global Business** Strategy and Global Organization -Global Strategic Planning. Going Global and Implementing Strategies. Intercultural Communications. Intercultural Human Resources Management in Global Context	Lecture Method using ICT Tools and chalk board.	Understand importance of interpersonal communications and global strategies	Seminar, Activities and Case studies

List of References (Book/ICT/ Web links):

1. Charles W. K Hill and Arun K. K. Jain. 2010. **International Business - Competing in the Global Market Place.** 6th edition. New Delhi: Tata McGraw Hill.
2. John D. Daniels and Lee H. Radebaugh. 2006. **International Business.**New Delhi: Pearson Publications.
3. Subba Rao, P. 2011. **International Business.** 3rd revised edition. Mumbai: Himalaya Publications.
4. Aswathappa, K. 2010. **International Business.** New Delhi: Tata McGraw Hill.

Ramesh. M

Name of the faculty member & Signature:

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LOYOLA ACADEMY

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Teaching

PlanfortheAcademicYear2023–2024

SEMESTER

Department:BBA-REG **Class&Section:DBBA-A&B** **CourseCode: BB18501A**

Nameof FacultyMember:M.Swetha Shastry **CourseTitle: LCM**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Leadership** Characteristics, Qualities of Leadership Theories of Leadership: Trait theory, Situation Theory, Behavioural Theory Leadership Styles: Autocratic, Participative, Laissez-Faire and Paternalistic	Lecture Method using ICT Tools and chalk board.	Recognize the qualities of a leader, analyze various leadership theories and illustrate the different leadership styles.	Seminar
II.	**Change Management** Introduction, An overview of change Forces of Change, Change models Change programmes, Change levers, Change as growth Change as transformation, Change as turnaround	Lecture Method using ICT Tools and chalk board.	Analyze the forces of change and interpret the techniques of change management.	Group discussion

III.	**Organisational Change** Meaning, Types Technology and Change: Technology change with Human Facts Resistance to Change vs. Inviting Change: Reasons Approaches to Organisation Change	Lecture Method using ICT Tools and chalk board.	Classify the various types of organizational change.	seminar
IV.	**Resistance to change** Factors contributiong to resistance Congnitive and affective processes Recognizing resistance, Managers as resistors to change Suggestions to manage resistance	Lecture Method using ICT Tools and chalk board.	Point out the reasons for resistance to organizational change and recognize the methods of overcoming resistance.	Group discussion
V.	**Planning and Organisation Change** Organisation Development Linking vision and Change: Content of meaningful vision Strategies for communicating change	Lecture Method using ICT Tools and chalk board.	Develop the most suitable plan for successful implementation and organization of change in an organization.	seminar

Listof References (Book/ICT/ Weblinks):

1. Prasad, L.M. 2001. **Principles and Practice of Management.** 6th edition. New Delhi: Kalyani Publishers.
2. Gupta R.S., Sharma B.D. and Bhalla N.S. 2012. **Principles and Practice of Management.** 8th revised and enlarged edition. New Delhi: Kalyani Publishers.
3. Sharma R.K. and Gupta Shashi K. 2012. **Business Organization and Management.** 3rd revised edition. New Delhi: Kalyani Publishers.
4. Dassler Gary. **Human Resource Management**. 10th edition. New Delhi: Pearson Publications.

Nameofthefacultymember&Signature: M. Sudha Shastry

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -VI

Department: BBA **Class & Section: DBBA(DSE)** **CourseCode:BC21025**

Name of the Faculty Member: Sweta Rao **Course Title: FINANCIAL MARKETS & INSTITUTIONS(NEW)**

Unit	Topics to be covered	Teaching Pedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction** Overview of Indian financial system Functions, various segments, developments and defects, Remedial measures-financial reforms Financial services-meaning, fund based non-fund based Modern activities – innovative financial instruments Challenges facing the financial service sector	ICT Method, PPTs, interactive session,	Classify about financial markets and services	Practical learning experience
II.	**Capital Markets** Constituents-primary and secondary market , Growth rate-defects of Indian capital markets, SEBI norms, stock exchanges, meaning, functions Organization listing procedure, types of brokers, function NSE, OTCEI Fractions methods of floating new issues, General guidelines for new issue, SEBI guidelines – recent trends	ICT Method, PPTs, interactive session,	Explain about the capital markets with reference to stock market as per SEBI regulations	Group Discussion, practical learning experience of secondary market especially NSE platform and live trading session on buying and selling of shares.

III.	**Money Market** Structure, features, objectives Importance of money markets Segments of money markets Call markets -bill markets, commercial papers, Certificates of deposits, inter-bank certificate, Repo-discount finance house of India	ICT Method, PPTs, interactive session,	Sketch the working of money market in the Indian Financial System	Group discussion, Assignments
IV.	**Securitization of Debts** Meaning, modus operandi, role of merchant bankers, and other agents Structure of securitization Securitisable assets – benefits – drawbacks- future prospects **Derivatives:** Meaning, kinds of financial derivatives, concepts of forwards, futures, options Swap, importance of derivatives **Depository System:** meaning, process of depository systems in India SEBI norms, benefits & draw backs NSDL & Central depository system	ICT Method, PPTs, interactive session, Case Study	Analyse the derivatory and depository system	Practical learning exposure, Scenario based learning on the concept of Derivatives-Forwards, Futures, Options and Swaps
V.	**Mutual Funds** Meaning, origin, types or classification Importance of mutual funds - Operation Concept of Net Asset Value (NAV) method - guidelines Reasons for slow growth, future prospects of mutual fund industry **Merchant Banking** Concept, origin, role of merchant bankers Services, Regulatory framework pre& post issue management-Challenges Qualities required for a Merchant Banker SEBI Regulations and Conditions for Merchant Banking	ICT Method, PPTs, interactive session, Case Study	Appraise financial service system relating to mutual funds and merchant banking.	Practical learning experience, Mutual Fund statements of various investors and analyzing their investment portfolio in various MF schemes and calculation of NAV.

List of References (Book/ICT/ Weblinks):

1. 1.Gordon and Natarajan. 2012. **Financial Markets and Service.** 3rd edition. Himalaya Publications: Mumbai.
2. Bhole, L.M. and Mahakud Jitendra. **Financial Institutions and Markets.** 5th edition. Tata McGraw Hill Publications: New Delhi.
3. Khan, M.Y. **Financial Services.** 6th edition. Tata McGraw Hill Publications: New Delhi.
4. Mithani, D.M. and Gordon, E. 2012. **Financial Services – Banking and Insurance.** 3rd edition. Himalaya Publications: Mumbai.
5. **Marketing of Financial Services.** 2003 edition. ICFAI.

Name of the faculty member & Signature: Sweta Rao

Approved by Head of the Department: Mary Patricia

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -VI

Department: BBA GENERAL **Class & Section: DBBA (GEN)** **Course Code: BB18601**

Name of the Faculty Member: DR A Latha **Course Title: Fundamental Investment Management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Investments-Concept; Real vs. Financial assets-Investment decision process-Sources of investment information-Investment vs. Speculation-Factors to be considered in investment decision-Liquidity, Return-Risk, Maturity, Safety, Tax and Inflations-The concept of return and risk -Sources and types of risk-Risk-return trade-off -Risk premium and risk aversion	PPT Presentation	Explain investment decisions considering risk factors and returns.	By interacting with one to one and posing questions
II.	Approaches to Investment Analysis-Fundamental Analysis-Technical Analysis-Efficient Market Hypothesis-Behavioral Finance and heuristic driven biases	PPT Presentation and chalk board	Analyze investment decisions to understand viability of projects.	Seminar and presentation
III.	Fixed Income Securities and Variable Income Securities-Features and types of debt instruments-Bond indenture, factors affecting bond yield. Bond-price theorems-Basic Features of Common Stock -Approaches to valuation–Balance sheet model-dividend capitalization models Relative valuations	PPT Presentation	Analyze fixed and variable income securities.	Quiz on loans and advances

IV.	Portfolio Theory-Concept of portfolio-Portfolio return and risk -Harry Markowitz's Portfolio theory -Calculation of expected returns of portfolio, standard deviation of portfolio-CAPM Theory-Construction of minimum risk portfolio	PPT Presentation and chalk board	Evaluate the role of SEBI and NSDL in portfolio management.	Seminar and presentation
V.	Security Market Indexes, their uses-Sensex and Nifty-Mutual funds: genesis, features, types and schemes-NAVs, costs, loads and return of mutual funds-Problems and prospects in India-Regulation of mutual funds and investor's protection in India	PPT Presentation	Explain the importance of mutual funds in capital market.	Group Discusssions

List of References (Book / ICT / Weblinks):

1. Jones Charles,P. 2007. Investments: Analysis and Management, 9 th Edition. Canada: John Wiley &Sons, Inc.
2. Francis, JC & Taylor, RW. 2000. Theory and Problems of Investments. 2 nd Edition. Schaum's Outline Series,US: McGraw Hill.
3. Dhanesh Khatri. 2010. Security Analysis and Portfolio Management. 1 st Edition. UK: Macmillan Publishers.
4. Sudhindra Bhat. 2009. Security Analysis and Portfolio Management. 1 st Edition. New Delhi: Excel Books.
5. Preeti Singh. 2010. Investment Management. 17 th Revised Edition. New Delhi : HPH.

Name of the faculty member & Signature: Dr A Latha



Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: BBA GENERAL **Class & Section: DBBA A &B** **Course Code: BB18602**

Name of the Faculty Member: Mary Patricia **Course Title: RETAIL MARKETING AND CUSTOMER RELATIONSHIP MANAGEMENT**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Retailing** Meaning of retail and retailing-Store format-Types of retailers-Changes impacting retailers-Retailing in India-Changes affecting retailers growth in India	Lecture method-	Understand the important concepts of retailing.	Quiz, Example: Finding out about various retail organizations and types
II.	**Planning and Merchandise Management** Meaning of merchandise management Category management Phases in merchandise planning-Sales forecasting for retailing-Determine assortment planning process-Planogram-Retail location strategies for different types of retailers-Factors affecting the location	Lecture – PPT	Sketch the importance of merchandise management and phases in merchandise planning.	Quiz on logos of various retail organizations
III.	**HRM and Store Design** Importance of HRM in retailing Meaning of retail marketing Understanding consumer behavior Stages in buying process Store design and layout	Lecture – PPT- Case study	Explain the concept of human resource management in retailing	Asking real life experience on what goes into buying a product-process

	Factors affecting pricing in retail Retailing and information technology support systems Meaning of IT and its growing role in retailing			
IV.	**Customer Service** Meaning of customer service Customers perspective of service quality The Parasuraman, Zeithmal and Berry model Approaches to develop customer service advantages perceived service Expected service The Gaps model to improve quality of retail service quality Handling service problems and complaints	Lecture – PPT- Case study	Explain and understand the approaches to develop customer service.	Quiz
V.	**Customer Relationship Management** Meaning, importance of CRM process- Steps involved in CRM process Identifying specific market segments Develop CRM programs for different customer segments Relationship based buying	Lecture – PPT- Case study	Analyse the various steps involved in CRM process.	Relationship based buying experiences were asked to the students

List of References (Book/ICT/ Weblinks):

1. Suja Nair. 2008. **Retail Management.** Himalaya Publication: Mumbai
2. Swapna Pradhan. **Retailing Management.**Tata McGraw Hill Publishing Company Limited , New Delhi.
3. Barry Berman and Joel R Evans. **Retail Management.** Pearson Publications.
4. Lamba, A. J. **The Art of Retailing.** Tata McGraw Hill Publishing Company Limited: New Delhi.

Name of the faculty member & Signature: Mary Patricia

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - VI

Department: BBA-GENERAL **Class &Section: DBBA- A&B** **Course Code: BC18026**

Name of the Faculty Member:
Mrs. M.SUNANDA

Course Title: Consumer Behaviour

Unit	Topics to be covered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction**: Nature – scope – marketing concept Role of consumer – consumer – decision process. Learning theories – behavioral learning theory, cognitive learning theory, Learning process – drives, cues, stimuli, Role of reinforcement – extinction Generalization discrimination-advertising effect.	Discussion and Demonstration, white board marker, PPT presentation	Identify and interpret the various concepts and importance of consumer behavior and markets.	Quiz, presentation by students, assignment on various learning theories.
II.	**Brand Loyalty:** Perception – concept – role, perceptual mapping – perceived risk, cognitive processes, attribution process. Consumer motivation – Freudian theory, stimulus – response and trail approach – theories, personally types, self – concept – life style – social character.	Discussion and Demonstration, white board marker, PPT presentation	Explain and demonstrate the uses of various theories, brands and its impact on customer's perception.	Student seminars
III.	**Attitudes:** Concept – components of attitudes – development of attitudes – functional nature of attitudes. Attitudes models – tri-component attitude model, multi – attributes attitude model, attitude towards the Ad-model.	Discussion and Demonstration, white board marker, PPT presentation	Classify and combine the various theories of attitudes and its effectiveness.	Group discussions and seminar

IV.	**Group Conformity:** Reference groups and their relevance – Opinion leadership – Class and culture – Social stratification, social class and consumer behavior.	Discussion and Demonstration, white board marker, PPT presentation	Identify the essence of groups and its impact on the buying behavior.	Videos on group conformity concepts.
V.	**Consumer Behavior Models:** Maslow's hierarchy of needs, Consumer – decision process model, Howard-Sheth Model. Buyer Behavior – Model, Contemporary model, Nicosia model – Engel-Blackwell Miniard Model.	Discussion and Demonstration, white board marker, PPT presentation	Interrelate and understand the essence of buying behavior models and its impact on marketing.	Group discussion and seminars, videos on the buying behavior models.

Listof References (Book/ICT/ Weblinks):

1. Gupta, S.L. and Pal, Sumitra. 2001. '**Consumer Behavior – An Indian Perspective**' – **Text & Cases**. S. Chand and Sons: New Delhi.
2. Chunawall, SA. 2000. '**Commentary on Consumer Behavior**'. Himalaya Publishers: Mumbai & Hyderabad.
3. Schiffinan, Leon & Kanuk, Leslie. 2002. '**Consumer Behavior**' **(6th edition)** PHI: USA.
4. Nair, R. Suja, 2003. '**Consumer Behavior in Indian Perspective**'. Re-print, Himalaya publishing house: Mumbai & Hyderabad.

Name of the faculty member & Signature:

Mrs. M.SUNANDA

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-VI

Department: BBA-GENERAL **Class&Section: DBBA-A** **CourseCode: BB18603**

CourseTitle: ED

Nameofthe FacultyMember: M.Swetha shastry

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Entrepreneurship** Meaning, definition of entrepreneur Definition and meaning of entrepreneurship-Characteristics-Classification of entrepreneurs-Functions of an entrepreneur-Entrepreneur vs. Entrepreneurship-Entrepreneurial environment-Women entrepreneurs Concept, support and assistance-Role of entrepreneur in economic development	Lecture Method using ICT Tools and chalk board.	Understand the nature and basic concepts of entrepreneur and entrepreneurship.	Seminar
II.	**Entrepreneurial Development & Training** EDP Meaning, Need of EDP-Objectives of EDP Entrepreneurial training – meaning and importance, Objectives and methods of EDP Institutions assisting entrepreneurs Financial assistance to entrepreneurs Types, Sources of finance	Lecture Method using ICT Tools and chalk board.	Demonstrate the knowledge of entrepreneurship development programmes.	Group discussion
III.	**Project** Meaning and definition of project Project classification Project identification and importance Project formulation Concept, need and significance Project feasibility Aspects of project feasibility Project report - Contents, reasons for failure of a	Lecture Method using ICT Tools and chalk board.	Recognize the need for project report and analyze the concepts of project formulation	seminar

	project **ReviewTechniques**-PERTCPM method			
IV.	**Factory Design and Layout** Meaning, Importance Factors affecting factory layout, Factory design Factory layout – meaning, consideration in factory layout Standardization – meaning and objective Types of standardization Advantages and importance of standardization Quality control meaning and importance	Lecture Method using ICT Tools and chalk board.	Interpret factory design and factory layout and identify the importance of standardization and quality control.	Group discussion
V.	**Small Scale Industries** Concept and meaning and definition of SSI Classification and characteristics of SSI Differences between large scale and small scale industries with examples Financial schemes and policies for SSI Problems of SSI Sickness of SSI Reasons and remedies for SSI	Lecture Method using ICT Tools and chalk board.	Differentiate small and large scale industries and identify the reasons for sickness of small scale industries	seminar

Listof References (Book/ICT/ Weblinks):

1. Desai Vasant. 2009. **The Dynamics of Entrepreneurial Development and Management.** 5th Edition, Himalaya Publications: Mumbai.
2. Gordon, E. and Natarajan, K. 2008. **Entrepreneurship Development.** 2nd Revised Edition, Himalaya Publications: Mumbai.

