

# Department of M.Sc Data Science

## M.SC. DATA SCIENCE

The Department of M.Sc. Data Science was founded in 2020 with the mission to empower students with the knowledge, skills, and expertise needed to thrive in the rapidly evolving world of data science. Our program is designed to unlock the power of data and equip the next generation of data-driven leaders to tackle real-world challenges and drive innovation. With a curriculum that blends theoretical learning with hands-on experience, our students are guided by industry professionals, ensuring that they stay at the forefront of emerging technologies and data science methodologies.

### Vision & Mission

**Vision** To be a leading provider of education in Data Science, equipping students with the skills and knowledge required to solve real-world problems and lead data-driven decision-making across industries.

**Mission** Our mission is to provide a comprehensive and cutting-edge curriculum that combines the core principles of data science with practical, hands-on experience.



### Programs Highlights

Comprehensive curriculum covering: Python, R, SQL, BigData, Deep Learning, NLP, Tableau/PowerBI, Cloud computing

- Mini/ Major Projects
- Internships and Placement support
- State of Art Labs
- Expert Faculty
- Career Services

### Unique Features of Our Program

- Expert sessions on industry integrated projects.
- Career Aspiration Program - an awareness program.
- Conference/Seminars with industry experts.
- An Exclusive recruitment drive. Enhancing analytical skills / Teamwork abilities / Personality development.
- This is a course with great job potential.
- It aids a student to be placed easily as he/she can get a role as a Data Analyst or Data Scientist with renowned MNCs / IT Companies.

### Career Opportunities

- Data Scientist/ Analyst
- Machine Learning Engineer
- Business Analyst Engineer
- Data Engineer
- AI Researcher
- Big Data Analyst

### Trainings/ Workshops

- Campus Recruitment Training (CRT) is provided for students to secure placements in campus interviews.
- Soft skills and career development workshops.
- Django/Flask/AWS/AZURE.

### Higher Education Prospects

Students are also eligible to pursue higher education in:

- PhD (Data Science)
- PhD (Computer Science)

### Why Loyola Academy?

- NAAC Accredited and recognized for academic excellence.
- Strong industry connections ensuring top-notch placements.
- Innovation-driven approach with a focus on emerging technologies.

### Admission Guidelines

A pass in B.E/B.Tech/BCA/B.Sc. Degree with a minimum aggregate of above 60% Marks along with Mathematics or Statistics or Computer Science as one of the subject.



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Sem-I

SUBJECTS

- Theory-**
1. Communicative Competence
  2. Mathematics for Data Science
  3. Artificial Intelligence
  4. Statistics & Probability
  5. Advanced Databases
  6. Python for Data Science
- Practical-**
1. Advanced Databases
  2. Data Visualization
  3. Python for Data Science
  4. Technical Seminar & Report Writing

Sem-II

SUBJECTS

- Theory-**
1. Human Values & Professional Ethics
  2. Multivariate Analysis & Stochastic Process
  3. Regression Analysis & Statistical Inference
  4. Big Data Analytics through Hadoop
  5. Machine Learning
  6. Cloud Computing/ Social Media Analytics/ Web Analytics
- Practical-**
1. Big Data Analytics through Hadoop
  2. Machine Learning
  3. Data Analytics
  4. Industrial Practices

Sem-III

SUBJECTS

- Theory-**
1. Time Series & Forecasting Techniques
  2. Big Data Security/ Reinforcement Learning/ Scalable Architectures for ML Applications
  3. Internet of Things
  4. Deep Learning
  5. Natural Language Processing
  6. Soft Skills
- Practical-**
1. Internet of Things
  2. Deep Learning
  3. Natural Language Processing
  4. Mini Project

Sem-IV

SUBJECTS

MAJOR PROJECT

**Extra Curricular Activities**

1. Sports
2. Resonance

**Extension Activities**

1. PLANET
2. Visiting adopted villages
3. Lab-to-school
4. Industrial visit
5. Virtual Industrial visit

**Non-GPA Courses**

1. NPTEL
2. CRT
3. Certificate course
4. Soft skills
5. Bridge course

**Student centric methods**

1. Minor projects
2. Internships
3. Research papers
4. Paper Presentations
5. Group-discussion/Seminar
6. Workshops

**Student support**

1. Academic counselling
2. Mentoring
3. Youtube lectures
4. Management scholarships
5. Endowment fund
6. Bridge course
7. Remedial

**Spirituality**

1. Morning Prayer
2. Retreats
3. Weekly prayer meetings
4. Spiritual day

**Leadership**

1. Student council
2. CR
3. ACR



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