COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: ADVANCED FOOD CHEMISTRY(THEORY)
COURSE CODE: MFT13105
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Name and describes the general chemical structures of major components of foods (water, proteins, carbohydrates, and lipids) and selected minor components (vitamins and minerals).	II (UNDERSTAND)
CO2	Understand, plan, perform and analyse a range of chemical investigations with emphasis on food analysis	IV(ANALYZE) I (REMEMBER)
CO3	Relate the chemical composition of foods to their functional properties	IV(ANALYZE)
CO4	Examine a molecular rationalization for the observed physical properties and reactivity of major food components	IV(ANALYZE)
CO5	Predict how changes in overall composition are likely to change the reactivity of individual food components	II (UNDERSTAND)

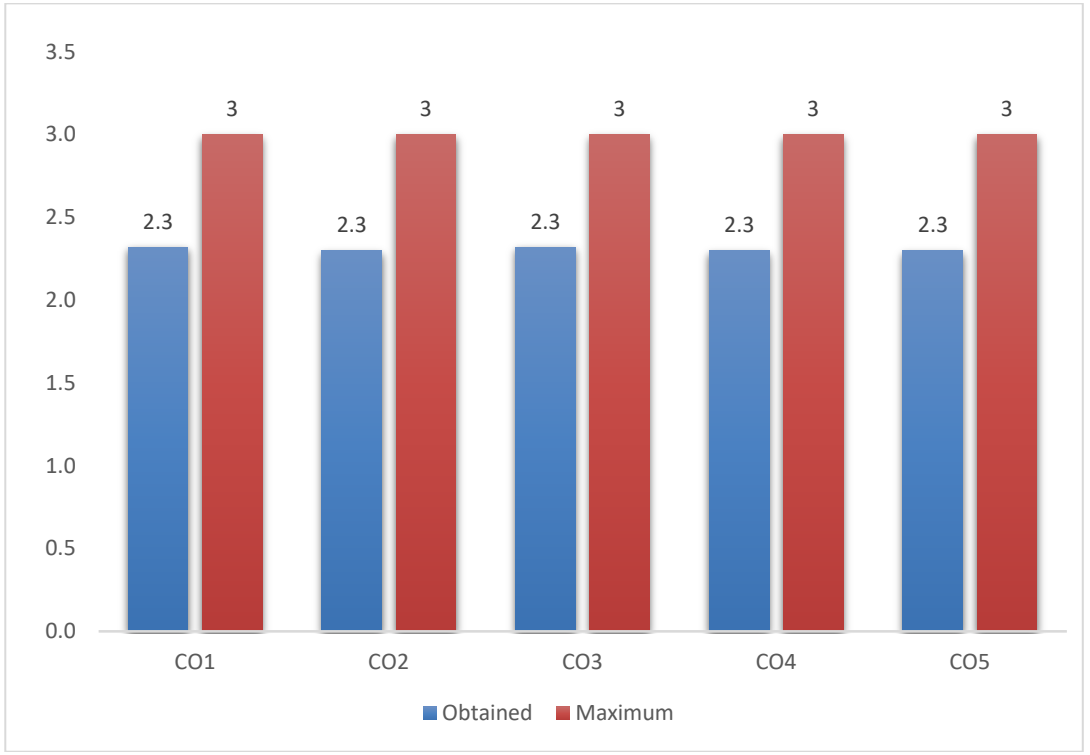
Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive
S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	77.8	2.0	2.8	80.6	2.0	2.0	2.3
CO2	100.0	3.0			100.0	3.0			100.0	3.0	77.8	2.0	2.8	80.6	2.0	2.0	2.3
CO3	100.0	3.0	97.2	3.0	100.0	3.0			100.0	3.0	77.8	2.0	2.8	80.6	2.0	2.0	2.3
CO4			97.2	3.0	100.0	3.0			100.0	3.0	77.8	2.0	2.8	80.6	2.0	2.0	2.3
CO5			97.2	3.0	100.0	3.0			100.0	3.0	77.8	2.0	2.8	80.6	2.0	2.0	2.3
																Average	Average
																2.0	2.308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3
CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.32		H 2.32		
CO2		H 2.3			
CO3				H 2.32	
CO4	H 2.3			H 2.3	
CO5	H 2.3				H 2.3
AVERAGE OF COS FOR POS	2.306666667	2.3	2.32	2.31	2.3
AVERAGE OF POS	2.302222	2.3	2.32	2.31	2.3
AVERAGE	2.306444444				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: FOOD MICROBIOLOGY(THEORY)
COURSE CODE: MFT13204
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.
PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.
PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.
PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.
PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products
PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet
PSO3.Devise research strategies for empowering and promoting healthy living in the community
PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	knowledge about the role and importance of quality control systems	II (UNDERSTAND)
CO2	Understand the techniques used to safeguard foods from several contaminants and make is safer for human consumption	IV(ANALYZE) I (REMEMBER)
CO3	Explain the application of food quality and food safety system	IV(ANALYZE)
CO4	Identify the hazard of the food chain to ensure food safety	IV(ANALYZE)
CO5	Review of legislative approaches for the management of food safety	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

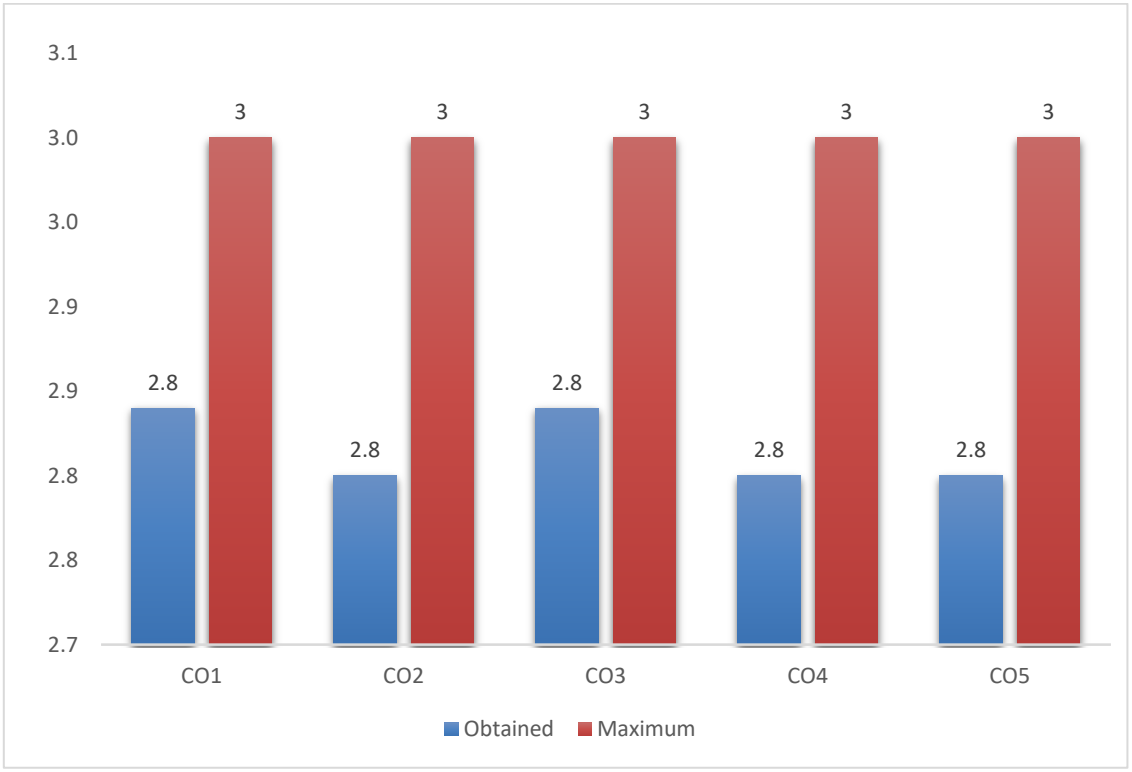
outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass%	Attainment level	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	pass %	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	72.2	1.0	2.6	86.1	3.0	3.0	2.8
CO2	100.0	3.0			100.0	3.0			100.0	3.0	72.2	1.0	2.5	86.1	3.0	3.0	2.8
CO3	100.0	3.0	88.9	3.0	100.0	3.0			100.0	3.0	72.2	1.0	2.6	86.1	3.0	3.0	2.8
CO4			88.9	3.0	100.0	3.0			100.0	3.0	72.2	1.0	2.5	86.1	3.0	3.0	2.8
CO5			88.9	3.0	100.0	3.0			100.0	3.0	72.2	1.0	2.5	86.1	3.0	3.0	2.8
																Average	Average
																3	2.816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2.8
2.8
2.8
2.8
2.8
CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.84		H 2.84		
CO2		H 2.8			
CO3				H 2.84	
CO4	H 2.8			H 2.8	
CO5	H 2.8				H 2.8
AVERAGE OF COS FOR POS	2.813333333	2.8	2.84	2.82	2.8
AVERAGE OF POS	2.804444	2.8	2.84	2.82	2.8
AVERAGE	2.812888889				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: FOOD PROCESS ENGINEERING-I (THEORY)
COURSE CODE: MFT13103
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Enumerate the units and dimensions of various physical quantities	II (UNDERSTAND)
CO2	Express the laws and theory of gases and vapours.	IV(ANALYZE) I (REMEMBER)
CO3	Describe the types and properties of fluid flow	IV(ANALYZE)
CO4	Calculate the material balance in food processing units	IV(ANALYZE)
CO5	Appraise the performance of processing units	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass%	Attainment level	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	83.3	2.0	2.8	58.3	0.0	0.0	1.1
CO2	100.0	3.0			100.0	3.0			100.0	3.0	83.3	2.0	2.8	58.3	0.0	0.0	1.1
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	83.3	2.0	2.8	58.3	0.0	0.0	1.1
CO4			100.0	3.0	100.0	3.0			100.0	3.0	83.3	2.0	2.8	58.3	0.0	0.0	1.1
CO5			100.0	3.0	100.0	3.0			100.0	3.0	83.3	2.0	2.8	58.3	0.0	0.0	1.1
																Average	Average
																0.0	1.108