Nameofthefacultymember&Signature: M.Swetha shastry

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER-VI

Department: BBA-GENERAL **Class&Section: DBBA-B** **CourseCode: BB18603**

Nameofthe FacultyMember: SANGEETA PETER **CourseTitle: ED**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Entrepreneurship** Meaning, definition of entrepreneur Definition and meaning of entrepreneurship-Characteristics-Classification of entrepreneurs-Functions of an entrepreneur-Entrepreneur vs. Entrepreneurship-Entrepreneurial environment-Women entrepreneurs Concept, support and assistance-Role of entrepreneur in economic development	Lecture Method using ICT Tools and chalk board.	Understand the nature and basic concepts of entrepreneur and entrepreneurship.	Seminar
II.	**Entrepreneurial Development & Training** EDP Meaning, Need of EDP-Objectives of EDP Entrepreneurial training – meaning and importance, Objectives and methods of EDP Institutions assisting entrepreneurs Financial assistance to entrepreneurs Types, Sources of finance	Lecture Method using ICT Tools and chalk board.	Demonstrate the knowledge of entrepreneurship development programmes.	Group discussion
III.	**Project** Meaning and definition of project Project classification Project identification and importance Project formulation Concept, need and significance Project feasibility Aspects of project feasibility Project report - Contents, reasons for failure of a	Lecture Method using ICT Tools and chalk board.	Recognize the need for project report and analyze the concepts of project formulation	seminar

	project **ReviewTechniques**-PERTCPM method			
IV.	**Factory Design and Layout** Meaning, Importance Factors affecting factory layout, Factory design Factory layout – meaning, consideration in factory layout Standardization – meaning and objective Types of standardization Advantages and importance of standardization Quality control meaning and importance	Lecture Method using ICT Tools and chalk board.	Interpret factory design and factory layout and identify the importance of standardization and quality control.	**Group discussion**
V.	**Small Scale Industries** Concept and meaning and definition of SSI Classification and characteristics of SSI Differences between large scale and small scale industries with examples Financial schemes and policies for SSI Problems of SSI Sickness of SSI Reasons and remedies for SSI	Lecture Method using ICT Tools and chalk board.	Differentiate small and large scale industries and identify the reasons for sickness of small scale industries	seminar

Listof References (Book/ICT/ Weblinks):

1. Desai Vasant. 2009. **The Dynamics of Entrepreneurial Development and Management.** 5th Edition, Himalaya Publications: Mumbai.
2. Gordon, E. and Natarajan, K. 2008. **Entrepreneurship Development.** 2nd Revised Edition, Himalaya Publications: Mumbai.

Dr. Sangeeta

Nameofthefacultymember&Signature:

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: BBA GENERAL **Class & Section: DBBA A** **Course Code: BB18605**

Name of the Faculty Member: Mary Patricia **Course Title: COMPANY LAW**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT-I** **Introduction** Introduction to companies act 1956 - definition of company – nature and characteristics of a company- Lifting the corporate veil – incorporation of company-Memorandum and articles of association-Doctrine of constructive notice-doctrine of indoor management –alteration of memorandum and articles of association	Lecture method-	Develop basic knowledge of provisions of companies act 2013.	Quiz, Example: Finding out about various organization and its characteristics
II.	**Prospectus and Share Capital** Kinds of companies – issue of prospectus – contents of prospectus Issue of shares – surrender – forfeiture – reissue of forfeited shares – transfer – issue of bonus shares and right shares – depository system-Share capital – alteration, reduction, consolidation, sub-division and reorganization of share capital	Lecture – PPT	Describe the capital structure of company through issues of shares and alteration of share capital.	Presentations on kinds of company
III.	**Borrowing Powers and Debentures** Borrowing powers – ultra vires – borrowing-Registration of charges Debentures – types of debentures – mortgages and creation of charges	Lecture – PPT- Case study	Explain the borrowing powers of a company and consequences of ultra vires borrowing.	Presentation on types of debentures

IV.	**Company Management** Company management – directors – number of directorships Appointment – qualifications – disqualifications and removal and resignation Managerial remuneration – powers, duties & liabilities of director Contracts in which directors are interested – meetings – kinds of meetings, notice, agenda Resolutions – types of resolutions – quorum and proxy.	Lecture – PPT- Case study	State various provisions of the companies act relating to company management and meetings.	Quiz
V.	**Reconstruction and Amalgamation** Reconstruction and amalgamation – winding up – meaning Modes – winding up by court – powers of court – grounds for winding up Provisions applicable for winding up proceedings Types of winding up – voluntary winding up - creditors winding up Consequences of winding up	Lecture – PPT- Case study	Identify various modes of winding up and legal provisions applicable.	Presentation on reconstruction and amalgamation

List of References (Book/ICT/ Weblinks):

1. Kapoor, N.D. 2009. **Elements of Company Law.** 3rd revised edition. Sultan Chand & Sons: New Delhi.
2. Kapoor, N.D. 2009. **Elements of Mercantile Law.** 31st revised edition. Sultan Chand & Sons: New Delhi.
3. Garg, K.C., Sareen, V.L., Sharma Mukesh and Chawla, R.C. 2004. **Mercantile Law including Company Law and Industrial Law.** 10th revised and enlarged edition. Kalyani Publishers: New Del

Name of the faculty member & Signature: Mary Patricia

Approved by Headof the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER

Department: BBA GENERAL **Class & Section: DBBA B** **Course Code: BB18605**

Name of the Faculty Member: DR. SANGEETA PETER **Course Title: COMPANY LAW**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	UNIT-I **Introduction** Introduction to companies act 1956 - definition of company – nature and characteristics of a company- Lifting the corporate veil – incorporation of company-Memorandum and articles of association-Doctrine of constructive notice-doctrine of indoor management –alteration of memorandum and articles of association	Lecture method-	Develop basic knowledge of provisions of companies act 2013.	Quiz, Example: Finding out about various organization and its characteristics
II.	**Prospectus and Share Capital** Kinds of companies – issue of prospectus – contents of prospectus Issue of shares – surrender – forfeiture – reissue of forfeited shares – transfer – issue of bonus shares and right shares – depository system-Share capital – alteration, reduction, consolidation, sub-division and reorganization of share capital	Lecture – PPT	Describe the capital structure of company through issues of shares and alteration of share capital.	Presentations on kinds of company
III.	**Borrowing Powers and Debentures** Borrowing powers – ultra vires – borrowing-Registration of charges Debentures – types of debentures – mortgages and creation of charges	Lecture – PPT- Case study	Explain the borrowing powers of a company and consequences of ultra vires borrowing.	Presentation on types of debentures

IV.	**Company Management** Company management – directors – number of directorships Appointment – qualifications – disqualifications and removal and resignation Managerial remuneration – powers, duties & liabilities of director Contracts in which directors are interested – meetings – kinds of meetings, notice, agenda Resolutions – types of resolutions – quorum and proxy.	Lecture – PPT- Case study	State various provisions of the companies act relating to company management and meetings.	Quiz
V.	**Reconstruction and Amalgamation** Reconstruction and amalgamation – winding up – meaning Modes – winding up by court – powers of court – grounds for winding up Provisions applicable for winding up proceedings Types of winding up – voluntary winding up - creditors winding up Consequences of winding up	Lecture – PPT- Case study	Identify various modes of winding up and legal provisions applicable.	Presentation on reconstruction and amalgamation

List of References (Book/ICT/ Weblinks):

1. Kapoor, N.D. 2009. **Elements of Company Law.** 3rd revised edition. Sultan Chand & Sons: New Delhi.
2. Kapoor, N.D. 2009. **Elements of Mercantile Law.** 31st revised edition. Sultan Chand & Sons: New Delhi.
3. Garg, K.C., Sareen, V.L., Sharma Mukesh and Chawla, R.C. 2004. **Mercantile Law including Company Law and Industrial Law.** 10th revised and enlarged edition. Kalyani Publishers: New Del

Dr. Sangeeta Peter

Name of the faculty member & Signature:

Approved by Headof the Department:

InternalQualityAssuranceCell *2023-2024*

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

ıg Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: BBA

Class & Section: DBBA-A

Course Code: BB18406

Name of the Faculty Member: K Praveen Kumar

Course Title: Management Accounting

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction - Management accounting definition,nature& functions,Objectives – importance and limitations,Its relationship with financial accounting & cost accounting (theory only),Techniques & installation of Management Accounting system,Role of Management Accountant, Duties and responsibilities of a management accountant ,Duties and responsibilities of a management accountant, Controller functions, MIS	Lecture Method using ICT (Chalk and Board, and PowerPoint Presentation) Tools and topic Discussion.	Understand the importance of nature & functions,Objectives Management accounting . Techniques & installation of Management Accounting system, Duties and responsibilities of a management accountant, Controller functions.	• Unit Test • Group Discussion • Viva
II.	Financial statement analysis – financial statements meaning,Types , objectives uses& limitations,Meaning of financial statement analysis Objectives – analysis and interpretation techniques and methods of financial statements Comparative and common size statement analysis,Ratio analysis meaning importance limitations classification of ratios liquidity ratios solvency ratios - profitability ratios , turnover ratios interpretation ratios (including problems)	Lecture Method using ICT (Chalk and Board, and PowerPoint Presentation) Tools, Topic Discussion.	Understand the presenting different Financial statement analysis Objectives analysis and interpretation techniques and methods of financial statements Ratio analysis meaning importance limitations classification of ratios .	• Unit Test • Group Discussion • Viva
III.	Funds flow analysis , concept of fund managerial uses of funds flow analysis- Cash flow analysis , concept of cash - difference between cash flow and funds flow analysis preparation of cash flow statement (including simple problems)	Lecture Method using ICT (Chalk and Board, and PowerPoint Presentation) Tools, Topic Discussion.	Understand the preparation of fund flow and cash flow statements.	• Unit Test • Group Discussion • Viva

IV.	Marginal costing – marginal cost equation contribution – break-even point – break-even chart profit-volume ratio - margin of safety (including simple problems) , Budgeting and Budgetary Control – objectives – advantages – limitations types of budgets – functional budgets – fixed and flexible budgets , zero-based budgeting problems in functional and flexible budgets only	Lecture Method using ICT (PowerPoint Presentation) Tools and Topic Discussion.	Identify marginal cost equation contribution,break-even point,break-even chart profit-volume ratio , margin of safety. Understand Budgeting and Budgetary Control and types of budgets.	• Unit Test • Group Discussion • Viva
V.	Definition of standard costing – meaning and determination of standard cost, Application of standard costing techniques – advantages and limitations. (theory only) **Variance Analysis** Meaning of variance – causes of variance – analysis of variances relating to direct materials, direct labour, overhead, sales, profit or loss – control of variance , simple problems in variance analysis	Lecture Method using ICT (PowerPoint Presentation) Tools and Topic Discussion.	Understand the standard costing Application of standard costing techniques . variance analysis causes of variance – analysis of variances relating to direct materials, direct labour.	• Unit Test • Group Discussion • Viva

List of References (Book / ICT / Weblinks):

1. Gupta Shashi, K. and Sharma, R.K. 2011. **Management Accounting.** 12th revised edition. Kalyani Publishers: New Delhi.
2. Dr. Lal Jawahar. 2010. **Accounting for Management.** 5th revised edition. Himalaya Publications: Mumbai.
3. Arora, M.N. 2010. **Accounting for Management.** 1st edition. Himalaya Publications: Mumbai.
4. Khan, M.Y. and Jain, P.K. 2008. **Management Accounting.** 4th edition. Tata McGraw Hill Publications: New Delhi.
5. Attinkson, Kaplan and Young. 2007. **Management Accounting.** 4th edition. Pearson Publications.

Name of the faculty member & Signature: K Praveen Kumar

Approved by Head of the Department

LOYOLA ACADEMY
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ıg Plan for the Academic Year 2023 – 2024

SEMESTER VI

Department: BBA

Class & Section: DBBA-B

Course Code: BB18406

Name of the Faculty Member: V Kalyan Goud

Course Title: Management Accounting

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction - Management accounting definition,nature& functions,Objectives – importance and limitations,Its relationship with financial accounting & cost accounting (theory only),Techniques & installation of Management Accounting system,Role of Management Accountant, Duties and responsibilities of a management accountant ,Duties and responsibilities of a management accountant, Controller functions, MIS	Lecture Method using ICT (Chalk and Board, and PowerPoint Presentation) Tools and topic Discussion.	Understand the importance of nature & functions,Objectives Management accounting . Techniques & installation of Management Accounting system, Duties and responsibilities of a management accountant, Controller functions.	• Unit Test • Group Discussion • Viva
II.	Financial statement analysis – financial statements meaning,Types , objectives uses& limitations,Meaning of financial statement analysis Objectives – analysis and interpretation techniques and methods of financial statements Comparative and common size statement analysis,Ratio analysis meaning importance limitations classification of ratios liquidity ratios solvency ratios - profitability ratios , turnover ratios interpretation ratios (including problems)	Lecture Method using ICT (Chalk and Board, and PowerPoint Presentation) Tools, Topic Discussion.	Understand the presenting different Financial statement analysis Objectives analysis and interpretation techniques and methods of financial statements Ratio analysis meaning importance limitations classification of ratios .	• Unit Test • Group Discussion • Viva
III.	Funds flow analysis , concept of fund managerial uses of funds flow analysis- Cash flow analysis , concept of cash - difference between cash flow and funds flow analysis preparation of cash flow statement (including simple problems)	Lecture Method using ICT (Chalk and Board, and PowerPoint Presentation) Tools, Topic Discussion.	Understand the preparation of fund flow and cash flow statements.	• Unit Test • Group Discussion • Viva

IV.	Marginal costing – marginal cost equation contribution – break-even point – break-even chart profit-volume ratio - margin of safety (including simple problems) , Budgeting and Budgetary Control – objectives – advantages – limitations types of budgets – functional budgets – fixed and flexible budgets , zero-based budgeting problems in functional and flexible budgets only	Lecture Method using ICT (PowerPoint Presentation) Tools and Topic Discussion.	Identify marginal cost equation contribution,break-even point,break-even chart profit-volume ratio , margin of safety. Understand Budgeting and Budgetary Control and types of budgets.	• Unit Test • Group Discussion • Viva
V.	Definition of standard costing – meaning and determination of standard cost, Application of standard costing techniques – advantages and limitations. (theory only) **Variance Analysis** Meaning of variance – causes of variance – analysis of variances relating to direct materials, direct labour, overhead, sales, profit or loss – control of variance , simple problems in variance analysis	Lecture Method using ICT (PowerPoint Presentation) Tools and Topic Discussion.	Understand the standard costing Application of standard costing techniques . variance analysis causes of variance – analysis of variances relating to direct materials, direct labour.	• Unit Test • Group Discussion • Viva

List of References (Book / ICT / Weblinks):

1. Gupta Shashi, K. and Sharma, R.K. 2011. **Management Accounting.** 12th revised edition. Kalyani Publishers: New Delhi.
2. Dr. Lal Jawahar. 2010. **Accounting for Management.** 5th revised edition. Himalaya Publications: Mumbai.
3. Arora, M.N. 2010. **Accounting for Management.** 1st edition. Himalaya Publications: Mumbai.
4. Khan, M.Y. and Jain, P.K. 2008. **Management Accounting.** 4th edition. Tata McGraw Hill Publications: New Delhi.
5. Attinkson, Kaplan and Young. 2007. **Management Accounting.** 4th edition. Pearson Publications.

