SASTRA
ENGINEERING · MANAGEMENT · LAW · SCIENCES · HUMANITIES · EDUCATION
DEEMED TO BE UNIVERSITY
(U/S 3 OF THE UGC ACT, 1956)
THINK MERIT | THINK TRANSPARENCY | THINK SASTRA

Master of Science (M.Sc.) Data Science

Medium of Instruction
English

Course Duration
2 Years (4 Semester)

About The Programme

The Master of Science (M.Sc.) in Data Science Online degree programme is designed to equip students with advanced knowledge and skills in data science, a rapidly growing and in-demand discipline. This programme blends theoretical concepts with practical applications, preparing graduates for successful careers in various industries, such as technology, finance, healthcare, and more.

The M.Sc. in Data Science programme curriculum covers a wide range of topics essential to the field, including data analysis, machine learning, data visualisation, statistical methods, and big data technologies.

The Data Science Masters programme emphasises critical thinking, problem-solving, and analytical skills, preparing graduates to tackle complex data challenges in today's data-driven world. Graduates are well-equipped to pursue roles such as data scientist, data analyst, machine learning engineer, business intelligence analyst, and more.

NAAC GRADE A++ | AICTE | UGC Entitled | UGC Category 1 | #28 nirf NATIONAL INSTITUTIONAL RANKING FRAMEWORK | WES WORLD EDUCATION SERVICES

Programme Highlights

Prestigious University Degree

Gain a recognized Masters' degree from top ranked SASTRA University, with a University ranking of #28 in NIRF 2024.

Flexible

Study from anywhere, at your own pace, ideal for working professionals.

Comprehensive Curriculum

Covers data analysis, machine learning, programming languages like Python and R, statistical methods, and big data technologies.

Hands-On Projects

Engage in practical projects and real-world case studies to build a professional portfolio and apply knowledge effectively.

Career Preparation

Gain skills in critical thinking, problem-solving, and data-driven decision-making, positioning graduates for roles like data scientist, machine learning engineer, and more.

Programme Structure

Semester 1 (5 Courses)

Code	Name	Credits
MATOL445	Probability & Statistics using R	4
MATOL446	Mathematics for Data Science	4
BINOL522	Python for Data Science	4
INTOL530	Artificial Intelligence & Reasoning	4
MATOL439	Applied Multivariate Analysis	4
Total Credits		**20**

Semester 2 (6 Courses)

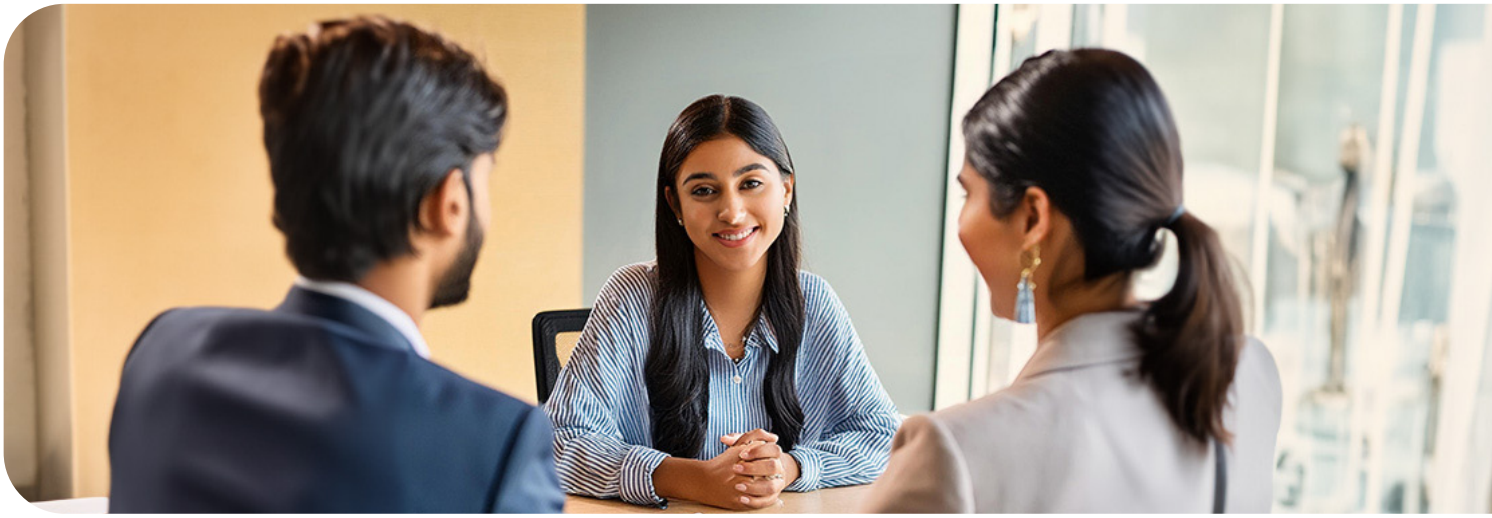
Code	Name	Credits
INTOL534	Machine Learning	4
CSEOL614	Big Data Mining & Analytics	4
INTOL413	RDBMS, SQL &Visualization	4
INTOL531	Data Mining Techniques	4
INTOL416	RDBMS, SQL, Visualization & Analytics Laboratory	2
MANOL106	Research Methodology & IPR	2
Total Credits		**20**