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 1.12		H 1.12		
CO2		H 1.1			
CO3				H 1.12	
CO4	H 1.1			H 1.1	
CO5	H 1.1				H 1.1
AVERAGE OF COS FOR POS	1.106666667	1.1	1.12	1.11	1.1
AVERAGE OF POS	1.102222	1.1	1.12	1.11	1.1
AVERAGE	1.106444444				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: TECHNOLOGY OF FOOD PRESERVATION & PROCESSING
COURSE CODE: MFT19102
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.
PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.
PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.
PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.
PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in lifelong learning and work effectively as an individual and as amember of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products
PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet
PSO3.Devise research strategies for empowering and promoting healthy living in the community
PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	The basics of various food processing and preservation technologies.	II (UNDERSTAND)
CO2	Demonstrate an understanding of the principles and application of food processing and preservation technologies	IV(ANALYZE) I (REMEMBER)
CO3	Describe the technologies used to effect preservation	IV(ANALYZE)
CO4	Demonstrate an understanding of the basic unit and factory operations used in food processing**.**	IV(ANALYZE)
CO5	Evaluate processing technologies for their appropriate application	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	83.3	2.0			100.0	3.0	100.0	3.0	100.0	3.0	61.1	0.0	2.2	88.9	3.0	3.0	2.7
CO2	83.3	2.0			100.0	3.0			100.0	3.0	61.1	0.0	2.0	88.9	3.0	3.0	2.6
CO3	83.3	2.0	100.0	3.0	100.0	3.0			100.0	3.0	61.1	0.0	2.2	88.9	3.0	3.0	2.7
CO4			100.0	3.0	100.0	3.0			100.0	3.0	61.1	0.0	2.3	88.9	3.0	3.0	2.7
CO5			100.0	3.0	100.0	3.0			100.0	3.0	61.1	0.0	2.3	88.9	3.0	3.0	2.7
																Average	Average
																3	2.672

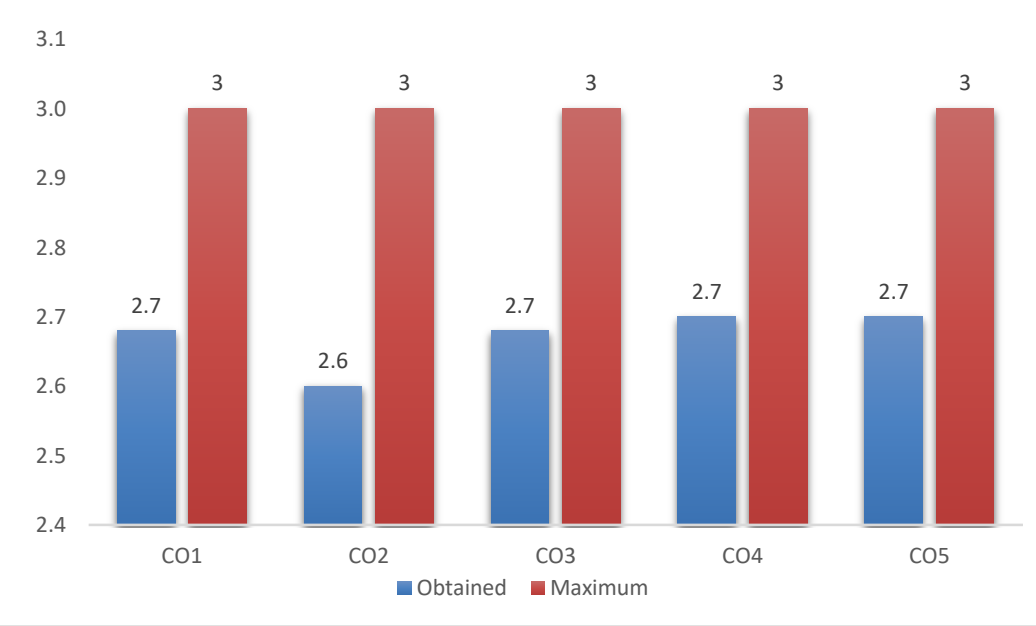


Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.68		H 2.68		
CO2		H 2.6			
CO3				H 2.68	
CO4	H 2.7			H 2.7	
CO5	H 2.7				H 2.7
AVERAGE OF COS FOR POS	2.693333333	2.6	2.68	2.69	2.7
AVERAGE OF POS	2.697778	2.6	2.68	2.69	2.7
AVERAGE	2.673555556				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: TECHNOLOGY OF ANIMAL BASED & FOOD PRODUCTS (THEORY)
COURSE CODE: MFT13104
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :
PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.
PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.
PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.
PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.
PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs
PSO1: Formulate environment friendly innovative food products
PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet
PSO3.Devise research strategies for empowering and promoting healthy living in the community
PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Understand the technology for raw material characteristics, handling, processing, and preservation.	II (UNDERSTAND)
CO2	Grasp by-product utilization of meat, poultry, fish and egg products.	IV(ANALYZE) I (REMEMBER)
CO3	Apprehend the hygiene, sanitation and mechanized practices of meat, fish, poultry and egg industry	IV(ANALYZE)
CO4	Comprehend the food standards in relation to these food commodities. Prepare various value-added products	IV(ANALYZE)
CO5	Perceive the knowledge regarding transportation and storage practices.	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	pass %	Attainment level	pass %	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	83.3	2.0			100.0	3.0	100.0	3.0	100.0	3.0	63.9	0.0	2.2	97.2	3.0	3.0	2.7
CO2	83.3	2.0			100.0	3.0			100.0	3.0	63.9	0.0	2.0	97.2	3.0	3.0	2.6
CO3	83.3	2.0	100.0	3.0	100.0	3.0			100.0	3.0	63.9	0.0	2.2	97.2	3.0	3.0	2.7
CO4			100.0	3.0	100.0	3.0			100.0	3.0	63.9	0.0	2.3	97.2	3.0	3.0	2.7
CO5			100.0	3.0	100.0	3.0			100.0	3.0	63.9	0.0	2.3	97.2	3.0	3.0	2.7
																Average	Average
																3	2.672

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.68		H 2.68		
CO2		H 2.6			
CO3				H 2.68	
CO4	H 2.7			H 2.7	
CO5	H 2.7				H 2.7
AVERAGE OF COS FOR POS	2.693333333	2.6	2.68	2.69	2.7
AVERAGE OF POS	2.697778	2.6	2.68	2.69	2.7
AVERAGE	2.673555556				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: ADVANCES IN FOOD PACKAGING
COURSE CODE: MFT13304
CREDITS: 4

DEPARTMENT: M.SC FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in lifelong learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	knowledge about the importance of packaging and understand different techniques involved in packing foods	II (UNDERSTAND)
CO2	Explain roles of shelf life of foods.	IV(ANALYZE) I (REMEMBER)
CO3	Explains about properties of different packaging materials	IV(ANALYZE)
CO4	Explains the latest packaging techniques like active packaging, intelligent packaging	IV(ANALYZE)
CO5	Demonstrates the interaction between food and packaging material Demonstrates the interaction between food and packaging material	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

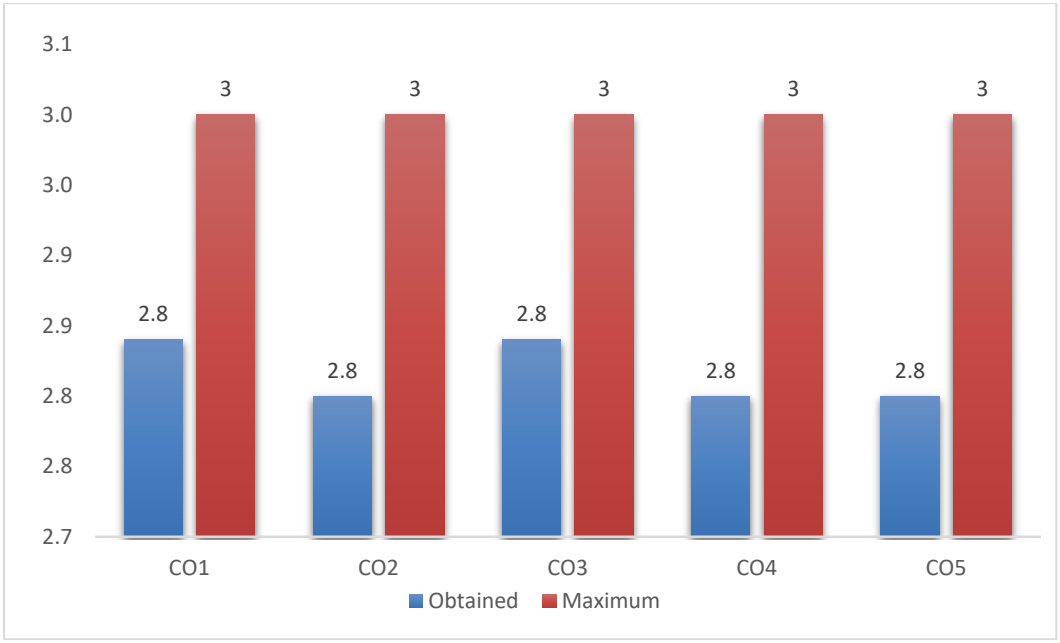
outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	**H**		**H**						**H**
C02		**H**		**S**			**S**		**H**
C03	**S**			**H**					**S**
C04	**H**			**H**			**H**		
C05	**H**				**H**	**S**	**H**		