Name of the faculty member & Signature: V KALYAN GOUD Kalyan

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	UNIT-IV **Report Writing – I (Business Report) 9Hrs** • Characteristics of a good Business Report (1) • Importance of Business Reports (1) • Types and Functions of Business Reports (2) • Preparing a Business Report and Specimen (2) • Specimen Business Report (3)	Lecture Method using ICT Tools	To be able to learn the structure, types and importance of a report and to draft a business report effectively	**Writing Skill Activity:** Students were given assignment topics to draft a business report. Also, students were taught the writing skill of framing a questionnaire.
V.	UNIT-V **Language Proficiency in Business Communication 9Hrs** • Framing Questions (2) • Active and Passive Voice (2) • Punctuations (2) • Paragraph Writing (3)	Lecture Method using ICT Tools	To write grammatically correct sentences and to be able to draft a grammatically and syntactically correct paragraph. Students also learn to converse in the right manner having understood the grammatical rules of the language.	**Writing Skill Activity**- Students were taught to draft a complete paragraph and to frame a formal paragraph having clearly understood the functions of the topic, supporting and closing sentence. Students are also made to solve several grammar worksheets in order to enable a thorough understanding of the grammatical topics in the unit. **Speaking Skills**-Students are taught the grammatical rules for active-passive voice, framing questions and punctuations, to be able to converse effectively in varied business scenarios.

List of References (Book / ICT / Weblinks):

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.

SUGGESTED READING:

1. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.
2. Gruscendorf, Marion. 2007. **English for Presentations**. U.K: Oxford Publication Oxford.
3. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.

	UNIT-IV **Report Writing – I (Business Report) 9Hrs** • Characteristics of a good Business Report (1) • Importance of Business Reports (1) • Types and Functions of Business Reports (2) • Preparing a Business Report and Specimen (2) • Specimen Business Report (3)	Lecture Method using ICT Tools	To be able to learn the structure, types and importance of a report and to draft a business report effectively	**Writing Skill Activity:** Students were given assignment topics to draft a business report. Also, students were taught the writing skill of framing a questionnaire.
V.	UNIT-V **Language Proficiency in Business Communication 9Hrs** • Framing Questions (2) • Active and Passive Voice (2) • Punctuations (2) • Paragraph Writing (3)	Lecture Method using ICT Tools	To write grammatically correct sentences and to be able to draft a grammatically and syntactically correct paragraph. Students also learn to converse in the right manner having understood the grammatical rules of the language.	**Writing Skill Activity**- Students were taught to draft a complete paragraph and to frame a formal paragraph having clearly understood the functions of the topic, supporting and closing sentence. Students are also made to solve several grammar worksheets in order to enable a thorough understanding of the grammatical topics in the unit. **Speaking Skills**-Students are taught the grammatical rules for active-passive voice, framing questions and punctuations, to be able to converse effectively in varied business scenarios.

List of References (Book / ICT / Weblinks):

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.

SUGGESTED READING:

1. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.
2. Gruscendorf, Marion. 2007. **English for Presentations**. U.K: Oxford Publication Oxford.
3. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.

4. Rai, Urmila., and Rai, S.M. 2002. **Business Communication**. Mumbai: Himalaya Publishing House.
5. Guy Brook-Hart. **Business Benchmark-Workbook**. Cambridge University Press.
6. Dr. Francis M.Peter S.J. **Business English Communication**.
7. Leo Jones and Richard Alexander. **New International Business English-Workbook**. Cambridge University Press.

Name of the faculty member & Signature: Ms. Sritama Maitra

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -II

Department: BBA-ED **Class & Section: ABBA ED** **Course Code: BBED22204**

Name of the Faculty Member: Dr A Latha **Course Title: Managerial Economics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Nature & Scope of Managerial Economics** Managerial Economics- Nature, Scope and significance -Concepts of economics – (Discount principle, incremental , equi-marginal, time perspective, opportunity cost)-Relation with other branches-managerial decision making process -	PPT Presentation, interacting with the students	Understand the basic terms and concepts used in the managerial economics	By interacting with one to one and posing questions
II.	**Demand Analysis** Demand determinants-demand distinctions-Law of demand-Elasticity of demand-Indifference curve analysis-Consumer surplus-Demand forecasting	PPT Presentation, interacting with the students	Appraise the behaviour of consumers through the demand and indifference analysis	Group Discussion
III.	**Production & Cost Analysis** Production function with one variable input & two variable input-Supply analysis-cost concepts & classification - Cost output relation in short & long run – Economies & Diseconomies of scale-Isoquants in managerial optimizing strategies-Bench marking & total quality management-break even analysis.	Chalk and Board PPT Presentation, interacting with the students	Interpret the behaviour of producer through supply, production and other related concepts.	Seminar

IV.	**Pricing Methods & Market Structure** Market structure-meaning & classification-price output determination under perfect competition-Monopoly-Monopolistic competition-Oligopoly-Pricing strategies-pricing methods-(cost plus pricing-transfer pricing-marginal cost pricing-administered pricing-pricing of multiple products).	PPT Presentation, Chalk and Board	Differentiate the market forms and the price and output determination under each type of market.	Case Study
V.	**Macro Economics & Business Decisions** Business cycle-Phases, Consequences, measures-Inflation-nature & causes-Fiscal policy-monetary policy-Global financial crisis & impact of global crisis in India-Eurozone crisis- Disinvestment in India	PPT Presentation,	Infer the impact of the macro economic factors on the business concerns.	Assessment

List of References (Book / ICT / Weblinks):

1. Dwivedi, D. M. 2008. **Managerial Economics.** 7th edition. New Delhi: Vikas Publishing house.
2. Mithani, D. M. **Managerial Economics Theory and Applications.**5th edition. Mumbai: Himalaya Publications.
3. Craig Peterson H and Chris Lewis W. **Managerial Economics.** 4th edition. New Delhi: Prentice Hall of India.
4. Varshney, R. L. and Maheswari, K. L. 2010. **Managerial Economics.** 9th edition.New Delhi: Sultan Chand & Sons.
5. John Kennedy M. 2009. **Micro Economics.** 18th revised edition. Mumbai: Himalaya Publications.

Name of the faculty member & Signature:

Dr A Latha

Approved by Head of the Department K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -II

Department: BBA-ED **Class & Section: ABBAED** **CourseCode:BBED22202**

Name of the Faculty Member: Sweta Rao **Course Title:Organisational Behaviour**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**ORGANIZATIONAL BEHAVIOR**Meaning, importance and historical development of organizational behaviour, Factors influencing organizational behaviour. Perception and Attribution- concept, nature and process, Factors influencing perception. Values and Attitudes. Personality - Stages of personality development, Determinants of personality. Concept and theories of learning.	ICT Method, PPTs, interactive session	To recognize the importance of planning and organizing and apply it is practice in organizations.	Practical learning experience, Presentations
II.	**MOTIVATION** Concept, importance and theories of motivation. Leadership - concept, characteristics, theories and styles of leadership, Managerial grid, Leadership continuum and Leadership effectiveness.	ICT Method, PPTs, interactive session, Case Study	To apply the principles of staffing, directing and control and motivational and leadership theories in the effective running of the organisation.	Group Discussion, introspection session to the students on the factors that motivates them, personal SWOT analysis
III.	**GROUP DYNAMICS** Meaning of groups and group dynamics, Formation, Characteristics and Types of groups,	ICT Method, PPTs, interactive session	To recognize the importance of concept of Organisation Behaviour in organizations.	Group Discussion, critical thinking based on Interpersonal relationship and transactional analysis

	effectiveness. Organizational Power and Politics.			

List of References (Book/ICT/ Weblinks):

1Robbins, P.Stephen - Organizational Behaviour-concepts, controversies & Applications - Prentice Hall of India Ltd., New Delhi, 1988.
2. Luthans Fred - Organizational behaviour - McGraw Hill Publishers Co. Ltd., New Delhi,1988.
3. Rao, VSP and Narayana, P.S. - Organization Theory &behaviour - Konark Publishers Pvt.Ltd., Delhi, 1987.
4. Prasad, L.M - Organizational Theory &behaviour - Sultan Chand & Sons, New Delhi, 1988.
5. Sekaran, Uma - Organizational behaviour-text & cases - Tata McGraw Hill Pub Ltd., New Delhi, 1989.

Name of the faculty member & Signature: Sweta Rao

Approved by Head of the Department :K.B.Sravanthi K.B.S

2023-2024

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - II

Department:BBA-ED **Class & Section: ABBA-ED** **Course Code: BBED22201**

Name of the Faculty Member: R.Srinivasa rao **Course Title : Fundementals of Business Statis[illegible]**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Introduction to statistics: meaning , definition, functions, applications and limitations Collection and sources of data- primary and secondary data Classification and types of classification of data Tabulation of data and its types	Discussion and Lecture method using ICT tools	To learn merits and limitations in using the statistical data.	Seminor based on how to collect the data.
II.	Diagrams: simple bar, multiple bar, subdivided bar, percentage bar and pie diagram Graphs: histogram, frequency polygon, frequency curve and Ogive curve	Discussion and Lecture method using ICT tools	To choose suitable diagrams and graphs for statistical data	Different types of representation of data i.e diagrams and graphs.
III.	Measures of central tendency: mean, median mode , G. M , H. M (merits and demerits) and problems	Discussion and Lecture method using ICT tools	To Learn how to analyze statistical data using different measures of central tendency.	Group discussion based different series and real life applications.

IV.	Measures of dispersion: Range, Q.D, Variance, Standard deviation, (Merits and demerits) e Skewness and moments – meaning – right and left skewed distribution Karl Pearson's coefficient of skewness, Bowley's coefficient of skewness ,Kelly's coefficient of skewness Moments – first, second, third and fourth moments ,Sheppard's correlation for moment's simple problems.	Discussion and Lecture method using ICT tools	To Learn compare the homogeneity of the statistical data using different measures of dispersion. The symmetric and nature of the statistical data using the concepts of Skewness and moments.	Group discussion based different series and real life applications.
V.	Correlation and its types , measures of correlation, ~~regression~~ and its properties.	Discussion and Lecture method using ICT tools	Describe how correlation is used to identify relationships between variables.	Written Test.

Listof References (Book/ICT):

1. Gupta, S P. 2008. **Business Statistics**, 36th revised edition. Sultan Chand & Co: New Delhi
2. Agarwal, B M. **Business Statistics** 3rd edition. Himalaya Publishers: Mumbai
3. Gupta, S C. **Business Statistics** 6th edition. Himalaya Publishers: Mumbai
4. Ajay Goal & Alma Goal, **"Mathematics & Statistics",** 4th edition, Taxman Pub.
5. **Microsoft Office Excel 2003 and 2007** – step by step, Frye, PH

R.S.R

Name of the faculty member &Signature:
(R.Srinivasa rao)

Approved by Head of the Department
K.B.Sravanthi

K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -II

Department: BBA-ED **Class & Section: ABBA** **Course Code: BBED22204**

Name of the Faculty Member: Dr A Latha **Course Title: Managerial Economics**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Nature & Scope of Managerial Economics** Managerial Economics- Nature, Scope and significance -Concepts of economics – (Discount principle, incremental , equi-marginal, time perspective, opportunity cost)-Relation with other branches-managerial decision making process	PPT Presentation, interacting with the students	Understand the basic terms and concepts used in the managerial economics	By interacting with one to one and posing questions
II.	**Demand Analysis** Demand determinants-demand distinctions-Law of demand-Elasticity of demand-Indifference curve analysis-Consumer surplus-Demand forecasting	PPT Presentation, interacting with the students	Appraise the behaviour of consumers through the demand and indifference analysis	Group Discussion
III.	**Production & Cost Analysis** Production function with one variable input & two variable input-Supply analysis-cost concepts & classification - Cost output relation in short & long run – Economies & Diseconomies of scale-Isoquants in managerial optimizing strategies-Bench marking & total quality management-break even analysis.	Chalk and Board PPT Presentation, interacting with the students	Interpret the behaviour of producer through supply, production and other related concepts.	Seminar

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IV.	**Pricing Methods & Market Structure** Market structure-meaning & classification-price output determination under perfect competition-Monopoly-Monopolistic competition-Oligopoly-Pricing strategies-pricing methods-(cost plus pricing-transfer pricing-marginal cost pricing-administered pricing-pricing of multiple products).	PPT Presentation, Chalk and Board	Differentiate the market forms and the price and output determination under each type of market.	Case Study
V.	**Macro Economics & Business Decisions** Business cycle-Phases, Consequences, measures-Inflation-nature & causes-Fiscal policy-monetary policy-Global financial crisis & impact of global crisis in India-Eurozone crisis- Disinvestment in India	PPT Presentation,	Infer the impact of the macro economic factors on the business concerns.	Assessment

List of References (Book / ICT / Weblinks):

1. Dwivedi, D. M. 2008. **Managerial Economics.** 7th edition. New Delhi: Vikas Publishing house.
2. Mithani, D. M. **Managerial Economics Theory and Applications.**5th edition. Mumbai: Himalaya Publications.
3. Craig Peterson H and Chris Lewis W. **Managerial Economics.** 4th edition. New Delhi: Prentice Hall of India.
4. Varshney, R. L. and Maheswari, K. L. 2010. **Managerial Economics.** 9th edition.New Delhi: Sultan Chand & Sons.
5. John Kennedy M. 2009. **Micro Economics.** 18th revised edition. Mumbai: Himalaya Publications.

Name of the faculty member & Signature:

Dr A Latha

Approved by Head of the Department K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -II

Department: BBA-ED **Class & Section: ABBAED** **Course Code : BBED22203**

Name of the Faculty Member: K.B.Sravanthi **Course Title**: Introduction to Entrepreneurship- II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	SkillDevelopmentActivity
I.	**UNIT 1:** **18hrs** **ENTREPRENEUTSHIP AS INNOVATION** Innovations leading to Entrepreneurial Innovation- Social Entrepreneurship- Definitions, concept, differences, characteristics- Concept of Risk taking and types – Internal and External Risk- Role of Technology and social Media in creating new forms of Business – Barriers of Entrepreneurship – Business Incubation and institutions involved in EDP, MSME – Government policy and support	PPT Presentation, interacting with the students	To prepare a business proposal plan.	Practical learning experience
II.	**UNIT 2 : INTRODUCTIONTO MARKET** **18hrs** Concept and Definition of Market- Types of Market- Role of E-Business and E-Commerce-Factors effecting market- Micro and Macro- Market Research- Market survey-Definition, steps and importance-Intensive expansion strategy and market development strategy -Product development strategy-integrative	PPT Presentation, interacting with the students	To recognize the distinct entrepreneurial traits and establishing an enterprise	Group Discussion

	expansion-vertical and horizontal.			
III.	**UNIT 3: COMPONENTS OF BUSINESS 18hrs** Elements of Business-Industry Definition and types – commerce- trade and auxiliaries to trade- marketing mix-product, place, price, promotion-channels of distribution and factors affecting.	PPT Presentation, interacting with the students	To identify the training and development required to become an entrepreneur	Presentations
IV.	**UNIT 4:BUSINESS FINANCE AND ARITHMETIC 18hrs** Inflow of cash, outflow of cash, cash book format for cash only, cash book format for cash and bank transactions-Unit of sale-cost and price-Income statement-cash flow projections- Breakeven point, ROI, EOQ, ROE.	PPT Presentation, interacting with the students	To classify and analyse the resource mobilization and funding organizations and also identify various schemes provided by government	Case Study
V.	**UNIT 5:RESOURCE MOBILIZATION 18hrs** Types of Resources- Physical, Human, Financial, Material, Intangible- Estimating capital requirement ad types of capital, capitalization-Sources of Finance-Debt and Equity-personal financing, venture capital financing- sources of Raising Debt-Mentorship and types.	PPT Presentation, interacting with the students	To recognize the registration process of a business enterprise.	Assessment

List of References (Book/ICT/ Weblinks):

1.Dr S.S.Khanka, EntrepreneurshipDevelopment, Delhi S Chand

2.Entrepreneurship and Management Concepts – Dr Vikas Saraf, Pawan Thakur, Latha Yadav

3.Entrepreneurship- Poonam Gandhi.