Semester 3 (5 Courses)

Code	Name	Credits
CSEOL615	Deep Learning & Applications	4
INTOL418	Predictive Analytics Regression & Classification	4
OEHOL014	Ethics & Data Security	4
XXXXXX	Elective I	4
XXXXXX	Elective II	4
Total Credits		20

Semester 4 (4 Courses)

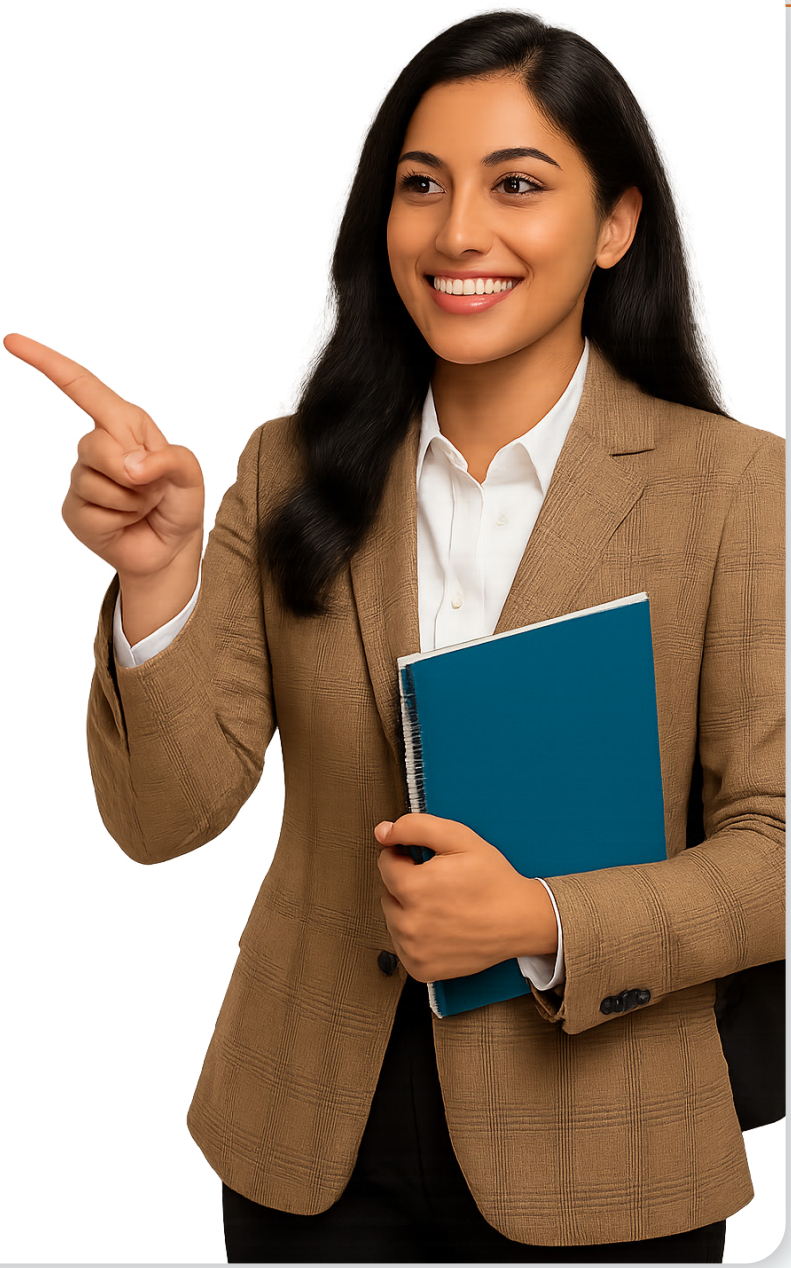
Code	Name	Credits
ICTOL601	Machine Vision	4
XXXXXX	Elective III	4
XXXXXX	Elective IV	4
INTOL500	Project Work & Viva Voce	8
Total Credits		**20**