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	pass %	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	74.3	1.0	2.6	97.1	3.0	3.0	2.8
CO2	100.0	3.0			100.0	3.0			100.0	3.0	74.3	1.0	2.5	97.1	3.0	3.0	2.8
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	74.3	1.0	2.6	97.1	3.0	3.0	2.8
CO4			100.0	3.0	100.0	3.0			100.0	3.0	74.3	1.0	2.5	97.1	3.0	3.0	2.8
CO5			100.0	3.0	100.0	3.0			100.0	3.0	74.3	1.0	2.5	97.1	3.0	3.0	2.8
																Average	Average
																3	2.816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CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.84		H 2.84		
CO2		H 2.8			
CO3				H 2.84	
CO4	H 2.8			H 2.8	
CO5	H 2.8				H 2.8
AVERAGE OF COS FOR POS	2.813333333	2.8	2.84	2.82	2.8
AVERAGE OF POS	2.804444	2.8	2.84	2.82	2.8
AVERAGE	2.812888889				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: ENERGY CONSERVATION AND AUDITING
COURSE CODE: MFT13306
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.
PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.
PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.
PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.
PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products
PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet
PSO3.Devise research strategies for empowering and promoting healthy living in the community
PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge on principles of milling and baking science	II (UNDERSTAND)
CO2	learn the measures taken to conserve energy from being wasted to provide it for future industrial growth.	IV(ANALYZE) I (REMEMBER)
CO3	Understands about the thermal efficiency by designing suitable systems for heat recovery & co-generation.	IV(ANALYZE)
CO4	To analyse & optimize the energy consumption in an organization	IV(ANALYZE)
CO5	Understand how to conduct the Cost Benefit Analysis	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	pass %	Attainment level	pass%	Attainment level	pass %	Attainment level	co wise internal average	pass %	Attainment level	co wise external average	co wise total average
CO1	97.1	3.0			100.0	3.0	100.0	3.0	100.0	3.0	57.1	0.0	2.4	80.0	2.0	2.0	2.2
CO2	97.1	3.0			100.0	3.0			100.0	3.0	57.1	0.0	2.3	80.0	2.0	2.0	2.1
CO3	97.1	3.0	100.0	3.0	100.0	3.0			100.0	3.0	57.1	0.0	2.4	80.0	2.0	2.0	2.2
CO4			100.0	3.0	100.0	3.0			100.0	3.0	57.1	0.0	2.3	80.0	2.0	2.0	2.1
CO5			100.0	3.0	100.0	3.0			100.0	3.0	57.1	0.0	2.3	80.0	2.0	2.0	2.1
																Average	Average
																2	2.124

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.16		H 2.16		
CO2		H 2.1			
CO3				H 2.16	
CO4	H 2.1			H 2.1	
CO5	H 2.1				H 2.1
AVERAGE OF COS FOR POS	2.12	2.1	2.16	2.13	2.1
AVERAGE OF POS	2.106667	2.1	2.16	2.13	2.1
AVERAGE	2.119333333				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: EXTRUSION TECHNOLOGY
COURSE CODE: MFT13303
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge about the technology involved in the development of varied extruded products.	II (UNDERSTAND)
CO2	Demonstrate the extraction process and identify different part of extruder.	IV(ANALYZE) I (REMEMBER)
CO3	Explain cereal based and breakfast cereal product	IV(ANALYZE)
CO4	Demonstrate packaging of cereal based extruded product.	IV(ANALYZE)
CO5	Demonstrate the factors affecting extrusion cooking**.**	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

Co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO 1	97.1	3.0			100.0	3.0	100.0	3.0	100.0	3.0	71.4	1.0	2.6	94.3	3.0	3.0	2.8
CO 2	97.1	3.0			100.0	3.0			100.0	3.0	71.4	1.0	2.5	94.3	3.0	3.0	2.8
CO 3	97.1	3.0	100.0	3.0	100.0	3.0			100.0	3.0	71.4	1.0	2.6	94.3	3.0	3.0	2.8
CO 4			100.0	3.0	100.0	3.0			100.0	3.0	71.4	1.0	2.5	94.3	3.0	3.0	2.8
CO 5			100.0	3.0	100.0	3.0			100.0	3.0	71.4	1.0	2.5	94.3	3.0	3.0	2.8
																Average	Average
																3	2.816

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.84		H 2.84		
CO2		H 2.8			
CO3				H 2.84	
CO4	H 2.8			H 2.8	
CO5	H 2.8				H 2.8
AVERAGE OF COS FOR POS	2.813333333	2.8	2.84	2.82	2.8
AVERAGE OF POS	2.804444	2.8	2.84	2.82	2.8
AVERAGE	2.812888889				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: FOOD QUALITY SYSTEMS & MANAGEMENT
COURSE CODE: MFT13305
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	knowledge about the role and importance of quality control systems	II (UNDERSTAND)
CO2	Understand the techniques used to safeguard foods from several contaminants and make is safer for human consumption	IV(ANALYZE) I (REMEMBER)
CO3	Explain the application of food quality and food safety system	IV(ANALYZE)
CO4	Identify the hazard of the food chain to ensure food safety	IV(ANALYZE)
CO5	Review of legislative approaches for the management of food safety	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass%	Attainment level	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	pass %	Attainment level	pass %	Attainment level	co wise internal average	pass %	Attainment level	co wise external average	co wise total average
CO1	94.3	3.0			100.0	3.0	100.0	3.0	100.0	3.0	68.6	1.0	2.6	97.1	3.0	3.0	2.8
CO2	94.3	3.0			100.0	3.0			100.0	3.0	68.6	1.0	2.5	97.1	3.0	3.0	2.8
CO3	94.3	3.0	94.3	3.0	100.0	3.0			100.0	3.0	68.6	1.0	2.6	97.1	3.0	3.0	2.8
CO4			94.3	3.0	100.0	3.0			100.0	3.0	68.6	1.0	2.5	97.1	3.0	3.0	2.8
CO5			94.3	3.0	100.0	3.0			100.0	3.0	68.6	1.0	2.5	97.1	3.0	3.0	2.8
																Average	Average
																3	2.816

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.84		H 2.84		
CO2		H 2.8			
CO3				H 2.84	
CO4	H 2.8			H 2.8	
CO5	H 2.8				H 2.8
AVERAGE OF COS FOR POS	2.813333333	2.8	2.84	2.82	2.8
AVERAGE OF POS	2.804444	2.8	2.84	2.82	2.8
AVERAGE	2.812888889				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: TECHNOLOGY OF F00D FERMENTATION
COURSE CODE: MFT13302
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Understanding about the levels of fermentation and its impact on food development.	II (UNDERSTAND)
CO2	To study the cell growth and product formation	IV(ANALYZE) I (REMEMBER)
CO3	To evaluate the kinetics and mechanism of microbial growth	IV(ANALYZE)
CO4	Highlights the application of fermentation in food technology industry	IV(ANALYZE)
CO5	Knowledge on purpose and functions of fermented foods	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	94.4	3.0	3.0	88.9	3.0	3.0	3.0
CO2	100.0	3.0			100.0	3.0			100.0	3.0	94.4	3.0	3.0	88.9	3.0	3.0	3.0
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	94.4	3.0	3.0	88.9	3.0	3.0	3.0
CO4			100.0	3.0	100.0	3.0			100.0	3.0	94.4	3.0	3.0	88.9	3.0	3.0	3.0
CO5			100.0	3.0	100.0	3.0			100.0	3.0	94.4	3.0	3.0	88.9	3.0	3.0	3.0
																Average	Average
																3.0	3.0

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 3		H 3		
CO2		H 3			
CO3				H 3	
CO4	H 3			H 3	
CO5	H 3				H 3
AVERAGE OF COS FOR POS	3	3	3	3	3
AVERAGE OF POS	3	3	3	3	3
AVERAGE	3				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: TECHNOLOGY OF SUGAR CONFECTIONARY & CHOCOLATE PROCESSING
COURSE CODE: MFT13302 (B)
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

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PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	knowledge about the role of confectionery industry	II (UNDERSTAND)
CO2	learn the processing techniques of several Indian confectioneries.	IV(ANALYZE) I (REMEMBER)
CO3	Lists the characteristics and functions of each ingredients used.	IV(ANALYZE)
CO4	Study includes preparation of candies, toffees, chocolates.	IV(ANALYZE)
CO5	Demonstrate working knowledge of Chocolate and Sugar confectionery.	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	94.1	3.0	3.0	100.0	3.0	3.0	3.0
CO2	100.0	3.0			100.0	3.0			100.0	3.0	94.1	3.0	3.0	100.0	3.0	3.0	3.0
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	94.1	3.0	3.0	100.0	3.0	3.0	3.0
CO4			100.0	3.0	100.0	3.0			100.0	3.0	94.1	3.0	3.0	100.0	3.0	3.0	3.0
CO5			100.0	3.0	100.0	3.0			100.0	3.0	94.1	3.0	3.0	100.0	3.0	3.0	3.0
																Average	Average
																3	3

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 3		H 3		
CO2		H 3			
CO3				H 3	
CO4	H 3			H 3	
CO5	H 3				H 3
AVERAGE OF COS FOR POS	3	3	3	3	3
AVERAGE OF POS	3	3	3	3	3
AVERAGE	3				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: FOOD PROCESS ENGINEERING-II (THEORY)
COURSE CODE: MFT13204
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

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PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	**BLOOM'S TAXONOMY LEVEL**
CO1	Explain the Basic Principles of Material Balances	II (UNDERSTAND)
CO2	Explain the Basic Principles of Energy Balances and Heat properties	IV(ANALYZE) I (REMEMBER)
CO3	Analyze the concept of Thermodynamics	IV(ANALYZE)
CO4	Judge the changes in thermodynamic properties associated with work and heat	IV(ANALYZE)
CO5	Distinguish various Rheological & Colligative properties of food materials	II (UNDERSTAND)