Name of the faculty member & Signature: K.B.Sravanthi K.B.S

Approved by Head of the Department : K.B.Sravanthi K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year

2023– 2024 SEMESTER-III

Department: BBA-ED | **Class & Section: NBBA-ED** | **Course Code: BBED23303**

Name of the Faculty Member:
Dr.Supriya.Jangam

Course Title: Marketing Management (MM)

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Marketing:** Concept of marketing-evolution-definitions-Nature and scope-significance of marketing-Marketing management tasks-Distinction between marketing concept and selling concept- Role of marketing in developing economy- Marketing of Non-profit organizations. **Marketing Environment:** Micro environment-meaning-factors influencing microenvironment-company consumers-competitors-suppliers-marketing intermediaries-Macro environment-meaning-factors influencing macro environment-cultural/ social environment-demographic environment-physical/natural-legal/political-economic-technological environment-SWOT Analysis (with reference to India)	Lecture Method using ICT Tools: Chalk and Board; Power Point Presentation using Projector, Chart Making.	CO1: Explain the concept of marketing and sketches the marketing environment.	Quiz, Solving Problems, Chart Preparation, PPT Presentations, Group Discussions and Tasks, Assignments.
II.	**Market Segmentation and Targeting:** Identification of Market Segments-	Lecture Method using ICT Tools: Chalk and Board;	CO2: Classify the market and identify the various market segments.	Quiz, Solving Problems, Chart Preparation, PPT Presentations, Group Discussions and Tasks,

	Segmenting Consumer Markets- Segmentation Basis- Selecting Target Markets- Segmentation and Targeting as a basis for strategy formulation- Developing and communicating a positioning strategy.	Power Point Presentation using Projector, Chart Making.		Assignments.
III.	Marketing Mix: Product: Definition of product-levels of product-classification of products-Product-mix decisions-product-life decisions-Brand decisions-packaging and labelling decisions-new product development- stages in new product development process-Product life cycle- Stages involved. Price: Concept-meaning of price and pricing-importance of pricing-Pricing objectives-factors influencing pricing-Price setting procedure-selecting a price method-adapting the price-Geographical pricing- Price discounts and allowances-Promotional pricing-discriminating price.	Lecture Method using ICT Tools: Chalk and Board; Power Point Presentation using Projector, Chart Making.	CO3: Point out the Marketing mix with reference to product and price.	Quiz, Solving Problems, Chart Preparation, PPT Presentations, Group Discussions and Tasks, Assignments.
IV.	**Channels of Distribution:** Marketing channels-number of channel levels-Channel design-channel dynamics **Promotion:** Promotion mix variables-The communication process-Advertising-designing effective advertising programs-Deciding on the media-Sales promotion-purpose-Major decisions in sales promotion.	Lecture Method using ICT Tools: Chalk and Board; Power Point Presentation using Projector, Chart Making.	CO4: Analyze the promotion mix and the channels of distribution.	Quiz, Solving Problems, Chart Preparation, PPT Presentations, Group Discussions and Tasks, Assignments.

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -III

Department: BBA ED **Class & Section: NBBA-ED** **Course Code: BBED23304**

Name of the Faculty Member: Sweta Rao **Course Title: Financial Management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Financial Management** Meaning of Finance and Financial Management-Types of Finance-Public and Private Finance, Classification of Private Finance-Personal Finance, Business Finance and Finance of Non-Profit Organization -Importance and Scope of Financial Management, Approaches to Finance Function-Relationship of Finance with Other Business Functions,- Objectives of Financial Management,- Profit Maximization and Wealth Maximization - Merits and Criticisms- Financial Decisions, Internal Relation of Financial Decisions,-Factors Influencing Financial Decisions, Functions, Areas of Financial Management-Functions of a Finance Manager	PPT Presentation, ICT method, interactive session with the students	Interpret the concept of business finance, finance decision and functions of finance manager	Group discussion
II.	**Cost of Capital** Concept and Significance of the Cost of Capital-Specific Cost of Capital, Various Sources of Finance-Cost of Debt (Including Simple Problems)- Cost of Preference Capital (Including Simple Problems)-Cost of Equity (Including Simple Problems)-Book	PPT Presentation, Chalk and Board, Problem based, interactive session with the students	Understand the concept of cost of capital and leverages and calculate the cost of capital and leverages of a business concern	Critical thinking and Problem-solving skills

	Value Weights Vs. Market Value Weights **Leverages** Financial Leverages (Including Simple Problems)-Operating Leverages (Including Simple Problems)-Combined Leverages (Including Simple Problems)			
III.	**Capital Budgeting** Concept of Capital Budgeting – Importance of Capital Budgeting - Kinds of Capital Budgeting Decisions-Methods of Appraisal – Non DCF and DCF Techniques of Appraisal-Payback – Discount Payback (Including Simple Problems)-Accounting Rate of Return (Including Simple Problems)-Net Present Value (Including Simple Problems)-Internal Rate of Return and Profitability Index (Including Simple Problems)	Problem based and Constructivist approach, Chalk and Board	Interpret the concept of capital budget and will be able to apply the techniques of ARR, NPV, IRR, PI etc.	Critical thinking and Problem solving skills
IV.	**Working Capital Management** Meaning of Working Capital, Types of Working Capital-Working Capital Cycle, Adequate Working Capital-Determinants of Working Capital, Estimation of Working Capital. Management of Cash, Cash Budget (Including Simple Problems)	PPT Presentation, Chalk and Board, interactive session with the students	Understand the concept of working capital management and apply the concept and able to determine working capital requirement of a business organization.	Scenario based learning and problem solving skills
V.	**Receivables Management** Management of Receivables, Objectives of Receivables Management-Optimum Credit Policy-Aspects of Credit Policy-Credit Terms–Credit Standards–Collection Policy (Theory Only)-Management of Inventory (Theory Only) **Dividend Policy Decisions** Meaning, Kinds, Determinants of Dividend Policy Decisions	PPT Presentation, ICT method, interactive session with the students	Interpret the concept of cash management and cash budgeting and receivable management	Case Study, Assessment

List of References (Book / ICT / Weblinks):

1. Pandey, I.M. **Financial Management.** 10th Edition. New Delhi: Vikas Publishing House Pvt Ltd.
2. Khan, M.Y. and Jain, P.K. **Financial Management.** 6th Edition. New Delhi: Tata McGraw Hill Publications.
3. Shashi Gupta, K. and Sharma, R.K. **Financial Management.** 7th edition. New Delhi: Kalyani Publishers.
4. Sudarshan Reddy, G. 2008. **Financial Management.** Mumbai: Himalaya Publishing House. Prasanna Chandra. 2009. **Financial Management.** 7th Edition. New Delhi: Tata McGraw Hill Publications.
5. Kulkarni, P.V. And Satya Prasad, B.G. 2004. **Financial Management.** Mumbai:Himalaya Publishing House.
6. Maheswari,S.N. 2001. **Financial Management.** New Delhi:Sultan Chand & Sons Publishers.
7. Ravi M Kishore. 2005. **Financial Management.** 6th Edition. New Delhi: Taxman Publishers.

Sweta Rao

Name of the faculty member & Signature:

Approved by Head of the Department K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -III

Department: BBAED

Class & Section: NBBAED

Course Code: BBED23305 BBED23305

Name of the Faculty Member: K.B.Sravanthi

Course Title: Human Resources Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Human Resource and Personnel Management** Introduction - Personnel Vs. Human Resources - Nature and Scope of HRM Features - Objectives - Importance of HRM - Role of HRM Functions of HRM -Managerial & Operative functions Meaning of Organizational Policies, Procedures & Programmes Organization of HRM, Role of Personnel/HR managers Qualifications and Qualities of Personnel/HR Managers Origin& Development of HRM	PPT Presentation	Understand the concept of HRM, functions and changing role of a hr manager	By interacting with one to one and posing questions

II.	**Job Analysis and Design** Job Analysis - Need, Technology, Process, Uses of Job Analysis-Job Description and Job Specification -Job Design, Job rotation, Job enlargement, Job Enrichment **Recruitment, Selection, Induction,** The Recruitment Process, Methods of Recruiting-The Selection Process, Type of tests,-Induction and Placement **Promotion, Transfer & Demotion** Promotion - Meaning - Purpose - Basis – Benefits - Problems - Promotion Policy Transfer-Meaning - Purpose - Types - Reasons – Benefits – Problems	PPT Presentation	Distinguish between the various methods of job design and interpret the techniques of acquisition of human resource.	seminar
III.	HR Planning – Introduction - Objectives, Definitions - Need for HRP Benefits of HRP - Factors affecting HRP Process of HRP - Problems & Limitations of HRP **Performance Management and Appraisal** Performance Management- HRD approaches for Work life balance Performance Appraisal - Meaning of Performance Appraisal - Need – Objectives Methods - Uses of Performance Appraisal – Limitations	PPT Presentation	Explain the importance of HRP and point out the various HRD approaches for Work life balance and describe the concept of job evaluation.	quiz

	Job Evaluation Job evaluation – Definition – Objectives - Methods/Techniques of Job evaluation Limitations & Problems of job evaluation			
IV.	**Human Resource Development** Meaning - Definitions – Principles of HRD Core concepts for improvement & development HRD **Total Quality Management** TQM - The Total Quality strategy **Career Planning & Development** Career Planning - Meaning - Need – Purpose Career Development - Actions - Advantages of Career Planning & Development	Chalk and black board	. Analyse the core concepts of HRD, TQM and understand the concept of career development.	Group discussions
V.	**Trade Unions & Industrial Relations** Concept of Trade Union – Objectives-Problems -Employer's Association - Legal Status Membership and Financial Status-Collective Bargaining -Features-Types - Process of Collective Bargaining -Employee Grievances and Discipline-Industrial Conflict – Resolution **Worker's Participation** Definition – Objectives-Forms of Participation - Quality Work life	Chalk and black board	Explain the various concepts of worker's participation and quality of work life.	seminar

List of References (Book / ICT / Weblinks):

1. Dassler Gary. **Human Resource Management**. 10th edition. New Delhi: Pearson Publications.

Mirza Saiyadain, S. **Human Resource Management.** 2nd edition. New Delhi: Tata McGraw Hill Publications.
3. Aswathappa, K. 2007. **Human Resource and Personnel Management.** New Delhi: Tata McGraw Hill Publications.
4. Rao Subba, P. 2012. **Essentials of Human Resource Management and Industrial Relations.** 3rd edition. Mumbai: Himalaya Publications.
5. Acquinias, P.G. 2006. **HRM Principles and Practices.** New Delhi:Vikas Publishing House Pvt Ltd.
6. Wayne Cascio, F. **Managing Human Resources (Productivity, Quality of Work Life, Profits).** 5th edition. New Delhi: Tata McGraw Hill Publicatior

Name of the faculty member & Signature: K.B.Sravanthi. K-B-S

Approved by Head of the Department: K.B.Sravanthi K-B-S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -II

Department: BBA - ED **Class & Section: ABBA ED** **Course Code: VE18201**

Name of the Faculty Member: Fr. Sudhakar **Course Title: Value Education And Personality Development.**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Ethics** Why Value Education?-Reasons to have Ethics for Life-Accepted Norms and Counter Values-Dimensions of Human Development: Physical, Intellectual, Emotional, Moral, Spiritual and Social	PPT Presentation, interacting with the students	Students will be able to identify Accepted norms and Counter values. They will be able to differentiate the various Dimensions of Human Development	Practical learning experience
II.	**Approach to Life** science and Pseudo-Conscience-Happiness as Life-goal-Values revealed and lived in Religions-Experience of God-Love: The three components of Love – Some of the basic stages and issues of life: Family, Love, Sex, Marriage.	PPT Presentation, interacting with the students	Students will be able to demonstrate Love and Experience of God. They will be able to identify the Basic Issues of Life and Happiness as a life goal	Group Discussion
III.	**Concern for Others** and Another-Human Context-Moral Problems of a Society / True Society: Social Desire, Social Fear, Social Silence, Social Indifference	PPT Presentation, interacting with the students	They will able to understand the importance of Concern for others. They will able to critique the various problems that deter the growth of the society.	Presentations

IV.	**Transformation of Self** initions of personality-Characteristics of personality-Elements of personality-Traits of good personality-Self-Identity, self concept-Self-Discovery, self-acceptance-Self-Esteem)RK SHEET (1): Self Estimation .	PPT Presentation, interacting with the students	The students will be able to recognize the traits of a good personality. They will be able identify their personality by Self-Exploration	Case Study
V.	**Life Enrichment Skills** pose of life - Goal setting-Characteristics of Goals-Building Relationships-Time Management-Stress Management-Emotional Management-Conflict Management am Management (Group Dynamics))RK SHEETS (1) & (2): 1) Anger Management 2) Team Management	PPT Presentation, interacting with the students	Students will be able to interpret the Purpose of Life and Goal Setting. They will be able to learn Self-Management.	Assessment

List of References (Book / ICT / Weblinks):

1. E-Retailing: Principles & Practice – 2009-by D. P. Sharma (Author)-Publisher : Himalaya Publishing House.
2. Introduction to ERP -by Rasci publication
3. Computer Skills-by Rasci publication

Name of the faculty member & Signature: Fr. Sudhakar

Approved by Head of the Department: K.B.Sravanthi K.B.S

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Plan for the Academic Year 2023 – 2024

SEMESTER

Department ENGLISH

Class & Section: BBA-ED, ~~BBA-TOURISM~~

Course Code: BE 23201

Name of the Faculty Member: Ms. Sritama Maitra

Sem-II

Course Title: BUSINESS ENGLISH-II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT-I** **Claim and Adjustment E- Mails -9Hrs** • Hints for Drafting Claim and Adjustment E- Mails (2) • Elements of Claim and Adjustment E- Mails (2) • Specimen Claim and Adjustment E-Mails (5)	Lecture Method using ICT Tools	To learn to write claim and adjustment e-mails, which could be prove to be useful during a business correspondence.	**Writing Skill Activity**-Developing effective writing skills, by making the students write claim and adjustment e-mails. Students are taught as to how to frame the introduction, body and the concluding paragraphs for these e-mails.
II.	**UNIT-II** **Grammar in Business Correspondence-9Hrs** • Commonly Misused Prepositions (3) • Subject- Verb Agreement (3) • Articles (3)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	**Speaking Skills and Writing Skills**-Developing effective speaking and writing skills, by ensuring that the students learn the grammar rules for articles, subject-verb agreement in order to communicate well and write with clarity.
III.	**UNIT-III** **Job Applications Letters and Resume writing 9Hrs** • Importance and Functions of an Application Letter (1) • General Guidelines to write Application Letters and Resumes (1) • The Form and Content of an Application Letter (1) • Preparing a Resume (2) • Specimen Application Letter and Resume (4)	Lecture Method using ICT Tools	To be able to draft a lucid job application letter and a resume effectively: both of which are extremely important for students to draft immediately after their graduation.	**Writing skill activity**: To write job application letters effectively, having understood the role of the introductory, body and conclusion paragraphs in building this letter. To draft a resume, highlighting well the candidate's achievements, technical skills and soft skills.

	UNIT-IV **Report Writing – I (Business Report) 9Hrs** • Characteristics of a good Business Report (1) • Importance of Business Reports (1) • Types and Functions of Business Reports (2) • Preparing a Business Report and Specimen (2) • Specimen Business Report (3)	Lecture Method using ICT Tools	To be able to learn the structure, types and importance of a report and to draft a business report effectively	**Writing Skill Activity:** Students were given assignment topics to draft a business report. Also, students were taught the writing skill of framing a questionnaire.
V.	**UNIT-V** **Language Proficiency in Business Communication 9Hrs** • Framing Questions (2) • Active and Passive Voice (2) • Punctuations (2) • Paragraph Writing (3)	Lecture Method using ICT Tools	To write grammatically correct sentences and to be able to draft a grammatically and syntactically correct paragraph. Students also learn to converse in the right manner having understood the grammatical rules of the language.	**Writing Skill Activity**- Students were taught to draft a complete paragraph and to frame a formal paragraph having clearly understood the functions of the topic, supporting and closing sentence. Students are also made to solve several grammar worksheets in order to enable a thorough understanding of the grammatical topics in the unit. **Speaking Skills**-Students are taught the grammatical rules for active-passive voice, framing questions and punctuations, to be able to converse effectively in varied business scenarios.

List of References (Book / ICT / Weblinks):

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.

SUGGESTED READING:

1. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.
2. Gruscendorf, Marion. 2007. **English for Presentations**. U.K: Oxford Publication Oxford.
3. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.

4. Rai, Urmila., and Rai, S.M. 2002. **Business Communication**. Mumbai: Himalaya Publishing House.
5. Guy Brook-Hart. **Business Benchmark-Workbook**. Cambridge University Press.
6. Dr. Francis M.Peter S.J. **Business English Communication**.
7. Leo Jones and Richard Alexander. **New International Business English-Workbook**. Cambridge University Press.