Electives for Semester III & IV

Course Name

- Algorithmic trading
- Bayesian data analysis
- Financial data analysis
- Healthcare data analytics
- Data science for structural biology
- Epidemiological modelling
- Social networks & graph analysis
- Spatial data analytics
- Information visualization
- Image processing & analysis
- Speech & video processing
- Information retrieval & natural language processing
- Energy systems modelling & analysis for data science



Data Science Programming Languages

Data Visualization

Python

SQL

Machine Learning

R Programming Language

Deep Learning

Big Data Mining and Analytics

Online Learning Methodology

e-Tutorial

- A pre-recorded video of an expert delivering a lesson or presentation on a particular topic.
- Videos will be uploaded on a weekly basis for 12 weeks.
- Videos will be available till semester completes.
- Any time access across devices.

e-Content

- Asynchronous mentoring.
- E-books, lecture notes, PPT and open-source materials.
- The contents will be a mix of all the above available for the students to use comprehensively.
- All materials will be made available from day 1 for the entire semester students can download.
- It can be accessed any time across devices.

Webinar

- Synchronous teaching & learning.
- Students must go through/study the previous three weeks content before sitting for webinars.
- 2 hour duration of each webinar – Every alternate week of the programme. (2, 4, 6, 8,10,12th weeks).
- This session will be doubt clearing sessions only of previous weeks content.

Assessment

- Each assessments will be MCQs/descriptive patterns.
- Totally 6 assessments starting from 3rd week of the programme (3,5,7,9,11,13 weeks).
- All courses will have 6 assessments out of which best of 5 will be taken into consideration and it is compulsory.

Learning Outcome

- Work as a Data Science professional in the corporate sector, academia, or research organisations.
- Use, analyse, and visualise data using specialised software tools.
- Undertake research/investigation independently and display teamwork and leadership skills to solve real-life problems.
- Apply computing theory, languages, algorithms, mathematical and statistical models, and the principles of optimisation to formulate and use data analysis in diverse sectors.
- Masters in Data Science experts learn to integrate concepts of data science and mathematics to contribute towards key technologies in data science and business analytics, including data mining, machine learning, visualisation techniques, predictive modelling, and statistics.
- Engage in lifelong learning and employ technical knowledge and strategies to address economic, environmental, health, national, global, cultural, societal and sustainability issues.