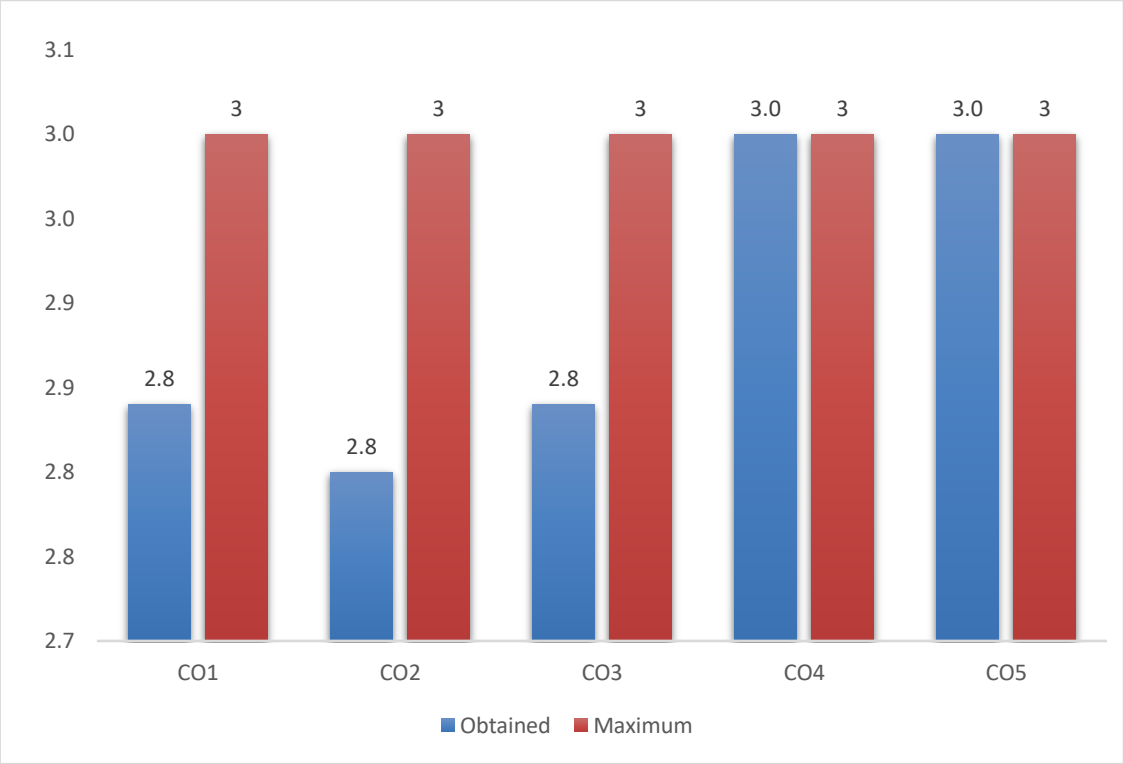
Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H						H
C02		H		S			S		H
C03	S			H					S
C04	H			H			H		
C05	H				H	S	H		

H: Highly Supportive **S: Supportive**

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	65.7	1.0			100.0	3.0	100.0	3.0	100.0	3.0	100.0	3.0	2.6	97.1	3.0	3.0	2.8
CO2	65.7	1.0			100.0	3.0			100.0	3.0	100.0	3.0	2.5	97.1	3.0	3.0	2.8
CO3	65.7	1.0	88.6	3.0	100.0	3.0			100.0	3.0	100.0	3.0	2.6	97.1	3.0	3.0	2.8
CO4			88.6	3.0	100.0	3.0			100.0	3.0	100.0	3.0	3.0	97.1	3.0	3.0	3.0
CO5			88.6	3.0	100.0	3.0			100.0	3.0	100.0	3.0	3.0	97.1	3.0	3.0	3.0
																AVERAGE	AVERAGE
																3	2.896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CO1
CO2
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CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.84		H 2.84		
CO2		H 2.8			
CO3				H 2.84	
CO4	H 3			H 3	
CO5	H 3				H 3
AVERAGE OF COS FOR POS	2.946666667	2.8	2.84	2.92	3
AVERAGE OF POS	2.982222	2.8	2.84	2.92	3
AVERAGE	2.908444444				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: POST HARVEST TECHNOLOGY OF PLANTATION CROPS
COURSE CODE: MFT13202
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	**BLOOM'S TAXONOMY LEVEL**
CO1	Explain the Basic Principles of Material Balances	II (UNDERSTAND)
CO2	Explain the Basic Principles of Energy Balances and Heat properties	IV(ANALYZE) I (REMEMBER)
CO3	Analyze the concept of Thermodynamics	IV(ANALYZE)
CO4	Judge the changes in thermodynamic properties associated with work and heat	IV(ANALYZE)
CO5	Distinguish various Rheological & Colligative properties of food materials	II (UNDERSTAND)

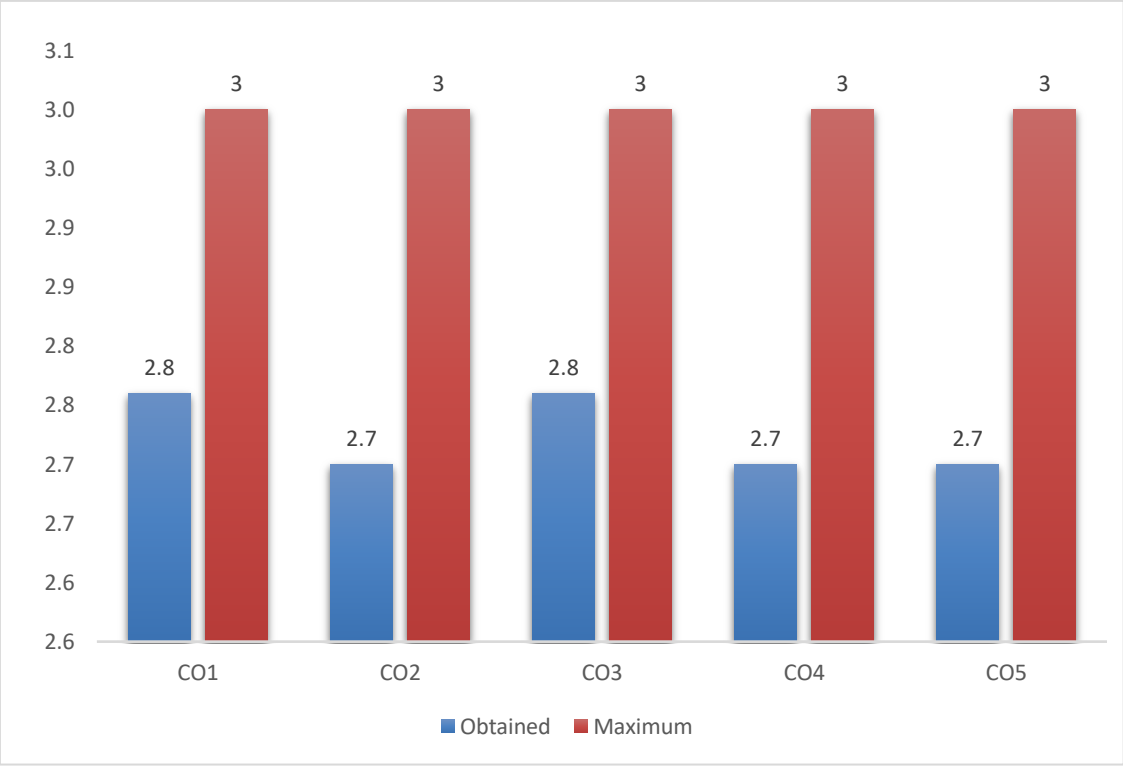
Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H				S	H			S
C02		H	S				S	H	
C03	H			H		H			H
C04		H	S				H		
C05	H					S			

H: Highly Supportive **S: Supportive**

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	co wise internal average	pass %	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	54.3	0.0	2.4	97.1	3.0	3.0	2.8
CO2	100.0	3.0			100.0	3.0			100.0	3.0	54.3	0.0	2.3	97.1	3.0	3.0	2.7
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	54.3	0.0	2.4	97.1	3.0	3.0	2.8
CO4			100.0	3.0	100.0	3.0			100.0	3.0	54.3	0.0	2.3	97.1	3.0	3.0	2.7
CO5			100.0	3.0	100.0	3.0			100.0	3.0	54.3	0.0	2.3	97.1	3.0	3.0	2.7
																AVERAGE	AVERAGE
																3	2.724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CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.76				
CO2		H 2.7			
CO3	H 2.76			H 2.76	
CO4		H 2.7			
CO5	H 2.7				
AVERAGE OF COS FOR POS	2.74	2.7		2.76	
AVERAGE OF POS	2.733333	2.7		2.76	
AVERAGE	2.731111111				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: RESEARCH METHODOLOGY
COURSE CODE: MFT19203
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication**: Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4**: Development of Skill and Attitude:** Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility:** Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Explain the procedures and prerequisites for research	II (UNDERSTAND)
CO2	Describe the process of research design	I (REMEMBER)
CO3	Determine the methods of data collection	IV (ANALYZE)
CO4	Distinguish various sampling techniques	II (UNDERSTAND)
CO5	Demonstrate various methods for measuring attitude for data processing and report writing	I (REMEMBER)