Name of the faculty member & Signature: Ms. Sritama Maitra

Approved by Head of the Department:

2023-2024

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -II

Department: BBA - ED **Class & Section: ABBA ED** **Course Code: VE18201**

Name of the Faculty Member: Fr. Sudhakar **Course Title: Value Education And Personality Development.**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction to Ethics** Why Value Education?-Reasons to have Ethics for Life-Accepted Norms and Counter Values-Dimensions of Human Development: Physical, Intellectual, Emotional, Moral, Spiritual and Social	PPT Presentation, interacting with the students	Students will be able to identify Accepted norms and Counter values. They will be able to differentiate the various Dimensions of Human Development	Practical learning experience
II.	**Approach to Life** ıscience and Pseudo-Conscience-Happiness as Life-goal-Values revealed and lived in Religions-Experience of God-Love: The three components of Love – Some of the basic stages and issues of life: Family, Love, Sex, Marriage.	PPT Presentation, interacting with the students	Students will be able to demonstrate Love and Experience of God. They will be able to identify the Basic Issues of Life and Happiness as a life goal	Group Discussion
III.	**Concern for Others** and Another-Human Context-Moral Problems of a Society / True Society: Social Desire, Social Fear, Social Silence, Social Indifference .	PPT Presentation, interacting with the students	They will able to understand the importance of Concern for others. They will able to critique the various problems that deter the growth of the society.	Presentations

IV.	**Transformation of Self** initions of personality-Characteristics of personality-Elements of personality-Traits of good personality-Self-Identity, self concept-Self-Discovery, self-acceptance-Self-Esteem)RK SHEET (1): Self Estimation .	PPT Presentation, interacting with the students	The students will be able to recognize the traits of a good personality. They will be able identify their personality by Self-Exploration	Case Study
V.	**Life Enrichment Skills** pose of life - Goal setting-Characteristics of Goals-Building Relationships-Time Management-Stress Management-Emotional Management-Conflict Management am Management (Group Dynamics))RK SHEETS (1) & (2): 1) Anger Management 2) Team Management	PPT Presentation, interacting with the students	Students will be able to interpret the Purpose of Life and Goal Setting. They will be able to learn Self-Management.	Assessment

List of References (Book / ICT / Weblinks):

1. E-Retailing: Principles & Practice – 2009-by D. P. Sharma (Author)-Publisher : Himalaya Publishing House.
2. Introduction to ERP -by Rasci publication
3. Computer Skills-by Rasci publication

Name of the faculty member & Signature: Fr. Sudhakar

Approved by Head of the Department: K.B.Sravanthi K.B.S

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

Plan for the Academic Year 2023 – 2024

SEMESTER

Department ENGLISH

Class & Section: BBA-ED, ~~BBA-TOURISM~~

Course Code: BE 23201

Name of the Faculty Member: Ms. Sritama Maitra

Sem-II

Course Title: BUSINESS ENGLISH-II

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT-I** **Claim and Adjustment E- Mails -9Hrs** • Hints for Drafting Claim and Adjustment E- Mails (2) • Elements of Claim and Adjustment E- Mails (2) • Specimen Claim and Adjustment E-Mails (5)	Lecture Method using ICT Tools	To learn to write claim and adjustment e-mails, which could be prove to be useful during a business correspondence.	**Writing Skill Activity**-Developing effective writing skills, by making the students write claim and adjustment e-mails. Students are taught as to how to frame the introduction, body and the concluding paragraphs for these e-mails.
II.	**UNIT-II** **Grammar in Business Correspondence-9Hrs** • Commonly Misused Prepositions (3) • Subject- Verb Agreement (3) • Articles (3)	Lecture Method using ICT Tools	Language proficiency for effective writing and speaking skills	**Speaking Skills and Writing Skills**-Developing effective speaking and writing skills, by ensuring that the students learn the grammar rules for articles, subject-verb agreement in order to communicate well and write with clarity.
III.	**UNIT-III** **Job Applications Letters and Resume writing 9Hrs** • Importance and Functions of an Application Letter (1) • General Guidelines to write Application Letters and Resumes (1) • The Form and Content of an Application Letter (1) • Preparing a Resume (2) • Specimen Application Letter and Resume (4)	Lecture Method using ICT Tools	To be able to draft a lucid job application letter and a resume effectively: both of which are extremely important for students to draft immediately after their graduation.	**Writing skill activity**: To write job application letters effectively, having understood the role of the introductory, body and conclusion paragraphs in building this letter. To draft a resume, highlighting well the candidate's achievements, technical skills and soft skills.

Internal Quality Assurance Cell *2023-2024*

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - III

Department: BBA- ED **Class&Section: NBBA-ED** **Course Code: BBED23302**

Name of the Faculty Member: M. SUNANDA **Course Title: RESEARCH METHODOLOGY**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction** Definition of research – meaning – nature – scope and objectives of research- basic research terms – types of research- research problem defined – necessity – factors to be considered while defining research problem procedure and pre-requisites for undertaking research.	Lecture Method using ICT Tools and chalk board.	Understand and interpret the basic meaning of research, to define the research problem at hand and construct the procedure for undertaking research.	Seminar
II.	**Hypothesis and Research Design** Hypothesis and related terms – formation of hypothesis – characteristics of good. Hypothesis- Fundamentals of Research Design – significance – features – steps – types of research. Design- Review of literature – operational definitions	Lecture Method using ICT Tools and chalk board.	Formulate hypothesis and develop an appropriate research design.	Presentations
III.	**Data Collection** Data collection and measurement – definition and characteristics of data – primary data and secondary data – characteristics – advantages and disadvantages- Sources of data – methods of data collection – observation method – personal interview forms, schedules and questionnaire method. Documented sources of data – case study method.	Lecture Method using ICT Tools and chalk board.	Classify the different sources of data and analyze the various methods of data collection.	Seminar/ case studies
IV.	**Sampling** Sampling and sampling design – definitions – variables – methods of sampling – probability sampling methods- simple	Lecture Method using ICT Tools and chalk board.	Develop the most appropriate sample size and design as well as determination of sampling and non sampling errors.	Group discussion/ prsentations

	random sampling – stratified sampling – systematic sampling – multi-stage sampling – non-probability sampling – judgement sampling – convenience sampling – quota sampling – hit or accidental sampling- size of sample – determination of sampling size – sampling and non-sampling errors.			
V.	**Attitude Measurement, Data Processing, Report Writing** Attitude measurement and scales – definition of attitude – importance – measurement of attitudes – concept of scale- basis for scale classifications – attitude scales – Thurston's scale – Likert's scale – Guttman's or cumulative scale – radio scales – opinion scales basic statistical tools. Data Processing – editing – codification – classification and tabulation of data quantitative analysis of data. Report writing and presentation – definition – purpose – report synopsis – types of report – characteristics of a good report – structure of a good research report – writing and formatting of reports.	Lecture Method using ICT Tools and chalk board.	Classify the various types of attitude measurement scales and applies the principles and format of report writing and presentation.	Seminar/ group discussions

Listof References (Book/ICT/ Weblinks):

1. Kothari, C.R. **Research Methodology.** 2013 print. New Delhi: Sage publications.
2. Swamy Krishna, R. and Ranganathan, M. 2008. **Methodology of Research in Social Sciences.** 1st edition. 2nd revised reprint. Mumbai: Himalaya Publications.
3. Sachdeva, J.K. 2008. **Business Research Methodology.** 1st edition. Mumbai: Himalaya Publications.

Nameofthefacultymember&Signature:

M. Sunanda.

Approvedby HeadoftheDepartment:

K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -III

Department: BBAED

Class & Section: BBAED -GE

Course Code: BBED G23BBEDIT

Name of the Faculty Member: K.B.Sravanthi

Course Title: Start Up Management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Evolution of the Concept of Entrepreneur. Characteristics of an Entrepreneur. Distinction Between an entrepreneur and a manager. Functions of an Entrepreneur. Traits/ Qualities of Entrepreneurs: Types of Entrepreneurs. Role of Entrepreneurship in Economic Development. Growth of Entrepreneurship in India. Problems and Development of Rural Entrepreneurship.	PPT Presentation	Develop a start-up Enterprise with Big Idea Generation.	By interacting with one to one and posing questions
II.	Entrepreneurship Development Programmes (EDPs) – Phases of EDP's and Evaluation of EDPs. Institutional Finance to Entrepreneurs like Commercial Banks–Other Major Financial Institutions such as IDBI, IFCI, IIBI, LIC, UTI, NABARD, SFCs, SISI, SIDCs, SIDBI, and EXIM Bank and venture capital firms. Role of Small Enterprises in Economic Development. Ownership Structures, MSME act.	PPT Presentation	Analyse start-up capital requirement by analysing legal factors.	seminar

III.	Concept of women entrepreneur, Functions of women entrepreneurs, growth of women entrepreneurship in India, problems of women entrepreneurs, developing women entrepreneurship, limitations of women entrepreneurship	PPT Presentation	Interpret feasibility Analysis towards funding issues.	quiz
IV.	Meaning of rural entrepreneurship – need for rural entrepreneurship, rural entrepreneurship / Industrialization in retrospect, problems of rural entrepreneurship, how to develop rural entrepreneurship? NGO's and rural entrepreneurship	Chalk and black board	Access growth stages in new venture and reasons for scaling ventures.	Group discussions
V.	Introduction – meaning of family business – types of family business – family business in India – advantages of family business – disadvantages of family business – major challenges faced by family business in India – business succession planning – making family business more effective.	Chalk and black board	Evaluate financial stability and decide on expansion possibilities	seminar

List of References (Book / ICT / Weblinks):

1. Vasanth Desai, "Dynamics of Entrepreneurial Development and Management", 2007, HPH, Millennium Edition.
2. S.S. Khanka, "Entrepreneurial Development", 2007, S. Chand & Co. Ltd.
3. Poornima. M Charantimath, "Entrepreneurial Development and Small Business Enterprises

Name of the faculty member & Signature: K.B.Sravanthi.

K-B-S

Approved by Head of the Department: K.B.Sravanthi

K-B-S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-III

Department: BBA-[ED]

Class & Section: NBBA-ED

Course Code: BBE22301

Name of the Faculty Member:
Jagadhish Varanasi

Course Title:
Fundamentals of Business Mathematics

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Quadratic Equations Formation of a quadratic equation, Sum and product of roots, Discriminant & Nature of the roots, Solving Quadratic Equations	-Lecture Method - ICT -Chalk & board -Quiz -Group Discussion	To Learn about the quadratic equations, to find the solutions of various types of quadratic equations and their nature.	Problem Resolving & Problem Solving
II.	Matrix Theory Algebra of matrices, determinant, Matrix Inversions, Solving of linear equations by Matrix Methods	-Lecture Method - ICT -Chalk & board -Quiz -Group Discussion	Able to apply Matrix operations, Computing Inverse of a matrix, Solving of linear equations by Matrix Methods	Problem Resolving & Problem Solving
III.	Set Theory Set operators, Results & Problems Venn diagrams- applications. De Morgan's Laws- Applications	Lecture Method - ICT - Chalk and talk - Quiz -Group Discussion	Venn diagrams enable students to organize information visually, so they are able to see the relationships between two or three sets of items.	Problem Resolving & Problem Solving
IV.	Arithmetic Progression, Arithmetic Mean -Problems. Geometric Progression, G.M - Problems	Lecture Method - ICT - Chalk and talk - Quiz -Group Discussion	apply the knowledge of finding n^{th} term and sum of n terms of an progressions in solving day to day life problems.	Problem Resolving & Problem Solving
V.	Differential Calculus- Derivatives of standard functions, rules of differentiation; Substitution Method, Maxima & Minima of functions of degree 2 or 3. Simple problems	Lecture Method - ICT - Chalk and talk - Quiz -Group Discussion	Apply the concept and principles of differential calculus to solve different geometric and physical problems that may arise in business, economics, and life sciences	Problem Resolving & Problem Solving

List of References (Book / ICT / Weblinks):

1. Sancheti. D.C., and Kapoor. 2004; Business Mathematics, New Delhi; S. Chand & Sons.
2. Dr. Dikshit Amarnath and Dr. Kumar Jitendra, 2005. Business Mathematics, Mumbai, Himalaya Publications

Name of the faculty member & Signature:
Jagadhish Varanasi

Approved by Head of the Department:

BBA-ED

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER- I

Department: BBA ED

Class : ABBA ED

Course Code:23101

Name of the Faculty Member:Dr.K.Musalaiah

Course Title: Indian Heritage and Culture

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian culture and to know about the greatness of the various kings especially, Ashoka Harshavardana, Satavahanas, Pallavas, Cholas and contribution of Buddhism and Jainism for art and architecture.	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval history especially Delhi Sultanate, Mughals, Qutubshahis and Kakatiyas.	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about western culture. Social Reform movements, subaltern Movement and Indian National Movement.	Group presentation
IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions, democratic system and its functions evolution of the	Quiz and group presentation.

			constitution.	
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about Fundamental Rights, women, Children Rights, LGBTQ and Tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr.K.Musalaiah – Dr. K. Musalaiah.

Approved by Head of the Department:

Mrs. K. B. Sravanthi K. B. S

LOYOLA ACADEMY
(DEGREE & PG COLLEGE)

ıg Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: English

Class & Section: ABBAED
BBA-ED AND TOURISM

Course Code: BE23101

Name of the Faculty Member: Ms. Sritama Maitra

Course Title: BBA

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	• **Structure and Layout of Letters, Quotations and Orders & Tenders** • Elements, forms and style of letters • Inviting and sending quotations • Placing orders	Lecture Method using ICT Tools	To learn about the format of a business letter and understand the basic formats of certain official letters used in business correspondence,	Writing skill activity: To help students understand the format of an official business letter and to be able to write letters on inviting/ sending quotations and placing orders efficiently.
II.	• **Sales Letters** • Qualities and Functions of a Sales letter • Format of a Sales letter • Specimen Sales letter	Lecture Method using ICT Tools	To learn about the strategies used in drafting a sales letter: the introductory, body and conclusion paragraphs of a sales letter	Writing skill activity: To write sales letters effectively having understood the role of the introductory, body and conclusion paragraphs in building a sales letter.
III.	• **Memorandum, Notices, Agenda and Minutes** • Functions and structure of a memorandum • Types of memorandum • Specimen memorandum • Format of Notice, Agenda and Minutes	Lecture Method using ICT Tools	To learn about the formats of memos, notices, agendas and minutes and to be able to draft the same in different business scenarios.	Group Discussion activity: The students were given topics on contemporary topics (as a part of their internal assessment criteria) to help analyze, build arguments and articulate it with immense clarity. Writing skill activity: To understand the format and to write notices, agendas, memos and minutes efficiently.
IV.	• **Telephone Etiquettes in Business Communication** • Telephone Etiquettes in Customer	Lecture Method using ICT Tools	To learn the etiquettes used in any business domain and to learn the art of communicating	Social Skills: Strategies and nuances with respect to social etiquettes were taught to help

	Service • Texting Etiquettes • E-mail Etiquettes		(oral and written communication), especially in business contexts.	equip the students with necessary social skills to enable effective communication in business scenarios, BPOs for example.
V.	• **Reading Comprehension** • Strategies for reading comprehension • Aspects of efficient reading • Speed, accuracy skimming, scanning and proof reading • Factual comprehension • Specimen comprehension • Commonly confused/misused words	Lecture Method using ICT Tools	To learn the art of reading effectively and to be able to read lucid comprehension passages, comprehend the same, and to be able to answer the questions asked in a relevant manner.	Reading Skills- To incorporate the 'strategies to read effectively' while reading a comprehension. Speaking Skills: To understand the meanings of commonly confused words and to make a sentence, enabling them to build a rich vocabulary to communicate with clarity.

List of References (Book / ICT / Weblinks):

1. Sharma, R.C., and Krishna Mohan. 2010. **Business Correspondence and Report writing.**, New Delhi: Tata McGraw Hill Publishing Company Limited.
2. Dutt, Kiranmai P., Raghavan, Geetha., and Prakash C.L.N. 2011. **A Course in Communication Skills.** New Delhi: Cambridge University Press.
3. Gruscendorf, Marion. 2007. **English for Presentations**. U.K: Oxford Publication Oxford.
4. Pal, Rajendra ., and Sulthan, Korlahalli J.S. 2010. **Essentials of Business Communication**. New Delhi: Sultan Chand &Sons Publishers.
5. Rai, Urmila., and Rai, S.M. 2002. **Business Communication**. Mumbai: Himalaya Publishing House.