Eligibilty

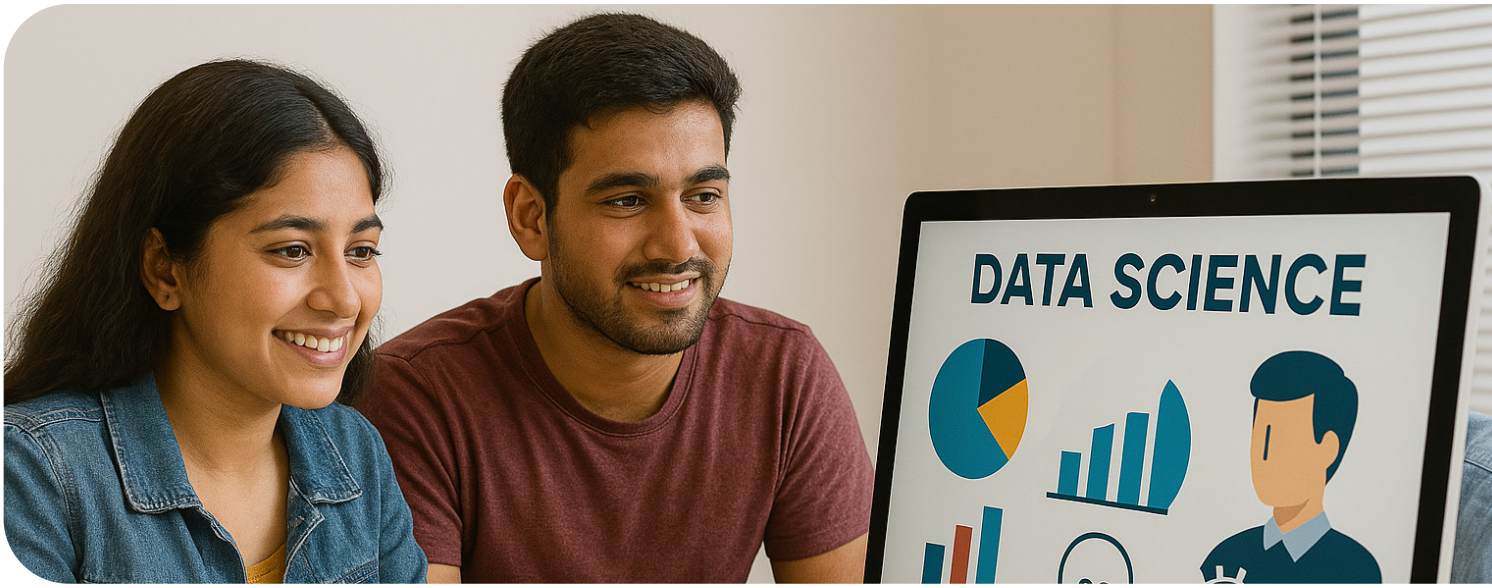
Graduate/Bachelors degree (10+2+3 or 10+2+4) or equivalent in any discipline but with a background in Mathematics or Statistics, from a recognized university.

Programme Objective

- Train learners to demonstrate proficiency with statistical analysis of data.
- M.Sc in Data Science equips graduates with the necessary skills to execute statistical analyses with professional statistical software.
- Enable graduates to create and implement solutions with advanced computing skills addressing data management.
- Prepare learners to develop the ability to build and assess data-based models.
- Equip graduates with the capability to design, implement and test computational approaches to develop innovative and effective solutions for diverse sectors.
- Enable the learners to apply data science concepts and methods to solve problems in the real-world context and communicate these solutions effectively.
- Online Data Science Masters nurture creativity in graduates to enable them to excel in industry and research organisations.
- Create technically sound, socially conscious and ethically committed professionals.

Salient Features

- The strong brand image of SASTRA in the corporate sector
- Semester-pattern
- Interactive learning content and Self Learning Materials (SLM)
- Personal contact classes
- Highly qualified and experienced faculty
- Affordable fee structure with loan facility at attractive rates
- Internal Assessment – 30 marks + End semester Exam - 70 marks



Programme Fees

For Students in India	Semester Fee	Yearly Fee	Total Programme Fee (Lumpsum for 2 years)
Programme Fee	INR 50,000	INR 1,00,000	**INR 2,00,000**
Limited Time Discounted Fee	INR 50,000	INR 85,000	**INR 1,40,000**

*The above fee is applicable for the **July 2025 batch** admissions

Fee Includes

- Interactive learning content and Self Learning Materials (SLM)
- Live interactive sessions with SASTRA faculty and contact classes as specified
- Semester exam fees for all 4 semesters
- Convocation Fee

Fee Does Not Include

- Re-exam fees for any subsequent attempts
- Any other administrative charges that are not covered above

Payment Options

Options I

Make a down payment of Rs.15000 and avail loan/financial assistance for the balance fee.