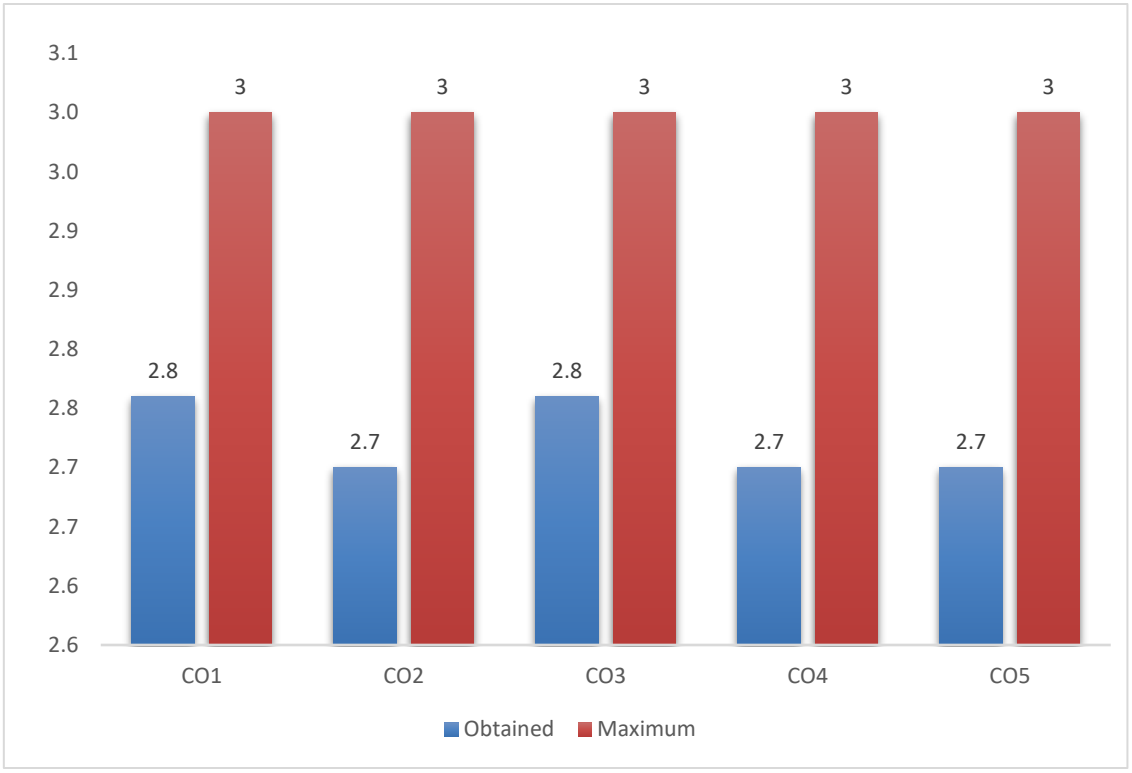
Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H			S	H	H		S	
C02	H			S		H		S	
C03		H	H				H		
C04				H	S				H
C05	H			S					H

H: Highly Supportive **S: Supportive**

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	pass%	Attainment level	pass %	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	97.1	3.0			100.0	3.0	100.0	3.0	100.0	3.0	54.3	0.0	2.4	100.0	3.0	3.0	2.8
CO2	97.1	3.0			100.0	3.0			100.0	3.0	54.3	0.0	2.3	100.0	3.0	3.0	2.7
CO3	97.1	3.0	100.0	3.0	100.0	3.0			100.0	3.0	54.3	0.0	2.4	100.0	3.0	3.0	2.8
CO4			100.0	3.0	100.0	3.0			100.0	3.0	54.3	0.0	2.3	100.0	3.0	3.0	2.7
CO5			100.0	3.0	100.0	3.0			100.0	3.0	54.3	0.0	2.3	100.0	3.0	3.0	2.7
																AVERAGE	AVERAGE
																3	2.724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CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.76				H 2.76
CO2	H 2.7				
CO3		H 2.76	H 2.76		
CO4				H 2.7	
CO5	H 2.7				
AVERAGE OF COS FOR POS	2.72	2.76	2.76	2.7	2.76
AVERAGE OF POS	2.706667	2.76	2.76	2.7	2.76
AVERAGE	2.737333333				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: TECHNOLOGY OF CEREALS & MILLING
COURSE CODE: MFT19206
CREDITS: 4

DEPARTMENT: M.SC FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES Or POs :

PO1: **Scientific Knowledge:** Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3:**Effective communication** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude:** Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSO

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Explain the criteria of wheat flour quality and dough rheology	IV (ANALYZE)
CO2	Classify the structure and composition of grains	IV (ANALYZE)
CO3	**Identify** the Manufacturing practices of flour	III(APPLY)
CO4	**Describe** the general technical aspects of confectionery and its raw materials	IV (ANALYZE)
CO5	**Identify** the Manufacturing practices of sugar confectionery products	II (UNDERSTAND)

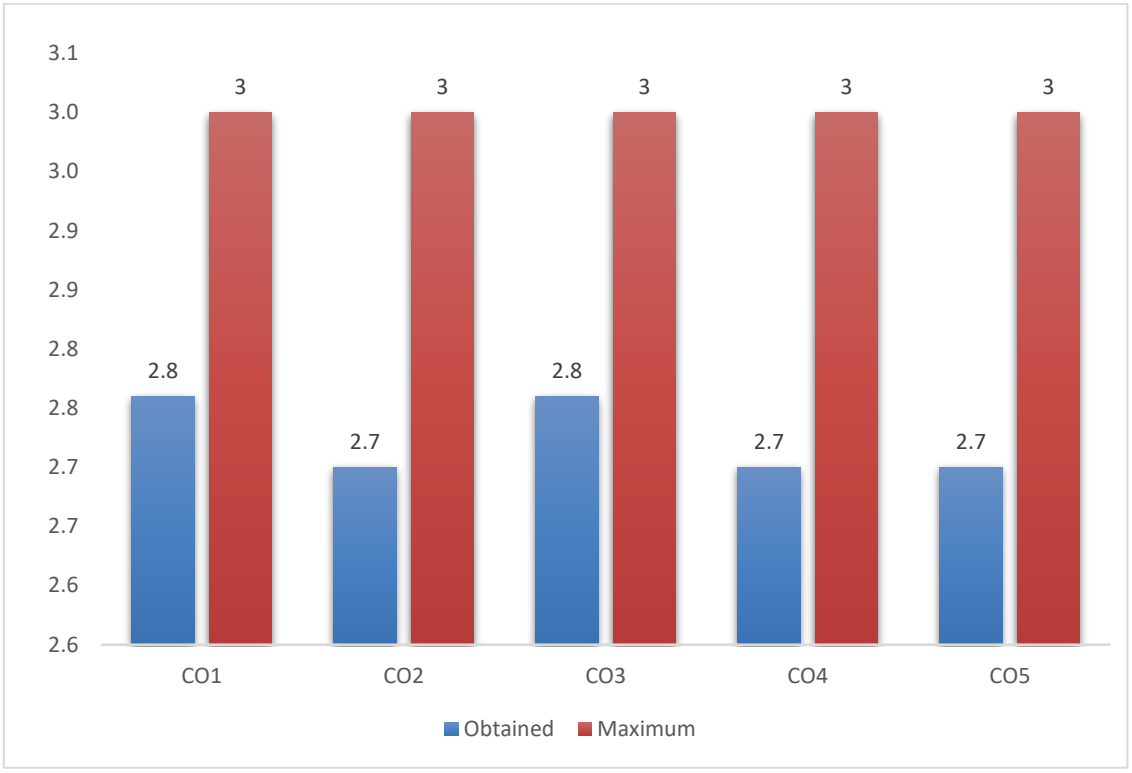
Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		H		S	H	H		S
C02	H			H			H	S	
C03		H	S		H	H			H
C04	H			S			H		
C05	H				S	S			

H: Highly Supportive **S: Supportive**

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass%	Attainment level	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	pass %	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	31.4	0.0	2.4	97.1	3.0	3.0	2.8
CO2	100.0	3.0			100.0	3.0			100.0	3.0	31.4	0.0	2.3	97.1	3.0	3.0	2.7
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	31.4	0.0	2.4	97.1	3.0	3.0	2.8
CO4			100.0	3.0	100.0	3.0			100.0	3.0	31.4	0.0	2.3	97.1	3.0	3.0	2.7
CO5			100.0	3.0	100.0	3.0			100.0	3.0	31.4	0.0	2.3	97.1	3.0	3.0	2.7
																AVERAGE	AVERAGE
																3	2.724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CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.76		H 2.76		
CO2	H 2.7			H 2.7	
CO3		H 2.76			H 2.76
CO4	H 2.7				
CO5	H 2.7				
AVERAGE OF COS FOR POS	2.715	2.76	2.76	2.7	2.76
AVERAGE OF POS	2.70375	2.76	2.76	2.7	2.76
AVERAGE	2.73675				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: INSTRUMENTAL METHODS OF FOOD ANALYSIS
COURSE CODE: MFT13205
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :
PO1: **Scientific Knowledge:** Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.
PO2: **Problem Analysis:**Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.
PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.
PO4: **Development of Skill and Attitude:** Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.
PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs
PSO1: Formulate environment friendly innovative food products
PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet
PSO3.Devise research strategies for empowering and promoting healthy living in the community
PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	**BLOOM'S TAXONOMY LEVEL**
CO1	Explain the calibration and standardization of different instruments	I (REMEMBER)
CO2	Analyse different sectroscopic and Refracto metric techniques	IV (ANALYZE)
CO3	Distinguish various microscopic techniques in food analysis	II (UNDERSTAND)
CO4	Distinguish various chromatographic techniques in food analysis	II (UNDERSTAND)
CO5	Generalize various Separation techniques in food analysis	IV (ANALYZE)