Name of the faculty member & Signature: Ms. Sritama Maitra

S. Maitra

Approved by Head of the Department:

K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year2023–2024

SEMESTER-I

Department: B.Sc.Computer Science & Cognitive Systems **Class&Section: ABBA-ED** **CourseCode: BBED22101**

Name of the Faculty Member: K Nandini

CourseTitle:Computers in management and fundamentals of IT

Unit	Topics to be covered	Teaching Pedagogy	LearningOutcome	Skill Development Activity
I.	**INTRODUCTION TO IT** Computer Systems- Hardware –I/O devices, Memory devices, Processors- Software - classification of software systems software, Application software- Operating Systems- Definition- Types of OS Understanding of GUI- Networks- Definition- Types of Network- LAN, WAN- Network Topologies- Physical Communication Media-TCP/IP, OSI Model.	LectureMethodusing ICT Tools Blackboard Inquiry based	**Understand** basic computer terminology and network types	Assignments
II.	**INTRODUCTION TO IS** Definition of Data, Information & Knowledge, IS- MIS, DSS, Expert Systems - Types of IS Operation, Tactical, Strategic IS- Executives Information Systems (EIS) Definitions- Data Base, DBMS, Advantages & Disadvantages of DBMS-Ethical and Social Issues in IS.	Lecture Method using ICT Tools Blackboard Inquiry based	**Understanding** the basic concepts of multimedia	Seminars
III.	**MULTIMEDIA CONCEPTS** Definition of Multimedia - Multimedia devices - Multimedia Formats - Audio formats- Video formats-Compression/	Lecture Method using ICT Tools Blackboard	**Classify** different applications of Information systems	Group discussions

	Decompression issues - Business Applications of Multimedia			
IV.	**INTERNET & SECURITY ISSUES** Internet-History- Internet Addressing and architecture-WWW-Architecture-Browser-Servers- Search engines-Internet Services- Email- Chatting-Messaging- Groups- Social Networking-Internet in Business- definition of e-commerce, m-commerce- types of online business-Security Issues in Internet	Lecture Method using ICT Tools Blackboard	**Understanding** WWW architecture and security issues in internet	Presentations
V.	**OFFICE MANAGEMENT APPLICATIONS** Intranets, Extranets, VPN- Internet Telephony- Group ware- audio and video Conferencing- Wireless Communication WLANS- Definitions of Blue tooth- Wi Fi- Wi Max-RFID-Use of Spreadsheets for office- spread sheet applications (MS-EXEL)- Use of Databases for the Office (MS-ACCESS)-Database applications	Lecture Method using ICT Tools Blackboard Inquiry based	**Understanding** group communications and utility of Ms-Excel and Ms-Access	Group activities

List of References (Book/ICT/ Weblinks):

1. Kenneth C. Laudon & Jane P. Laudon - Management Information Systems - Managing the Digital Firm, Pearson Education, Fourth Edition 20
2. Turban, McLean, Wetherbe- Information Technology For Management, Wiley Student Edition-Fourth Edition.
3. Leonard Jessup, Joseph Valacich-Information Systems Today, Why IS matters, Pearson Education-Low Price Edition, Second Edition.
4. Effy Oz-Management Information systems, Thonson Course Technology, Fifth Edition

Name of the faculty member & Signature:K.Nandini K. Nandini

Approved by Head of the Department: K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -I

Department: BBA

Class & Section: ABBA-ED

Course Code: BBED22102

Name of the Faculty Member: DR A Latha

Course Title: Management Foundations

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**INTRODUCTION TO MANAGEMENT** Meaning, definition, concept, scope and principles of management; Evolution of management thought - Management theories- classical, behaviour, system, contingency and contemporary perspectives on management. Management art or science and management as profession. Process and levels of Management. Introduction to Functions (POSDCORB) of Management.	PPT Presentation	Identify and interpret the various principles and importance of management	By interacting with one to one and posing questions
II.	Planning – Importance, objectives, process, policies and procedures, types of planning, Decision making - Process of decision making, Types of decision, Problems involved in decision making.	PPT Presentation	Explain and demonstrate the uses of planning and decision making process, so that their will be no confusion between planning and implementation	seminar
III.	Meaning, importance, principles of organizing, span of management, Patterns of organization –formal and informal organizations, Common organizational structures;	PPT Presentation	Classify different patterns of organization and combine the various techniques of control and coordination.	quiz

	departmentalization, Authority-delegation, centralization and decentralization, Responsibility – line and staff relationship. .			
IV.	Sources of recruitment, Selection process, Training, Directing, Controlling – Meaning and importance, Function, span of control, Process and types of Control, Motivation, Co-ordination – Need and types and techniques of co-ordination - Distinction between coordination and co-operation - Requisites for excellent co-ordination - Systems Approaches and co-ordination.	PPT Presentation and chalk and baord	Identify the essence of motivation and direction in order to achieve the common objective of the organisation	Seminar and Mock Interview
V.	Total Quality management, Technology Management, Talent, and Knowledge Management, Leadership, Organizational change and Development, Corporate Social responsibility.	PPT Presentation and chalk and baord	Interrelate and understand the essence of leadership and the importance of communication.	Group discussions

List of References (Book / ICT / Weblinks):

1. Robbins, S. P., &DeCenzo, A. D. Fundamentals of Management. New Delhi: Pearson Education.
2. T.Ramasamy (2018) Principles of Management, Himalaya Publishing House, Mumbai.
3. L.M. Prasad, Principle and Practice of Management, Sultan Chand and Sons, 6th edition.

Name of the faculty member & Signature: Dr A Latha

Approved by Head of the Department: K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER -I

Department: BBAED **Class & Section: ABBAED** **Course Code: BBED22103**

Name of the Faculty Member: K.B.Sravanthi **Course Title: Introduction to Entrepreneurship**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Entrepreneurship -concept , functions, need and importance, definitions, what is an Enterprise. Entrepreneurial functions.	PPT Presentation	To prepare a business proposal plan	By interacting with one to one and posing questions
II.	Myths of Entrepreneurship, advantages and disadvantages, need process, current scenario of entrepreneurship in the economy	PPT Presentation	To recognize the distinct entrepreneurial traits and establishing an enterprise	seminar
III.	Concept of Entrepreneur, types, difference between entrepreneur and employee, intrapreneurship definition, concept and functions.	PPT Presentation	To identify the training and development required to become an entrepreneur	quiz
IV.	Concept of ethics and ethics, entrepreneurial values, core values Attitudes- definition, features, sources – Essential Attitudes of entrepreneurs- Motivation and process - Maslow's Hierarchy and needs – Mac Cleland's Theory.	Chalk and black board	To classify and analyze the resource mobilization and funding organizations and also identify various schemes provided by government.	Group discussions
V.	Concept of Business idea and ways to generate ideas and its importance- Types of entrepreneur based on personality- feasibility study – features and types - introduction and elements of business plan –	Chalk and black board	To recognize the registration process of a business entreprise	seminar

	difference between business plan and feasibility study- Women entrepreneurs and their challenges.			

List of References (Book / ICT / Weblinks):

1. Entrepreneurship – Poonam Gandhi 2020
2. Entrepreneurship Development – S. Anil Kumar , S.C.Poornima, Minik Abraham, K JAYASREE 2019.
3. https://youtu.be/qsl5cwZmdvU?si=eBOWgybgGted74FC

Name of the faculty member & Signature: K.B.Sravanthi. K.B.S

Approved by Head of the Department: K.B.Sravanthi K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER - I

Department: BBA- ED **Class&Section: ABBA ED** **Course Code: BBED22104**

Name of the Faculty Member:V KALYAN GOUD **Course Title:** FINANCIAL ACCOUNTING - I

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** Need for accounting — definition - Meaning – features – objectives- Functions – systems and bases and scope of accounting. Introduction to Accounting standards – Definition- meaning- list of Accounting Standards issued by ASB- Books keeping and accounting – branches of accounting – advantages – limitations. Basic terminology used – accounting concepts an conventions, Accounting equation Classification of accounts – rules of double entry system, Journalizing – posting to ledgers – balancing of ledgers	Lecture Method using ICT Tools and chalk board.	Describe the need and importance of accounting.	Seminar/ Presentations
II.	**Subsidiary Books** Subdivision of journal – preparation of subsidiary books. Different types of cash book – simple cash book, cash book with cash and discount columns, Cash book with cash and bank columns – cash book with cash discount and bank columns and petty cash book.	Lecture Method using ICT Tools and chalk board.	Explain about subdivision of journal	Presentations
III.	**Bank Reconciliation Statement** Bank reconciliation statement – need – reasons for difference between cash book and pass book balances. Simple problems on favourable balance, Simple problems on overdraft balances. Ascertainment of correct cash book balance.	Lecture Method using ICT Tools and chalk board.	Compare the cashbook and passbook balances to reconcile the difference.	Seminar

2023-2024

IV.	**Trial Balance and Final Accounts** Trial balance – meaning – objectives- Methods of preparation. Final accounts – preparation of manufacturing, trading, profit & loss account and Balance Sheet Adjusting and closing entries.	Lecture Method using ICT Tools and chalk board.	Analyze the financial position of an organization	Presentations
V.	**Rectification of Errors** Errors and their rectification- Types of errors Rectification before and after preparation of final accounts- Suspense account – effect of errors on profit.	Lecture Method using ICT Tools and chalk board.	Identify the mistakes in books of accounts and helps in correcting them.	Seminar

Listof References (Book/ICT/ Weblinks):

1. Jain, S.P. and Narang, K.L. 2011. **Financial Accounting Part-1.** 11th Revised Edition. New Delhi: Kalyani Publishers.
2. Gupta, R.L. and Radha Swamy. 2001. **Advanced Accountancy – Volume-I.** 10th Edition. New Delhi: Sultan Chand & Sons.
3. Maheswari, S. N. and Maheswari, S.K. 2004. **Advanced Accountancy – Volume-I.** 9th Edition. New Delhi: Vikas Publishing House Pvt Ltd.

KALYAN GOUD. V. & Kalyan

Name of the faculty member & Signature:

Approved by Head of the Department K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023-2024

SEMESTER-IV

Department: Environmental Science **Class: BBA -NBB-ED** **Course Code:ES23301**

Name of Faculty Member: Dr.G.Sudhakar **Course Title: EVS&GS**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Definition, Scope and Importance of environmental Studies** **Renewable & Non-Renewable resources** **Definition of Ecosystem, Structure and functions** **Biodiversity and its conservation**	Lecture Method using ICT Tools and Board	Understand the importance of Environmental education, conservation of naturalresources & understand the importance of ecosystems and biodiversity	Oral question and answers To understand the importance of ecological balance for Sustainable Development
II.	**Environmental pollution** **Solid Waste Management** **Industrial Waste Management** **Disaster Management: floods, Earthquakes, and Cyclones**	Lecture Method using ICT Tools and Board	Understand the pollution problems and apply the environmental science knowledge onsolid waste management, disaster management	Oral question and answers To understand the impacts of developmental activities and mitigation measures
III.	**Rainwater Harvesting, Water-shed Management** **Global Warming Ozone depletion, and Acid rains Environmental Legislation** **Environmental & Human Health-HIV/AIDS** **Role of Information Technology in Environmental Studies.**	Lecture Method using ICT Tools and Board	Apply environmental science knowledge to improve the resources. Evaluate and understand the sustainable environmental conditions and control methods	Oral question and answers To understand the environmental policies and regulations

IV.	**Why should we study gender issues?** **Socialization** **Missing women** **Being together as equals** **Through the lens of gender**	Lecture Method using ICT Tools and Board	Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on)	Oral question and answers To develop students' sensibility regarding issues of gender in contemporary India
V.	**Sexual harassment** **Say no eve teasing.** **Caste-based violence.** **Nirbhaya Act** **Domestic violence - Is home a safe place?** **Hindu Inheritance Act (2005)**	Lecture Method using ICT Tools and Board	Understand gender problems and ways of addressing them, including interactionsacross local to global scales in communities and overcome inequalities with legislation.	Oral question and answers To expose the students to debate on politics and economic works and on genderviolence.

List of References (Book / ICT / Weblinks):

1. Rajagopalan R. 2015. **Environmental Studies-from Crisis to Cure.** Third Edition.Chennai: Oxford University Press.
Dr D K Asthana and Dr Meera Asthana. 2014.
2.**A Textbook of EnvironmentalStudies** Revised Edition. New Delhi: S. Chand & Company
3. Sen Amartya **More Than One Million Women Are Missing.** New York Review of Books 37.20 (20 December 1990). Print. **We Were Making History...Life Stories ofWomen in the Telangana People's Struggle**. New Delhi: Kali for Women.
4. Shatrughna, Veena. **Women's Work and its Impact on Child Health and Nutrition.** Hyderabad: National Institute of Nutrition, Indian Council of Medical Research .1993

Name of the faculty member & Signature: (Dr. G. Sudhakar)

Approved by Head of the Department: K-B-S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year2023–2024

SEMESTER -IV

Department: BBA-ED **Class& Section: NBBAED** **Course Code:BBED23402**

Nameofthe Faculty:Sweta Rao **CourseTitle:CORPORATEGOVERNANCE & BUSINESS ETHICS**

Unit	Topics tobe covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Introduction** Values – Importance-Sources of Value Systems-Types, Values, Loyalty-Ethical Behaviour-Values across Cultures-Business Ethics – Nature - Characteristics and Needs-Ethical Practices in Management	ICT Method, PPTs, interactive session	Identify and explain the importance of values and ethics.	Scenario based learning, Presentations by students on different values, cultures followed by different countries
II.	**The Ethical Value System (Theories)** Universalism Theory-Utilitarianism Theory-Distributive Justice Theory-Social Contracts Theory-Individual Freedom of Choice – the concept - Professional Codes in the corporate-Relationship between culture and Ethics-Ethical Values in different Cultures-Relation between Culture and Individual Ethics	ICT Method, PPTs, Case Study , interactive session	Analyze and interpret the various theories of ethical value system.	Practical learning experience, Presentations on various theories of ethical value system and its impact on the organisation, Perceptions of business features related to ethics by country
III.	**Law and Ethics** Meaning of Law and Ethics-Relationship between Law and Ethics-Other Bodies in enforcing Ethical Business behaviour(Corporates, government, financial institutions and NGO)-Impact of Laws on Business Ethics-Social Responsibilities of Business-Environmental Protection-	ICT Method, PPTs, Case Study, interactive session	Point out the relationship between law and ethics and understand the impact of law on the business.	Scenario based learning, Group discussion, Videos on Fair Trade Practices and implementation of various act and policies on business

	Fair Trade Practices -Fulfilling all National obligations under various Laws (implementation of govt act and policies)-Safeguarding of health and wellbeing of the customer (marketing)			
IV.	**Corporate Governance** Meaning of Corporate Governance-Issues and need-Corporate governance code-Transparency and disclosure in the corporate-Role of auditors-Board of directors-Share holders	ICT Method, PPTs, interactive session	Explain the corporate governance codes, transparency and disclosure in the corporate.	Quiz on various corporate governance codes
V.	**Issues of Governance** Global issues of governance-Accounting and regulatory framework -Corporate scams-Committees in India and abroad dealing with corporate governance-Corporate social responsibility-Introduction to Companies Act, 2013 – Provisions Relating to Corporate Governance	ICT Method, PPTs, interactive session, Case study on Corporate scams in India and abroad	Identify and point out the global issues of governance.	Practical learning experience, presentations and videos on various CSR activities undertaken by the organisation, videos on corporate scams as well as global issues of governance.

List of References (Book/ICT/ Weblinks):

1. Fernando, A. C. 2006. **Business Ethics and Corporate Governance**. 1st Edition. New Delhi: Pearson Publications.
2. Dr. Kumar Senthil, and Rajan Senthil. 2006. **Business Ethics and Values.** 1st Edition. Mumbai: Himalaya Publications.