Options II

Pay Semester fee on or before the specified last date.

Options III

Pay the annual fee upfront on or before the specified last date.

Options IV

Pay the full programme fee on or before the specified last date.

Programme Degree

Throughout the course, participants will undergo periodic evaluations, including quizzes, class assignments, projects, case analyses, or other objective/subjective assessments as determined by the instructor during class hours.

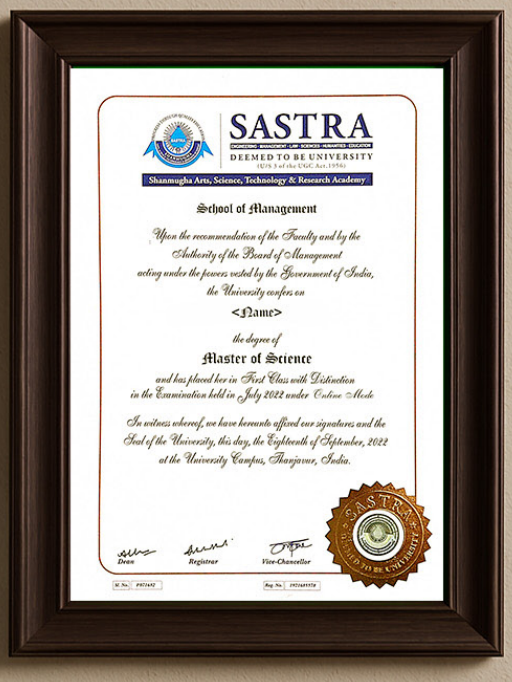
Timely and successful completion of these evaluation components is essential. Participants are expected to demonstrate active engagement and meet all requirements within the given timelines.

SASTRA University will award a Course Completion Certificate to those who:

- Successfully complete all assessment components.
- Meet the specified attendance criteria.

The primary objective of the assignments and projects is to enable participants to apply the conceptual insights gained during the programme to real-world organizational decision-making scenarios.

Get an M.Sc Degree from Sastra



Careers after M.Sc. in Data Science

- Data Analyst
- Research Assistant
- Professor
- Biochemist
- Environmental Consultant
- Statistician
- Forensic Expert
- Actuarial Analyst
- Agricultural Scientist
- Software Developer

Top Recruiting Companies

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Apollo HOSPITALS TOUCHING LIVES

MARUTI SUZUKI

NCS

TITAN BIOTECH

IBM

SUN PHARMA

ओएनजीसी ONGC

Infosys

HCLTech

Capgemini

About SASTRA University

With a humble beginning in the year 1984, SASTRA's progress in the last 36 years is a testimony to its commitment to building a University as envisaged in its guiding model. Today, SASTRA is one of India's premier institutions offering undergraduate, postgraduate & doctoral programmes in Engineering, Management, Law, Sciences, Humanities and Education. It was conferred Deemed-to-be-University status in 2001 by the University Grants Commission under Section 3 of the UGC Act 1956. SASTRA also has an MHRD-notified off-campus named Srinivasa Ramanujan Centre (SRC) at Kumbakonam.

As a comprehensive University, its teaching programmes are complemented by research engagements, consultancy assignments, training and extension activities. This has been re-accredited by NAAC (fourth cycle) With a maximum grade of 'A++' (3.76/4.00) and is a Category I Institution based on the UGC's categorization of Universities for Graded Autonomy Regulations, 2018. Twelve engineering programmes of SASTRA have been internationally accredited for a period of 9 years by the Institution of Engineering & Technology (IET), UK recognizing SASTRA's academic excellence. In the NIRF ranking, SASTRA has always been placed among the top 40 Universities with a current position of #28 in 2024. It is also recognized as a Scientific & Industrial Research Organization by the Government of India.

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