Table 1: CO, PO, PSO MAPPING

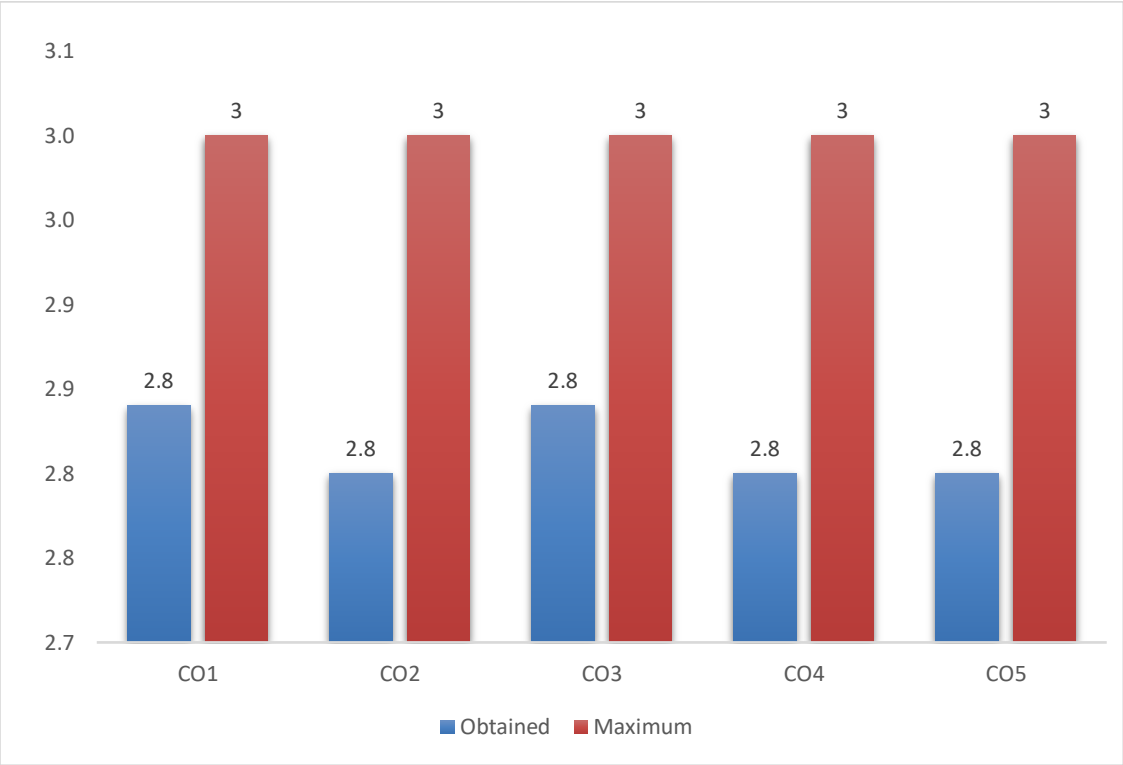
outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H				S			S	H
C02		H		H		H		H	
C03	H		S		H		H		
C04	H		H	H				H	
C05		H				S			H

H: Highly Supportive **S: Supportive**

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	co wise internal average	pass %	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	68.6	1.0	2.6	97.1	3.0	3.0	2.8
CO2	100.0	3.0			100.0	3.0			100.0	3.0	68.6	1.0	2.5	97.1	3.0	3.0	2.8
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	68.6	1.0	2.6	97.1	3.0	3.0	2.8
CO4			100.0	3.0	100.0	3.0			100.0	3.0	68.6	1.0	2.5	97.1	3.0	3.0	2.8

CO5			100.0	3.0	100.0	3.0			100.0	3.0	68.6	1.0	2.5	97.1	3.0	3.0	2.8
																AVERAGE	AVERAGE
																3	2.816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CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.84				
CO2		H 2.8		H 2.8	
CO3	H 2.84				H 2.84
CO4	H 2.8		H 2.8	H 2.8	
CO5		H 2.8			
AVERAGE OF COS FOR POS	2.826666667	2.8	2.8	2.8	2.84
AVERAGE OF POS	2.822222	2.8	2.8	2.8	2.84
AVERAGE	2.812444444				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: FOOD SUPPLY AND COLD CHAIN MANAGEMENT
COURSE CODE: MFT13404
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES Or POs :

PO1: **Scientific Knowledge:** Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3:**Effective communication** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude:** Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSO

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Explain the criteria of wheat flour quality and dough rheology	IV (ANALYZE)
CO2	Classify the structure and composition of grains	IV (ANALYZE)
CO3	**Identify** the Manufacturing practices of flour	III(APPLY)
CO4	**Describe** the general technical aspects of confectionery and its raw materials	IV (ANALYZE)
CO5	**Identify** the Manufacturing practices of sugar confectionery products	II (UNDERSTAND)

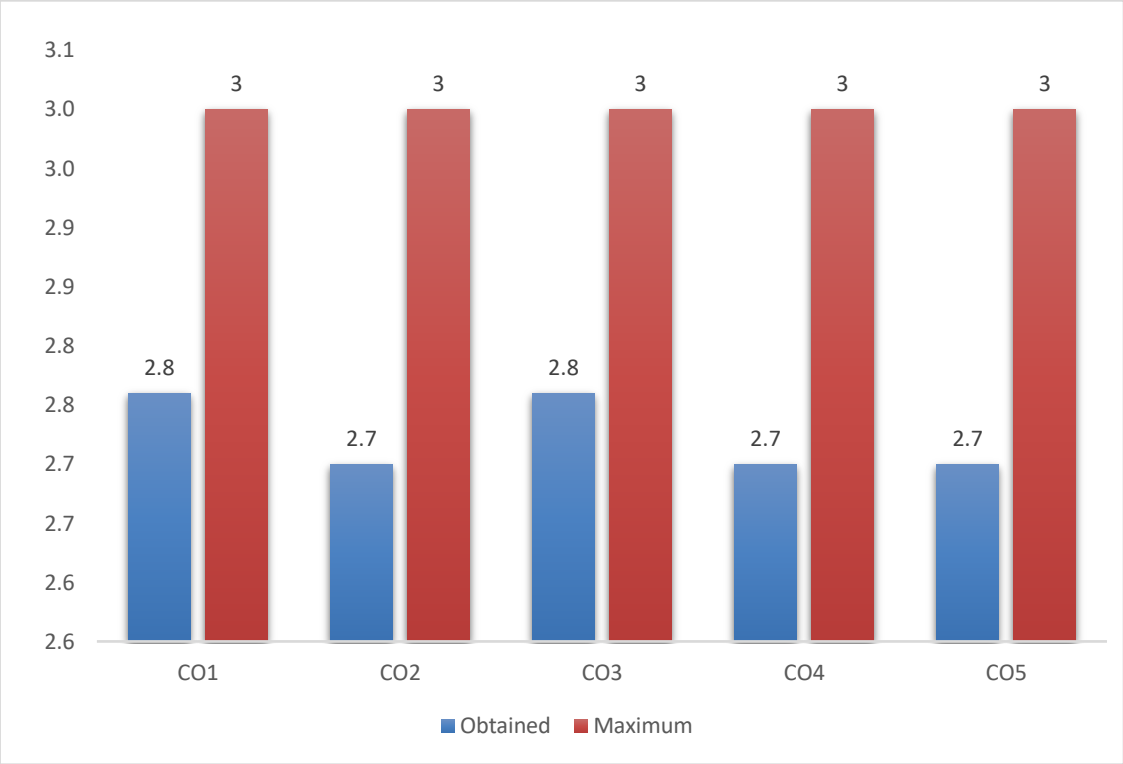
Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01			H	S				H	H
C02	H	S			S	S	H		
C03				H	H		H		S
C04	H	H		S		S		H	
C05	H		H	H					H

H: Highly Supportive S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	co wise internal average	pass %	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	28.6	0.0	2.4	85.7	3.0	3.0	2.8
CO2	100.0	3.0			100.0	3.0			100.0	3.0	28.6	0.0	2.3	85.7	3.0	3.0	2.7
CO3	100.0	3.0	97.1	3.0	100.0	3.0			100.0	3.0	28.6	0.0	2.4	85.7	3.0	3.0	2.8
CO4			97.1	3.0	100.0	3.0			100.0	3.0	28.6	0.0	2.3	85.7	3.0	3.0	2.7
CO5			97.1	3.0	100.0	3.0			100.0	3.0	28.6	0.0	2.3	85.7	3.0	3.0	2.7
																AVERAGE	AVERAGE
																3	2.724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CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1			H 2.76		
CO2	H 2.7				
CO3				H 2.76	H 2.76
CO4	H 2.7	H 2.7			
CO5	H 2.7		H 2.7	H 2.7	
AVERAGE OF COS FOR POS	2.7	2.7	2.73	2.73	2.76
AVERAGE OF POS	2.7	2.7	2.715	2.73	2.76
AVERAGE	2.721				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: FOOD TOXICOLOGY
COURSE
CODE:MFT13403B
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES Or POs :

PO1: **Scientific Knowledge:** Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3:**Effective communication** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude:** Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSO

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Explain the criteria of wheat flour quality and dough rheology	IV (ANALYZE)
CO2	Classify the structure and composition of grains	IV (ANALYZE)
CO3	**Identify** the Manufacturing practices of flour	III(APPLY)
CO4	**Describe** the general technical aspects of confectionery and its raw materials	IV (ANALYZE)
CO5	**Identify** the Manufacturing practices of sugar confectionery products	II (UNDERSTAND)