Name of the faculty member & Signature: Sweta Rao

K.B.S

Approved by Head of the Department: K.B.Sravanthi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year2023–2024

SEMESTER -IV

Department: BBA-ED **Class & Section: NBBAED** **Course Code: BBED23405**

Name of the Faculty: Dr Ramesh Muthangi **Course Title: Accounting for Management**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Management Accounting – Meaning, Scope, Importance and Limitations – Management Accounting vs. Cost Accounting – Management Accounting vs. Financial Accounting	PPT Presentation, interacting with the students	To understand the Concept of Management Accounting compared to financial & cost accounting.	Seminars, Group discussion
II.	Analysis and interpretation of financial statements – Nature, Objective, Tools – Methods – Comparative statements, Common size statement and Trend Analysis – Ratio Analysis – Classification of ratios – Profitability, Turnover & Solvency Ratio	PPT Presentation, Practicing problems	To Analyze the Financial Statement using Comparative & Common size Statement and Ratios	Practical learning experience, Case study
III.	Funds Flow and Cash Flow Statements (Simple Problems only)	PPT Presentation, Practicing problems	To Analyze the financial Statements using Funds Flow & Cash flow Statements in Business	Practical learning experience
IV.	Budgets and Budgetary control – Meaning, Objectives, merits and demerits – Types of Budgets – Production, Cash and Flexible Budgets.	PPT Presentation, Practicing problems	To know the preparation of different types of budgets	Practical learning experience, Case Study
V.	Marginal Costing (excluding decision making) – Break Event Analysis – Break Even chart.	PPT Presentation, Practicing problems, Group activity	To understand calculation of break even point in units and value.	Practical learning experience, Case study

List of References (Book/ICT/ Weblinks):

1. Dr.Maheswari S.N – Management Accounting – Sultan Chand & Sons
2. Reddy and Murthy - Management Accounting – Margham Publications

Name of the faculty member & Signature: Dr Ramesh Muthangi

Approved by Head of the Department: K.B.Sravanthi

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -IV

Department: BBA-ED **Class & Section: NBBAED** **CourseCode : BBED23404**

Name of the Faculty Member: K.B.Sravanthi **Course Title: Production And Material Management**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	Meaning, Nature and scope of Production Management, Production planning and control, selection of sites for locating plants, Layout planning	PPT Presentation, interacting with the students	Identify the elements of production management and various transformation processes to enhance productivity and competitiveness.	Practical learning experience
II.	Routing, Scheduling, Dispatch and follow up operations for jobbing, batch and mass production, New product design and product planning.	PPT Presentation, interacting with the students	Analyse and evaluate various facility alternatives and their capacity decisions, develop a balanced line of production and scheduling and sequencing techniques in operation environments.	Group Discussion
III.	Quality Assurance: Application of statistical quality control, Total quality Management - Role, scope, and importance of material management - Make-or-buy Decisions.	PPT Presentation, interacting with the students	Plan and implement suitable materials handling principles and practices in the operations.	Presentations
IV.	Concept and scope of purchasing management, Principles, and objectives of purchasing, purchasing procedure: requisitioning, selecting source of supply, Ordering, Delivery, Scientific Purchasing	PPT Presentation, interacting with the students	Plan and implement suitable quality control measures in Quality Circles to TQM.	Case Study
V.	Inventory Management: Meaning and functions, Inventory Planning and Control, E.O.Q. Minimum and	PPT Presentation, interacting with the students	To understand the Materials Management function starting from Demand Management through	Assessment

	maximum Level, Re-order level, ABC analysis.		Inventory Management	

List of References (Book/ICT/ Weblinks):

1. Buffa, A.E.S: Modern Production Management
2. Chase, R.B., Acquilano N .Jr. Production and Operation Management
3. O.P. Khanna: Industrial Engineering Management

Name of the faculty member & Signature: K.B.Sravanthi K.B.S

Approved by Head of the Department : K.B.Sravanthi K.B.S

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

SEMESTER -IV

Department: BBA-ED **Class & Section: NBBAED** **Course Code: BBED23401**

Name of the Faculty Member: K.B.Sravanthi **Course Title:** start-up management

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**UNIT – I: ENTREPRENEUR AND ENTREPRENEURSHIP:** Evolution of the Concept of Entrepreneur. Characteristics of an Entrepreneur. Distinction Between an entrepreneur and a manager. Functions of an Entrepreneur. Traits/ Qualities of Entrepreneurs: Types of Entrepreneurs. Role of Entrepreneurship in Economic Development. Growth of Entrepreneurship in India. Problems and Development of Rural Entrepreneurship	PPT Presentation, interacting with the students	Develop a start-up Enterprise with Big Idea Generation..	Practical learning experience
II.	**UNIT- II: WOMEN ENTREPRENEURSHIP:** Concept of women entrepreneur, Functions of women entrepreneurs, growth of women entrepreneurship in India, problems of women entrepreneurs, developing women entrepreneurship, limitations of women entrepreneurship	PPT Presentation, interacting with the students	Analyse start-up capital requirement by analysing legal factors.	Group Discussion

III.	**UNIT – III: RURAL ENTREPRENEURSHIP** Meaning of rural entrepreneurship – need for rural entrepreneurship, rural entrepreneurship / Industrialization in retrospect, problems of rural entrepreneurship, how to develop rural entrepreneurship? NGO's and rural entrepreneurship	PPT Presentation, interacting with the students	Interpret feasibility Analysis towards funding issues.	Presentations
IV.	**UNIT – IV:** **ROLE OF SUPPORT INSTITUTIONS & MANAGEMENT OF SMALL ENTERPRISES:** Entrepreneurship Development Programmes (EDPs) – Phases of EDP's and Evaluation of EDPs. Institutional Finance to Entrepreneurs like Commercial Banks–Other Major Financial Institutions such as IDBI, IFCI, IIBI, LIC, UTI, NABARD, SFCs, SISI, SIDCs, SIDBI, and EXIM Bank and venture capital firms. Role of Small Enterprises in Economic Development. Ownership Structures,MSME act.	PPT Presentation, interacting with the students	Access growth stages in new venture and reasons for scaling ventures.	Case Study
V.	**UNIT – V: FAMILY BUSINESS** Introduction – meaning of family business – types of family business – family business in India – advantages of family business – disadvantages of family business – major challenges faced by family business in India – business succession planning – making family business more effective.	PPT Presentation, interacting with the students	Evaluate financial stability and decide on expansion possibilities.	Assessment

List of References (Book/ICT/ Weblinks):

1. 1. Vasanth Desai, "Dynamics of Entrepreneurial Development and Management", 2007, HPH, Millenium Edition.
2. S.S. Khanka, "Entrepreneurial Development", 2007, S. Chand & Co. Ltd.
3. Poornima. M Charantimath, "Entrepreneurial Development and Small Business Enterprises

Name of the faculty member & Signature: K.B.Sravanthi K.B.S

Approved by Head of the Department : K.B.Sravanthi K.B.S

LOYOLA ACADEMY

OLD ALWAL, SECUNDERABAD - 500 010, TELANGANA, INDIA
(Autonomous and Affiliated to Osmania University)
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TEACHING PLAN FOR THE ACADEMIC YEAR 2023–2024

Name	:	Mrs. N. Anitha Rani			
Dept	:	B.B.A Enterprise Development			
Subject	:	Mobile Commerce	No. of Hours		60
Class	:	NBBAED	SEM	:	IV
Sub. Code:	:	BBED23403	Year	:	II

S.No	Topics to be Covered	No.of Hours	Teaching Pedagogy	Learning Outcome	Skill Development Activity
UNIT-1	E-Commerce Concepts: Anytime Commerce, Dimensions of E-Commerce	02	Discussion and ICT Tools	Introduced the concept of E-Commerce, E-business and their different types	Got the knowledge on E-Commerce, M-Commerce, And their business models
	E-Commerce Business Models, M-Commerce Concepts: An information systems perspective, anytime ,anywhere commerce	02			
	Impact of mobility on e-commerce	02			
	M-Commerce Business models	02			
	M-Commerce Value Chain	02			
	M-Commerce Information system functional model	02			
UNIT-2	M-Commerce Technology: Types of mobile clients(mobile phones, PDAs, laptop computers, vehicle mounted devices, hybrid devices)	02	Discussion and ICT Tools	Discuss the security aspects of E-Business	Aware and Perceived about M-Commerce Technology, GPS, Mobile device protocols
	Device limitations: considerations for user interface and application design	01			
	Device location technology: GPS, Triangulation	02			
	Mobile client software, Mobile device operating systems	02			
	Micro browsers	01			
	Mobile device communication protocols: WAP, i-Mode	02			
	Mobile device page description languages	01			
	Mobile device application software	01			

UNIT-3	Introduction to mobile communication technology	01	Discussion and ICT Tools	To explain all the networks and their technologies	Educated the Various Types of Networks and their Technologies
	Networks: LAN, WAN, PAN, MAN	01			
	Wireless Networks: WWAN technology: cellular systems 2G(CDMA,TDMA,GSM).2.5G(GPRS, EDGE),3G,4G,5G,WLAN technology: wi-fi WMAN technology: Wi-max WPAN technology: Bluetooth	02			
UNIT-4	M-Commerce Applications	02	Discussion and ICT Tools	To analyze all the payments, financial services	Learned about the M-Commerce Applications.
	Mobile financial services	01			
	Mobile advertising, mobile inventory management	02			
	Mobile product location and shopping	01			
	Mobile proactive service management, Mobile business services	02			
	Mobile entertainment, Mobile office	02			
	Mobile distance education and Mobile information access, Vehicular mobile commerce	02			
UNIT-5	Wireless application development	02	Discussion and ICT Tools	To illustrate the cyber laws related to E-Business	Acquainted with the wireless application development, M-Commerce issues
	The wireless application : Client side, server side	02			
	WAP, Trust in m-commerce, Encryption, Authentication, confidentiality, integrity, and non - repudiation	02			
	Mobile payment, M-Commerce issues, Technology issues(Mobile client issues, Communications infrastructure issues and other technology issues)	04			
	Application issues ,Global m-commerce issues	02			

References/Suggested Reading Books:

1. Mobile Commerce Technology, Theory and Applications, **E. Brian. Mennecke , J.Troy Strander**, Idea Group Inc, IRM Press
2. M-Commerce Crash course, **P.J.Louis**, McGraw –Hill Companies
3. E-Commerce –Concepts and Applications, **Nidhi Dhawan**, International book house

N. Anitharani

Signature of the Faculty: **(N.Anitha Rani)**

K.B.S

Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: B.B.A. Tourism **Class: ABBAT** **Course Code:BBTR-23101**

Name of the Faculty Member:Dr.Srujan Kumar. G **Course Title: Indian Heritage and Cultural Tourism**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian Customs and Traditions	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval Indian history and medieval Culture	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about historical, Social, religious and political issues of the nation.	Group presentation
IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions and democratic system of India	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about human Rights, tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr. Srujan Kumar G

Approved by Head of the Department:

Dr. Sangeeta Peter

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

ODD SEMESTER

Department: BBA TOURISM **Class & Section: ABBTR** **Course Code: BBTR23302**

Name of the Faculty Member:
Dr. Sangeeta Peter

Course Title: Tourism Principles & Practices

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Tourism:** An overview, Elements, Nature and Characteristics – Typology of Tourism – Classification of Tourists – Tourism Network – Interdisciplinary approaches to tourism – Historical development of tourism – Major motivators & deterrents to travel	Interactive Learning Lecture using ICT Tools	Learn about structure and components of tourism industry	Quiz
II.	**International Civil Aviation Organization** (ICAO), Federal Aviation Administration (FAA), FAIRS, Federal Aviation Administration (FAA), the History of ICAO and the Chicago Convention, Inter Agency Committee for Aviation Policy (ICAP)	Interactive Learning Lecture using -chalkboard -ICT Tools	Understand the role of various civil aviation organizations. Appreciate the fast-moving nature of airline activities and relate then to airport management	Presentation
III.	**Tourism Impacts** – Tourism Area Life Cycle (TALC) – Doxey's Index – Demonstration Effect – Push and Pull Theory – Tourism System – Mathieson and Wall Model & Leiper's Model – Stanley Plog's Model of destination preferences - Demand & supply in tourism – Tourism Regulations – Present trends in domestic & global tourism – MNC's in tourism industry	Lecture using -ICT Tools	Study the impacts of tourism and recent trends of the sector	Quiz, Presentations

IV.	**Tourism Organizations**: Role & functions of United Nations World Tourism Organization (UNWTO) • World Travel & Tourism Council (WTTC) • Pacific Asia Travel Association (PATA) • Ministry of Tourism – Govt. of India • International Air Transport Association (IATA) • Travel Agents Association of India (TAAI) • Indian Association of Tour Operators (IATO) • Federation of Hotel & Restaurant Associations of India (FHRAI)	Lecture using -ICT Tools	Understand the role of various tourism organisations	Presentations, Case study
V.	Overview of five years plans with special reference to eleventh five year plan for tourism development and promotion. National Action Plan, National Tourism Policy – Code of conduct for safe & sustainable tourism for India. Overview of five year plans for Tourism development & promotion.	Interactive Learning Lecture using -ICT Tools	Get insights of tourism policies in National & International context	Presentation

List of References (Book/ICT/ Web links):

1. Tourism Development: Principles & Practices by A K Bhatia, Starling Publishers Pvt. Ltd
2. Swain S K, Mishra J.M (2012), Tourism Principles & Practices, Oxford University Press

Dr. Sangeeta Patwa

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

ODD SEMESTER

Department: BBA Tourism **Class & Section: ABBTR** **Course Code: BBTR23103**

Name of the Faculty Member: Mr. Ramesh **Course Title: Financial Accounting**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Accounting Definition, Meaning, Features, Objectives, Functions, Scope and Importance **Book Keeping and Accounting** Accounting concepts and conventions, Accounting Equation, Classification of accounts, Journalizing, posting to ledgers, Balancing of ledgers	Interactive Learning Lecture using -chalkboard -ICT Tools	Understand the basic concepts of financial accounting. Learning how to write journal entries and posting them to ledgers.	Quiz
II.	Subsidiary Books Preparation of Subsidiary Books, Types of cash books and petty cash book	Interactive Learning Lecture using -chalkboard	Understand the importance of subsidiary books, students are able to prepare cash books	Solving different problems
III.	Trial Balance and Final Accounts Meaning, Objectives, methods of preparation Preparation of Trading, Profit and Loss account and Balance sheet Adjusting and closing entries	Interactive Learning Lecture using -chalkboard -ICT Tools	Understand the importance of trial balance and Balance sheet Able to draft the final accounts	Analysis and Presentations of final accounts
IV.	Rectification of errors Types of errors Rectification before and after preparation of final accounts Suspense account	Interactive Learning Lecture using - chalkboard -ICT Tools	Understand the Errors and Rectification of errors, solving the simple problems	Presentations, Problem Solving

V.	Single entry system Meaning, Features, Books and Accounts maintained, preparation of statement of affairs, Differences between balance sheet and statement of affairs Hire Purchase and Installment Purchase System Features, accounting treatment in the books of hire purchaser and hire vendor, Default and repossession. Differences between hire purchase and installment purchase system.	Interactive Learning Lecture using -ICT Tools - chalkboard	Understand the single entry system and Hire Purchase & Installment Purchase system. Learning how to draft the statement of affairs, accounting treatment of hire purchaser and hire vendor.	Quiz, presentation and problem solving.

List of References (Book/ICT/ Weblinks):

1. Jain, S.P.and Narang, K.L. 2011 Financial Accounting – Kalyani Publishers
2. Gupta, R.L. and Radha Swamy. 2001 Advanced Accountancy Volume-I – Sulthan Chand and sons.
3. Maheshwari, S.N. amd Maheshwari, S.K. 2004, Advanced Accountancy Volume – I – Vikas Publishing House Pvt. Ltd.