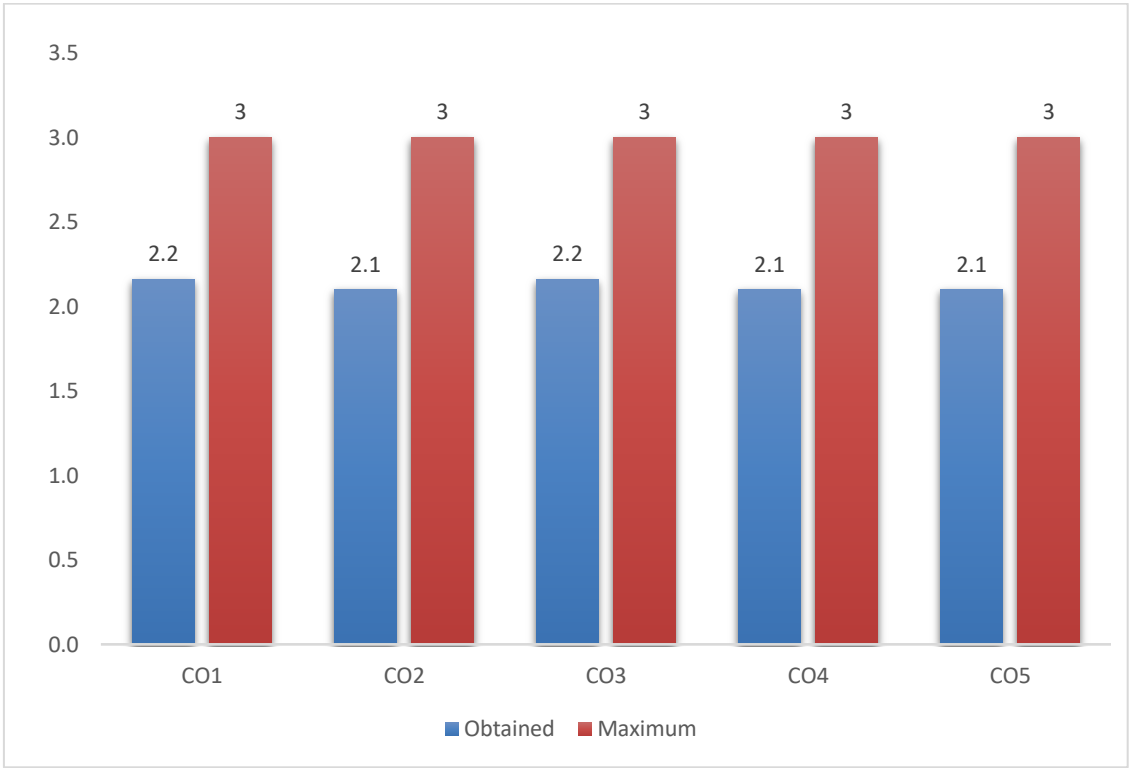
Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H		S		H		S	H	H
C02	H	H	H			S			
C03		H	S	H	S	H	S	H	H
C04	H				H				S
C05	H	S	H	H		S	H	H	

H: Highly Supportive S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	21.1	0.0	2.4	78.9	2.0	2.0	2.2
CO2	100.0	3.0			100.0	3.0			100.0	3.0	21.1	0.0	2.3	78.9	2.0	2.0	2.1
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	21.1	0.0	2.4	78.9	2.0	2.0	2.2
CO4			100.0	3.0	100.0	3.0			100.0	3.0	21.1	0.0	2.3	78.9	2.0	2.0	2.1
CO5			100.0	3.0	100.0	3.0			100.0	3.0	21.1	0.0	2.3	78.9	2.0	2.0	2.1
																AVERAGE	AVERAGE
																2	2.124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CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.16				H 2.16
CO2	H 2.1	H 2.1	H 2.1		
CO3		H 2.16		H 2.16	
CO4	H 2.1				H 2.1
CO5	H 2.1		H 2.1	H 2.1	
AVERAGE OF COS FOR POS	2.115	2.13	2.1	2.13	2.13
AVERAGE OF POS	2.10375	2.13	2.1	2.13	2.115
AVERAGE	2.11575				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: NUTRACEUTICALS and FUNCTIONAL FOODS
COURSE CODE: MFT19403A
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES Or POs :

PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude**: Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	**BLOOM'S TAXONOMY LEVEL**
CO1	Explain the Basic Principles of Material Balances	II (UNDERSTAND)
CO2	Explain the Basic Principles of Energy Balances and Heat properties	IV(ANALYZE) I (REMEMBER)
CO3	Analyze the concept of Thermodynamics	IV(ANALYZE)
CO4	Judge the changes in thermodynamic properties associated with work and heat	IV(ANALYZE)
CO5	Distinguish various Rheological & Colligative properties of food materials	II (UNDERSTAND)

Table 1: CO, PO, PSO MAPPING

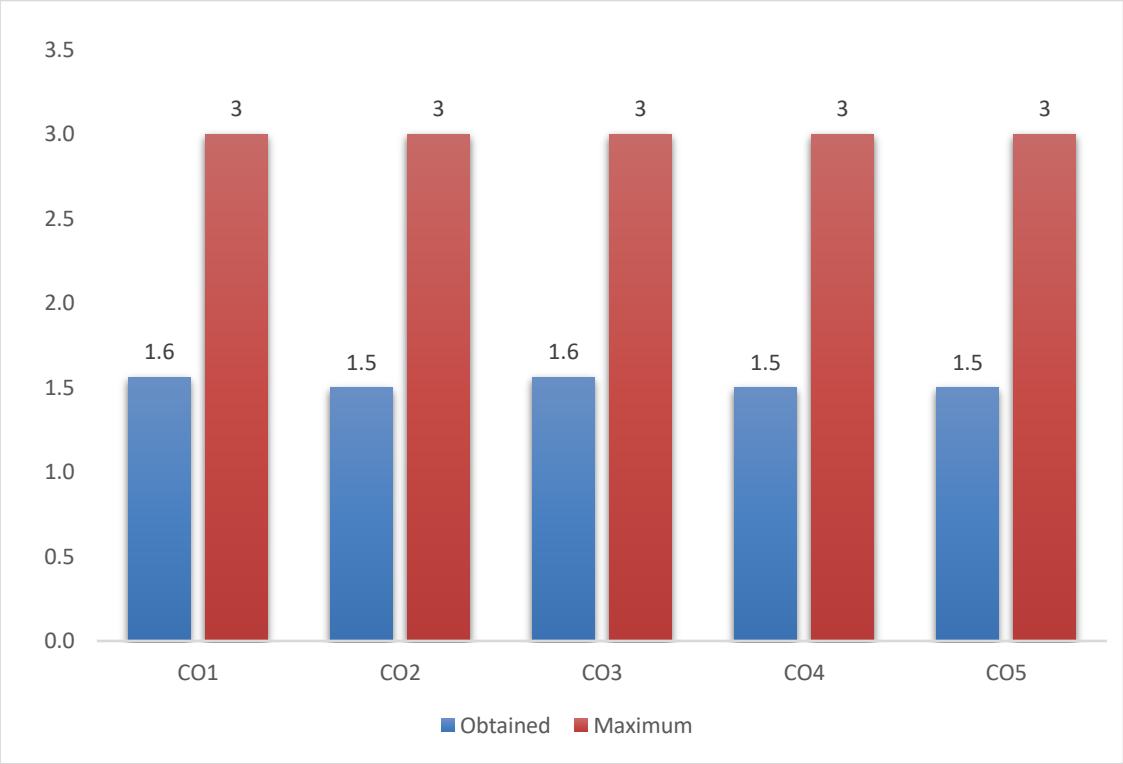
outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01			H	S			H		S
C02	H	S		H		S	H	H	
C03	H		S		H			S	H
C04		H				H			
C05	S		H	H	S				H

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	co wise internal average	pass %	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	12.5	0.0	2.4	68.8	1.0	1.0	1.6
CO2	100.0	3.0			100.0	3.0			100.0	3.0	12.5	0.0	2.3	68.8	1.0	1.0	1.5
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	12.5	0.0	2.4	68.8	1.0	1.0	1.6
CO4			100.0	3.0	100.0	3.0			100.0	3.0	12.5	0.0	2.3	68.8	1.0	1.0	1.5
CO5			100.0	3.0	100.0	3.0			100.0	3.0	12.5	0.0	2.3	68.8	1.0	1.0	1.5
																AVERAGE	AVERAGE
																1	1.524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CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1			H 1.56		
CO2	H 1.5			H 1.5	
CO3	H 1.56				H 1.56
CO4		H 1.5			
CO5			H 1.5	H 1.5	
AVERAGE OF COS FOR POS	1.53	1.5	1.53	1.5	1.56
AVERAGE OF POS	1.53	1.5	1.515	1.5	1.56
AVERAGE	1.521				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: N U T R I T I O N F O R H E A L T H a n d F I T N E S S
COURSE CODE: MFSN20402
CREDITS: 4

DEPARTMENT: M.SC FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES Or POs :
PO1: **Scientific Knowledge**: Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.
PO2: **Problem Analysis**: Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.
PO3: **Effective Communication**: Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.
PO4**: Development of Skill and Attitude:** Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.
PO5: **Life Long Learning and Social Responsibility:** Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs
PSO1: Formulate environment friendly innovative food products
PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet
PSO3.Devise research strategies for empowering and promoting healthy living in the community
PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Explain the procedures and prerequisites for research	II (UNDERSTAND)
CO2	Describe the process of research design	I (REMEMBER)
CO3	Determine the methods of data collection	IV (ANALYZE)
CO4	Distinguish various sampling techniques	II (UNDERSTAND)
CO5	Demonstrate various methods for measuring attitude for data processing and report writing	I (REMEMBER)

Table 1: CO, PO, PSO MAPPING

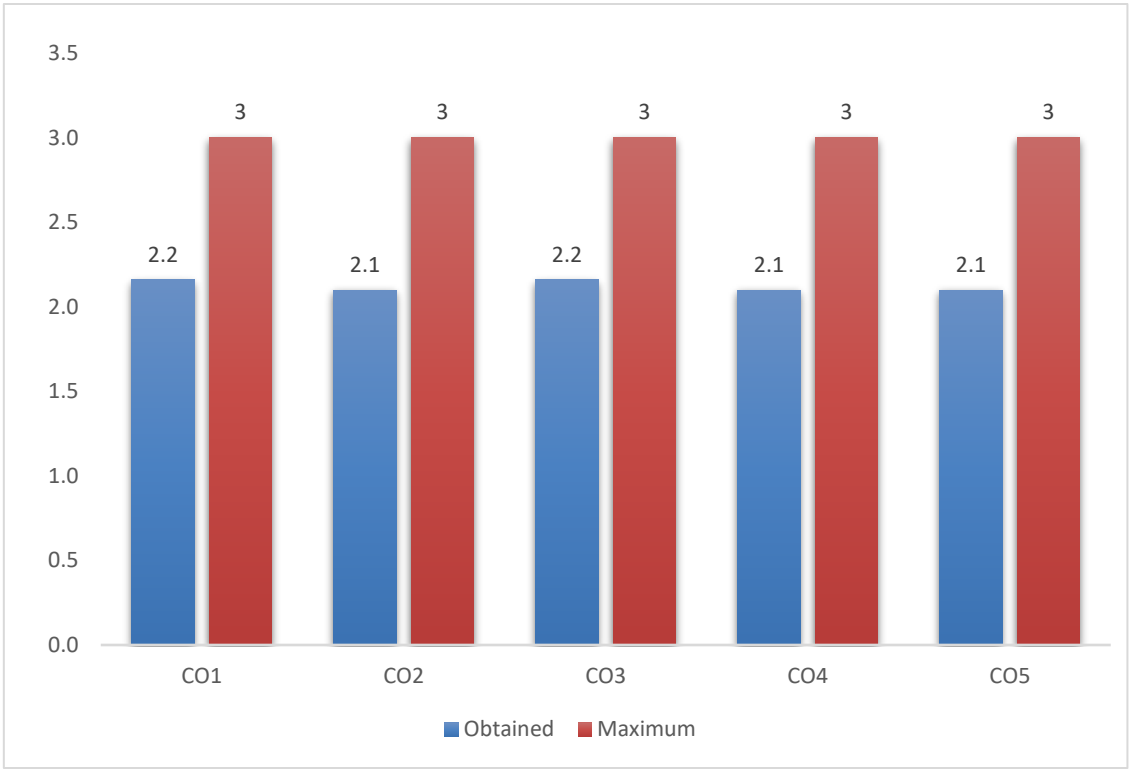
outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01			H	S			S		H
C02	H	H			S	H	H	H	
C03	H		S	H	H	H	H		
C04	H			S	H			H	
C05		H	H	H	S	S	H		H

H: Highly Supportive

S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	22.2	0.0	2.4	83.3	2.0	2.0	2.2
CO2	100.0	3.0			100.0	3.0			100.0	3.0	22.2	0.0	2.3	83.3	2.0	2.0	2.1
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	22.2	0.0	2.4	83.3	2.0	2.0	2.2
CO4			100.0	3.0	100.0	3.0			100.0	3.0	22.2	0.0	2.3	83.3	2.0	2.0	2.1
CO5			100.0	3.0	100.0	3.0			100.0	3.0	22.2	0.0	2.3	83.3	2.0	2.0	2.1
																AVERAGE	AVERAGE
																2	2.124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CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1			H 2.16		
CO2	H 2.1	H 2.1			
CO3	H 2.16			H 2.16	H 2.16
CO4	H 2.1				H 2.1
CO5		H 2.1	H 2.1	H 2.1	
AVERAGE OF COS FOR POS	2.12	2.1	2.13	2.13	2.13
AVERAGE OF POS	2.12	2.1	2.115	2.13	2.13
AVERAGE	2.119				

COURSE OUTCOME MAPPING

MAPPING COURSE OUTCOMES LEADING TO THE ATTAINMENT OF PROGRAM OUTCOMES:

COURSE TITLE: TECHNOLOGY OF BAKING SCIENCE
COURSE CODE: MFT19401
CREDITS: 4

DEPARTMENT: M.Sc. FOOD TECHNOLOGY AND MANAGEMENT

PROGRAMME OUTCOMES Or POs :

PO1: **Scientific Knowledge:** Ability to build a strong foundation of knowledge, integrated with the latest developments in science and technology which help students develop critical thinking, reasoning, decision making in process of quality education.

PO2: **Problem Analysis:**Identify, formulate and analyse the complex scientific problems using the knowledge gained across various streams of science and technology.

PO3: **Effective Communication:** Ability to articulate ideas, communicate effectively using current tools in the field of ICT along with effective report writing and documentation.

PO4: **Development of Skill and Attitude:** Enabling the students with the required skill, right attitude, time management and self discipline for prominent career in industry, research institutes and for further academic study.

PO5: **Life Long Learning and Social Responsibility**: Recognise the need and ability to engage in life long learning and work effectively as an individual and as a member of diverse team. Students get the ability to act with an informed awareness of issues to participate in civic life through volunteering.

PROGRAMME SPECIFIC OUTCOME (DEPARTMENT WISE) or PSOs

PSO1: Formulate environment friendly innovative food products

PSO2.Acquire entrepreneurial skills and skill based knowledge in the field of food science and to establish a food service outlet

PSO3.Devise research strategies for empowering and promoting healthy living in the community

PSO4.Develop comprehensive and analytical skills to take up careers in academics, Food industry and health sectors

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Explain the calibration and standardization of different instruments	I (REMEMBER)
CO2	Analyse different sectroscopic and Refracto metric techniques	IV (ANALYZE)
CO3	Distinguish various microscopic techniques in food analysis	II (UNDERSTAND)
CO4	Distinguish various chromatographic techniques in food analysis	II (UNDERSTAND)
CO5	Generalize various Separation techniques in food analysis	IV (ANALYZE)

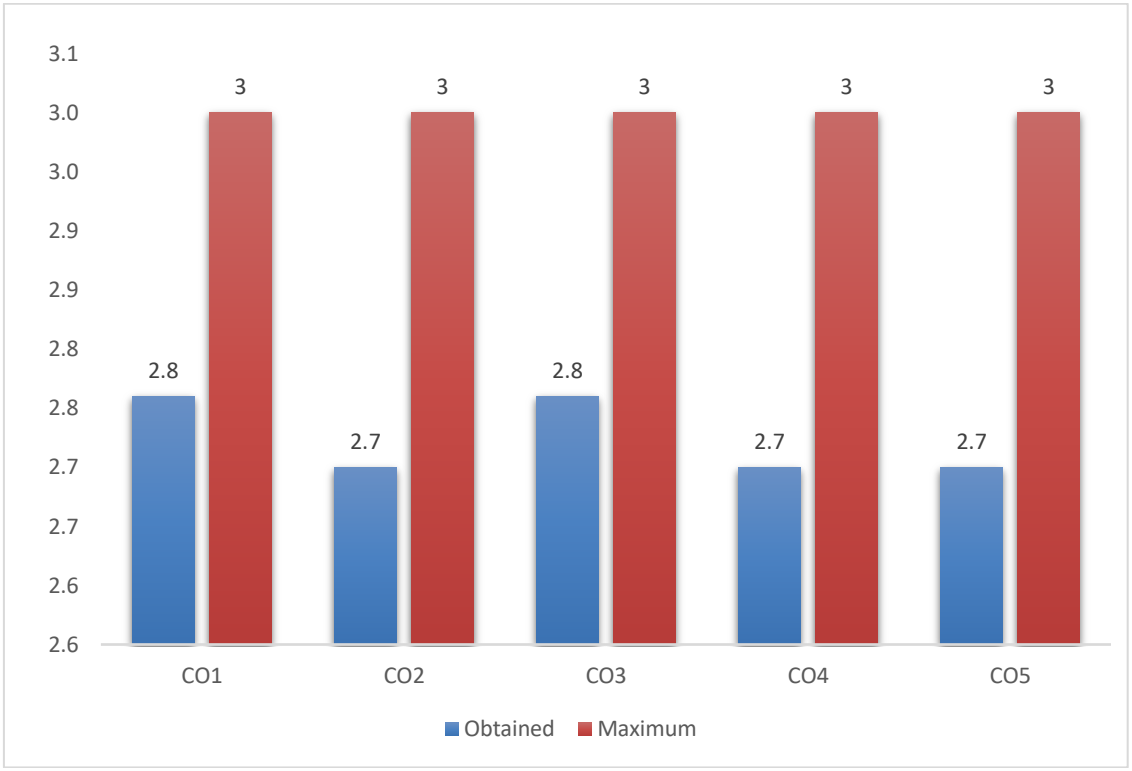
Table 1: CO, PO, PSO MAPPING

outcomes	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
C01	H			S			S		
C02							H	H	H
C03	H	S	H	S	H	S			
C04									S
C05	H		H	H	S		H		

H: Highly Supportive S: Supportive

Table 2: COURSE OUTCOME ATTAINMENT

co	mid exam 1		mid exam 2		group discussion		assignment		viva		Attendence			External Exam			
	pass%	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass %	Attainment level	pass%	Attainment level	co wise internal average	pass%	Attainment level	co wise external average	co wise total average
CO1	100.0	3.0			100.0	3.0	100.0	3.0	100.0	3.0	40.0	0.0	2.4	97.1	3.0	3.0	2.8
CO2	100.0	3.0			100.0	3.0			100.0	3.0	40.0	0.0	2.3	97.1	3.0	3.0	2.7
CO3	100.0	3.0	100.0	3.0	100.0	3.0			100.0	3.0	40.0	0.0	2.4	97.1	3.0	3.0	2.8
CO4			100.0	3.0	100.0	3.0			100.0	3.0	40.0	0.0	2.3	97.1	3.0	3.0	2.7
CO5			100.0	3.0	100.0	3.0			100.0	3.0	40.0	0.0	2.3	97.1	3.0	3.0	2.7
																AVERAGE	AVERAGE
																3	2.724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CO1
CO2
CO3
CO4
CO5
Obtained
Maximum

Table 3: PROGRAMME OUTCOME MAPPING

OUTCOME	PO1	PO2	PO3	PO4	PO5
CO1	H 2.76				
CO2					
CO3	H 2.76		H 2.76		H 2.76
CO4					
CO5	H 2.7		H 2.7	H 2.7	
AVERAGE OF COS FOR POS	2.74		2.73	2.7	2.76
AVERAGE OF POS	2.733333		2.73	2.7	2.76
AVERAGE	2.730833333				