Ramesh

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

ODDSEMESTER

Department: BBA.TOURISM

Class&Section: ABBT

CourseCode: BBTR23105

Nameofthe FacultyMember: D. BANU KRANTHI

CourseTitle: FUNDAMENTALS OF INFORMATION TECHNOLOGY

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction to Computers** • Definition - Characteristics and limitations of computers • Block diagram of a computer, CPU • Primary and secondary storage • Input and output devices **Data Representation and Storage** Data representation in computers, bits and bytes • Number systems (Binary, Octal and Hexadecimal) • Conversion from decimal to binary, octal, hexadecimal and vice versa • Secondary storage • Random Vs Sequential access, Tracks and Sectors • Storage characteristics • Increasing data storage capacity through compression (disk compression and file Compression)	Interactive Learning Lecturing using traditional methods ICT Tools	Understand basic computer terminology and number systems. Gain a comprehensive understanding of computers, including their components, data representation, and storage systems. This module covers the basics of number systems, conversion methods, and techniques for increasing data storage capacity through compression.	Quiz, PPT presentation for students and small assignments, problem solving methods
II.	• Operating Systems: meaning, definition, Functions • Types of operating systems: Desktop OS, Server OS, Mainframe OS, • Hand-held OS & Embedded OS • Multi Tasking and Multi threading	Lecture-Based Teaching Experiential Learning LectureMethodu	Identify different operating systems, and its types. Comprehend the core concepts of operating systems, distinguish between types such as Desktop OS	Regular Assessments group discussion on programming and PPT presentation, problem solving methods

	• Multi User multi processor support • Miscellaneous tasks • Batch Processing systems • Real time systems, Time sharing systems • User Interfaces: GUI, Pen based, Touch Screen & Conversational interfaces • Common Operating Systems: DOS, Windows 95/98 and UNIX	sing ICT Tools	and Server OS, and gain insights into multi-tasking, user interfaces, and various operating systems like DOS, Windows, and UNIX. This knowledge will provide a solid foundation for understanding the functions and applications of operating systems in diverse computing environments.	
III.	• Applications of Information Technology • Application programs • Horizontal Market Applications, Vertical Market Applications • Customs Applications, Shareware and Public domain software • Transaction Processing – Centralized transaction processing • Client Server software, Distributed computing and Replication • Information tools for management control: DSS, EIS, GIS, OLAP • Data Warehousing and Data Mining • IT in Business and Industry – Home and at play, Education and Training, Entertainment and Arts, Science, Engineering and Math, computers in hiding • IT Enabled Services: BPO, KPO & Call centers	Interactive Learning ICT tools, Lecturing using traditional methods	Classify different applications of Information technology Grasp the broad spectrum of Information Technology applications, from transaction processing to data warehousing, spanning business, education, and entertainment. They will also understand the significance of IT-enabled services, including BPO and KPO, in various industries.	Regular Assessments, self-coding techniques and gaining ideas to develop the code
IV.	• Systems Development: The six phases of Systems Analysis & Design • The challenges of Digital Age: Security issues: Threats to Computers & • Communications • Security: Safeguarding Computers & Communications • Quality of Life Issues • The ethics of using databases: concerns about accuracy & privacy • Five generations of programming languages	Lecture-Based Teaching Flipping method-review materials independently before class	Analyse the importance of system development and the phases of SDLC Gain skills in Systems Analysis & Design, acquiring expertise in addressing Digital Age challenges such as security threats and ethical concerns in database usage. Additionally, they will gain a concise understanding of the five generations of programming languages.	Regular Assessments, PPT presentation and active learning in coding. problem solving methods

V.	• Modern Communications: Communications, FAX • Voice Mail and Information Services, Email • Group Communications: News groups, Mailing lists, IRC, Network games • Video conferencing • File exchange, bandwidth • Modem, Network topologies • Network Types – LAN, MAN and WAN • Dialup Access	LectureMethodusing ICT Tools Lecture-Based Teaching	Categorize modern means of communications, types of networks and topologies Acquire proficiency in diverse communication technologies, from FAX and email to video conferencing and group communication platforms. Develop a foundational understanding of network concepts,	Regular Assessments, seminars and developing new simple projects, problem solving methods

Listof References (Book/ICT/ Weblinks):

1. Curtin Dennis, P. and Foley Kim. 2000. **Information Technology – The Breaking Wave.** 7th edition. New Delhi: Tata McGraw Hill Publications.
2. Williams Brian, K. and Sawyer Stacey, C. 2007. **Using Information Technology – A Practical Introduction to Computers and Communications.** 6th editi New Delhi: Tata McGraw Hill Publications.
3. Sinha Pradeep, K. and Sinha Preeti. 2007. **Computer Fundamentals, Concepts, Systems and Applications.**4th edition. New Delhi: BPB Publications.
4. Rajaraman. 2006. **Fundamentals of Computers.**4th edition. New Delhi: PHI Publications.
5. Bharihoke Deepak. 2000. **Fundamentals of Information Technology.** 2nd edition. New Delhi: Excel Books.

Nameofthefacultymember&Signature: D. Bama Kranthi

D. Bama

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching PlanfortheAcademicYear2023–2024

ODDSEMESTER

Department: BBA.TOURISM **Class&Section: ABBT** **CourseCode: BBTR23105**

Namecofthe FacultyMember: D. BANU KRANTHI **CourseTitle: FUNDAMENTALS OF INFORMATION TECHNOLOGY**

Unit	Topicsto becovered	TeachingPedagogy	LearningOutcome	SkillDevelopmentActivity
I.	**Introduction to Computers** • Definition - Characteristics and limitations of computers • Block diagram of a computer, CPU • Primary and secondary storage • Input and output devices **Data Representation and Storage** Data representation in computers, bits and bytes • Number systems (Binary, Octal and Hexadecimal) • Conversion from decimal to binary, octal, hexadecimal and vice versa • Secondary storage • Random Vs Sequential access, Tracks and Sectors • Storage characteristics • Increasing data storage capacity through compression (disk compression and file Compression)	Interactive Learning Lecturing using traditional methods ICT Tools	Understand basic computer terminology and number systems. Gain a comprehensive understanding of computers, including their components, data representation, and storage systems. This module covers the basics of number systems, conversion methods, and techniques for increasing data storage capacity through compression.	Quiz, PPT presentation for students and small assignments, problem solving methods
II.	• Operating Systems: meaning, definition, Functions • Types of operating systems: Desktop OS, Server OS, Mainframe OS, • Hand-held OS & Embedded OS • Multi Tasking and Multi threading	Lecture-Based Teaching Experiential Learning LectureMethodu	Identify different operating systems, and its types. Comprehend the core concepts of operating systems, distinguish between types such as Desktop OS	Regular Assessments group discussion on programming and PPT presentation, problem solving methods

	• Multi User multi processor support • Miscellaneous tasks • Batch Processing systems • Real time systems, Time sharing systems • User Interfaces: GUI, Pen based, Touch Screen & Conversational interfaces • Common Operating Systems: DOS, Windows 95/98 and UNIX	sing ICT Tools	and Server OS, and gain insights into multi-tasking, user interfaces, and various operating systems like DOS, Windows, and UNIX. This knowledge will provide a solid foundation for understanding the functions and applications of operating systems in diverse computing environments.	
III.	• Applications of Information Technology • Application programs • Horizontal Market Applications, Vertical Market Applications • Customs Applications, Shareware and Public domain software • Transaction Processing – Centralized transaction processing • Client Server software, Distributed computing and Replication • Information tools for management control: DSS, EIS, GIS, OLAP • Data Warehousing and Data Mining • IT in Business and Industry – Home and at play, Education and Training, Entertainment and Arts, Science, Engineering and Math, computers in hiding • IT Enabled Services: BPO, KPO & Call centers	Interactive Learning ICT tools, Lecturing using traditional methods	Classify different applications of Information technology Grasp the broad spectrum of Information Technology applications, from transaction processing to data warehousing, spanning business, education, and entertainment. They will also understand the significance of IT-enabled services, including BPO and KPO, in various industries.	Regular Assessments, self-coding techniques and gaining ideas to develop the code
IV.	• Systems Development: The six phases of Systems Analysis & Design • The challenges of Digital Age: Security issues: Threats to Computers & • Communications • Security: Safeguarding Computers & Communications • Quality of Life Issues • The ethics of using databases: concerns about accuracy & privacy • Five generations of programming languages	Lecture-Based Teaching Flipping method-review materials independently before class	Analyse the importance of system development and the phases of SDLC Gain skills in Systems Analysis & Design, acquiring expertise in addressing Digital Age challenges such as security threats and ethical concerns in database usage. Additionally, they will gain a concise understanding of the five generations of programming languages.	Regular Assessments, PPT presentation and active learning in coding. problem solving methods

V.	• Modern Communications: Communications, FAX • Voice Mail and Information Services, Email • Group Communications: News groups, Mailing lists, IRC, Network games • Video conferencing • File exchange, bandwidth • Modem, Network topologies • Network Types – LAN, MAN and WAN • Dialup Access	LectureMethodusing ICT Tools Lecture-Based Teaching	Categorize modern means of communications, types of networks and topologies Acquire proficiency in diverse communication technologies, from FAX and email to video conferencing and group communication platforms. Develop a foundational understanding of network concepts,	Regular Assessments, seminars and developing new simple projects, problem solving methods

Listof References (Book/ICT/ Weblinks):

1. Curtin Dennis, P. and Foley Kim. 2000. **Information Technology – The Breaking Wave.** 7th edition. New Delhi: Tata McGraw Hill Publications.
2. Williams Brian, K. and Sawyer Stacey, C. 2007. **Using Information Technology – A Practical Introduction to Computers and Communications.** 6th editi New Delhi: Tata McGraw Hill Publications.
3. Sinha Pradeep, K. and Sinha Preeti. 2007. **Computer Fundamentals, Concepts, Systems and Applications.**4th edition. New Delhi: BPB Publications.
4. Rajaraman. 2006. **Fundamentals of Computers.**4th edition. New Delhi: PHI Publications.
5. Bharihoke Deepak. 2000. **Fundamentals of Information Technology.** 2nd edition. New Delhi: Excel Books.

Nameofthefacultymember&Signature: D. Bama Kranthi

D. Bama

Approvedby HeadoftheDepartment:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

ODD SEMESTER

Department: BBA TOURISM **Class & Section: ABBTR** **Course Code: BBTR23302**

Name of the Faculty Member:
Dr. Sangeeta Peter

Course Title: Tourism Principles & Practices

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	**Tourism:** An overview, Elements, Nature and Characteristics – Typology of Tourism – Classification of Tourists – Tourism Network – Interdisciplinary approaches to tourism – Historical development of tourism – Major motivators & deterrents to travel	Interactive Learning Lecture using ICT Tools	Learn about structure and components of tourism industry	Quiz
II.	**International Civil Aviation Organization** (ICAO), Federal Aviation Administration (FAA), FAIRS, Federal Aviation Administration (FAA), the History of ICAO and the Chicago Convention, Inter Agency Committee for Aviation Policy (ICAP)	Interactive Learning Lecture using -chalkboard -ICT Tools	Understand the role of various civil aviation organizations. Appreciate the fast-moving nature of airline activities and relate then to airport management	Presentation
III.	**Tourism Impacts** – Tourism Area Life Cycle (TALC) – Doxey's Index – Demonstration Effect – Push and Pull Theory – Tourism System – Mathieson and Wall Model & Leiper's Model – Stanley Plog's Model of destination preferences - Demand & supply in tourism – Tourism Regulations – Present trends in domestic & global tourism – MNC's in tourism industry	Lecture using -ICT Tools	Study the impacts of tourism and recent trends of the sector	Quiz, Presentations

IV.	**Tourism Organizations**: Role & functions of United Nations World Tourism Organization (UNWTO) • World Travel & Tourism Council (WTTC) • Pacific Asia Travel Association (PATA) • Ministry of Tourism – Govt. of India • International Air Transport Association (IATA) • Travel Agents Association of India (TAAI) • Indian Association of Tour Operators (IATO) • Federation of Hotel & Restaurant Associations of India (FHRAI)	Lecture using -ICT Tools	Understand the role of various tourism organisations	Presentations, Case study
V.	Overview of five years plans with special reference to eleventh five year plan for tourism development and promotion. National Action Plan, National Tourism Policy – Code of conduct for safe & sustainable tourism for India. Overview of five year plans for Tourism development & promotion.	Interactive Learning Lecture using -ICT Tools	Get insights of tourism policies in National & International context	Presentation

List of References (Book/ICT/ Web links):

1. Tourism Development: Principles & Practices by A K Bhatia, Starling Publishers Pvt. Ltd
2. Swain S K, Mishra J.M (2012), Tourism Principles & Practices, Oxford University Press

Dr. Sangeeta Pethe

Name of the faculty member & Signature:

Approved by Head of the Department:

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023 – 2024

SEMESTER-I

Department: B.B.A. Tourism **Class: ABBAT** **Course Code:BBTR-23101**

Name of the Faculty Member:Dr.Srujan Kumar. G **Course Title: Indian Heritage and Cultural Tourism**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Meaning of culture-Characteristics of Indian Culture and Caste system, Indus Valley Civilization, Vedic/Aryan Culture, Golden Age of Indian Culture-Mauryas and Guptas, Ashoka the great and Harshavardana, Satavahavas, Pallavas, & Cholas and Development of the art and architecture - contributions of Buddhism and Jainism.	Lecture Method and using PPT method	To learn about Indian Customs and Traditions	Quiz
II.	Cultural Development under the Delhi Sultanate and Mughals, Sufi and Bakti Movement in Medieval period. Cultural Achievements of Kakatiys and Qutubshahis and Development of Art and Architecture during medieval India.	Lecture Method and using PPT method	To learn about medieval Indian history and medieval Culture	Debate
III.	Influence of Western culture on Indian Society, 19th century Socio Religious Reform Movement-Raja Ram Mohan Roy, Ishwara Chandra Vidyasagar and Veerasalingam, Subaltern Movements in India- Jyothirao Phule-Savitribai Phule,E.V Ramaswamy Naikar-Narayana Guru-Dr.B.R.Ambedkar and Indian National Movement-Moderate, Extremist and Gandhian phases.	Lecture Method and using PPT method	To learn about historical, Social, religious and political issues of the nation.	Group presentation
IV.	Perceptions of all Major Religions-A critical analysis, Rise of communalism in Indian Society, Democratic system in India and its functions-Evolution of the constitution and organs of democracy.	Lecture Method and using PPT method	To learn about all major religions and democratic system of India	Quiz and group presentation.
V.	Fundamental Rights, Women, Children Rights and LGBTQ and Tribal Culture and their Issues.	Lecture Method and using PPT method	To learn about human Rights, tribal Culture and their issues	Viva

List of References (Book / ICT / Weblinks):

1. Morris Mano Computer Architecture 3rd Publication---------- example
2. Kai Hwang, Faye A Briggs. Computer Architecture and Parallel Processing
3. https://www.youtube.com/watch?v=uvupli4nik8

Name of the faculty member & Signature:

Dr. Srujan Kumar G

Approved by Head of the Department:

Dr. Sangeeta Peter

LOYOLA ACADEMY

(DEGREE & PG COLLEGE)

Teaching Plan for the Academic Year 2023–2024

ODD SEMESTER

Department: BBA Tourism **Class & Section: ABBTR** **Course Code: BBTR23103**

Name of the Faculty Member: Mr. Ramesh **Course Title: Financial Accounting**

Unit	Topics to be covered	Teaching Pedagogy	Learning Outcome	Skill Development Activity
I.	Introduction to Accounting Definition, Meaning, Features, Objectives, Functions, Scope and Importance **Book Keeping and Accounting** Accounting concepts and conventions, Accounting Equation, Classification of accounts, Journalizing, posting to ledgers, Balancing of ledgers	Interactive Learning Lecture using -chalkboard -ICT Tools	Understand the basic concepts of financial accounting. Learning how to write journal entries and posting them to ledgers.	Quiz
II.	Subsidiary Books Preparation of Subsidiary Books, Types of cash books and petty cash book	Interactive Learning Lecture using -chalkboard	Understand the importance of subsidiary books, students are able to prepare cash books	Solving different problems
III.	Trial Balance and Final Accounts Meaning, Objectives, methods of preparation Preparation of Trading, Profit and Loss account and Balance sheet Adjusting and closing entries	Interactive Learning Lecture using -chalkboard -ICT Tools	Understand the importance of trial balance and Balance sheet Able to draft the final accounts	Analysis and Presentations of final accounts
IV.	Rectification of errors Types of errors Rectification before and after preparation of final accounts Suspense account	Interactive Learning Lecture using - chalkboard -ICT Tools	Understand the Errors and Rectification of errors, solving the simple problems	Presentations, Problem Solving

V.	Single entry system Meaning, Features, Books and Accounts maintained, preparation of statement of affairs, Differences between balance sheet and statement of affairs Hire Purchase and Installment Purchase System Features, accounting treatment in the books of hire purchaser and hire vendor, Default and repossession. Differences between hire purchase and installment purchase system.	Interactive Learning Lecture using -ICT Tools - chalkboard	Understand the single entry system and Hire Purchase & Installment Purchase system. Learning how to draft the statement of affairs, accounting treatment of hire purchaser and hire vendor.	Quiz, presentation and problem solving.

List of References (Book/ICT/ Weblinks):

1. Jain, S.P.and Narang, K.L. 2011 Financial Accounting – Kalyani Publishers
2. Gupta, R.L. and Radha Swamy. 2001 Advanced Accountancy Volume-I – Sulthan Chand and sons.
3. Maheshwari, S.N. amd Maheshwari, S.K. 2004, Advanced Accountancy Volume – I – Vikas Publishing House Pvt. Ltd.

Ramesh

Name of the faculty member & Signature:

Approved by Head of the Department: