



# PLACEMENT BROCHURE FACULTY OF SCIENCE

Department of Statistics &

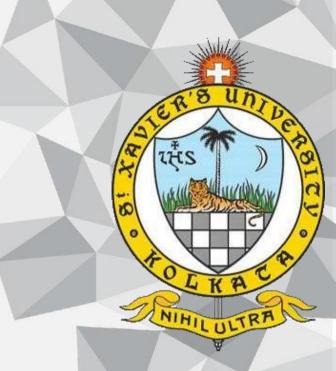
&
Department of Computer Science 2024-2026

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### **ABOUT THE UNIVERSITY**

St. Xavier's University, Kolkata, founded in 2017, is a prestigious Jesuit Institution in New Town, Kolkata, India, driven by values of academic excellence and integrity. The university's motto, "NIHIL ULTRA" (Nothing Beyond), encapsulates its commitment to limitless knowledge pursuit and personal growth. With a rich heritage of Jesuit education, St. Xavier's University offers a diverse range of programs and disciplines, catering to the needs of 3,700 students as of July 2025. Guided by 125 esteemed faculty members, the university provides a nurturing and inclusive environment for holistic development. The university's crest, derived from Saint Francis Xavier's family crest, embodies dignity, courage, and the pursuit of higher aspirations. Rooted in the Xaverian and Society of Jesus values (Iesus Hominum Salvator), it emphasizes faith and compassion in education. Anchored in its Vision 2020, St. Xavier's University continues to evolve as a hub for intellectual and spiritual growth. With a strong focus on social justice and community engagement, it shapes graduates committed to making a positive societal impact, embracing the ethos of "NIHIL ULTRA" in their boundless pursuit of progress.





# MESSAGE FROM THE VICE CHANCELLOR

I have the pleasure and privilege of introducing the third batch of aspiring technocrats from the Faculty of Science of St. Xavier's University, Kolkata. The aim of the SXUK is not just to produce technocrats but we endeavor to create future leaders of industry and the country; leaders who believe we can and thus we begin to see opportunities all around. The Faculty of Science, equipped with all the state-of-the-art facilities, is offering two-year postgraduate programmes viz, M.Sc. in Computer Science with specialization in Networking and Cyber Security or Data Analytics and M.Sc. in Statistics with specialization in Industrial Statistics or Business Analytics or Biostatistics. In the Science Postgraduate course, the Summer Internship Programme (SIP) is very important as the students get exposed to direct first-hand technology exposure or industry experience during this internship programme. The students get an overall understanding of the real technology world and industrial operations in SIP, which supplement and complement their theoretical classroom knowledge including dealing with case studies. We are hopeful that the science students will get good opportunities of SIP and final placement in esteemed organizations, which will be their lifetime experience. I wish the students all success.

I also take this opportunity to invite the recruiting managers and hiring supervisors of the corporate world to be a part of our campus placement programs and give our students an opportunity to prove their mettle and exhibit their readiness to take on the challenges of the corporate world. God bless all of us.

Rev. Dr. J. Felix Raj, S.J.

Vice - Chancellor

St. Xavier's University, Kolkata



### MESSAGE FROM THE DEAN

It is my pleasure to warmly welcome you on behalf of the Faculty of Science at St. Xavier's University, Kolkata. As the dean, I take great pride in our longstanding tradition of providing practical, experiential education that our departments have upheld since their inception. Our postgraduate program in Statistics empower our students to become "men and women for others," equipping them to be agents of meaningful social change in our country and eventually in the world.

Inspired by the Ignatian charism, our Jesuit education shapes students into leaders with the moral depth and intellectual rigor needed to tackle today's challenges.

Situated in an economic and cultural hub, St. Xavier's University, Kolkata offers unique opportunities for students to engage with IT companies and communities. I warmly invite all those interested in expanding their knowledge and enriching their careers to explore our departments further, either online or by visiting our campus. I hope you will join our community of life long learners.

Dr. Tuhin Utsab Paul.

Dean, Faculty of Science

St. Xavier's University, Kolkata





## MESSAGE FORM HEAD, DEPARTMENT OF STATISTICS

The Department of Statistics at St. Xavier's University, Kolkata is delighted to promote the dynamic and talented students and invite you to discover these young talents by giving placement opportunities in your organization. Our department is dedicated to nurturing analytical minds and equipping them with robust statistical skills and a strong foundation theoretical and applied statistics. The department offers a comprehensive two-year M.Sc. programme in Statistics, with a choice of specialisation in Industrial Statistics, Biostatistics, or Business Analytics. It imparts extensive theoretical knowledge and rigorous practical training to its students through a multi-faceted teaching system, ensuring that our students are well-prepared to tackle real-world challenges. curriculum has been prepared with the requirements of the industry and related research organizations in mind, to offer a well-rounded academic programme. The department's primary goal is to foster excellence and provide an exceptional educational environment, guided by our highly qualified and experienced faculty members. We take pride in our graduates who exhibit exceptional analytical abilities, critical thinking, and a strong ethical foundation.



Dr. Utpal Pore

# MESSAGE FORM HEAD, DEPARTMENT OF COMPUTER SCIENCE

The Department of Computer Science at St. Xavier's University, Kolkata, focuses on providing quality education and overall student development. As part of the School of Science, the department aims to build a strong foundation in computational thinking, problem-solving, and innovation. We offer a combination of theory and practical learning so that students are well-equipped to face the fast-changing digital world. Our courses are regularly updated to include new technologies like Artificial Intelligence, Data Science, Cloud Computing, and Cybersecurity. We promote research across different subjects, encourage innovative projects, and work together with industry partners to improve learning opportunities. Besides academic knowledge, we emphasize ethics, leadership, and social responsibility.

The department encourages curiosity and creativity, helping students to contribute positively to society. With experienced faculty, modern labs, and up-to-date resources, we aim to prepare students to adapt, lead, and succeed in their careers. Our goal is to develop not only skilled technology professionals but also responsible citizens who contribute to nation-building.



Rev. Dr. Maria Joseph Israel S.J.

# DEPARTMENT OF STATISTICS

Established in August 2022, the Department of Statisticsis dedicated to academic excellence. It offers the prestigious M.Sc. in Statistics program with specializations in Industrial Statistics, Business Analytics, and Biostatistics. department independent fosters thinking and inquiry, preparing students for both industry and research with amodern curriculum. Equipped with a state-of-the-art laboratory, it prioritizes problem-solving and programming skills. The department envisions a future with impactful seminars and workshops, empowering students and faculty to lead in emerging trends and technologies, emphasizing the importance of problem- solving and programming in academia and careers

# DEPARTMENT OF COMPUTER SCIENCE

Established in 2022, the Department of Computer Science at SXUK was founded with a vision to nurture innovation, research, and technical excellence. It offers undergraduate, postgraduate, and doctoral programs designed to meet the rapidly evolving demands of the IT industry and academia. The department emphasizes critical thinking, programming expertise, and problemsolving abilities. With a future-oriented curriculum, students are exposed to Artificial Intelligence,

Data Science, Cloud Computing, Cybersecurity, and Emerging Technologies. The department also fosters innovation through hackathons, research projects, and collaborations, preparing students to contribute to both national and global technological advancements.

### **FACULTY PROFILE**



Dr. Tuhin Utsab Paul Associate Professor, Dean



Dr. Utpal Pore
Assistant Professor and Hod
Department of Statistics



Prof. Manisha Pal
Adjunct Professor
Department of Statistics



Dr. Sugata Sen Roy Associate Professor



Dr. Maria Joseph Israel Assistant Professor and Head Department of Computer Science



Dr. Priyanka Talukdar
Assistant Professor





Dr. Aniket Biswas
Assistant Professor



Dr. Tanushree Biswas
Assistant Professor



Dr. Upendra Kumar Sahoo Assistant Professor



Dr. Mrinmoyee Bhattacharya Assistant Professor



Dr. Soma Debnath
Assistant Professor



Dr. Sayan Das Assistant Professor



Mr. Malay Mitra Guest Professor

# COURSE STRUCTURE OF M.Sc. STATISTICS

#### COURSE STRUCTURE

#### Semester - I

- · Mathematical Analysis
- · Probability Theory
- · Statistical Inference I
- · Linear Algebra & Linear Models
- · Sampling Techniques
- · R Programming

#### Semester - III

- · Bavesian Inference
- · Applied Multivariate Analysis
- · Regression Analysis II
- Time Series Analysis and Development Statistics
- · Advanced Data Analytic Techniques
- Internship

#### Semester - II

- Stochastic Processes
- Multivariate Analysis
- · Statistical Inference II
- · Regression Analysis I
- · Design of Experiments
- Python

Value Added Course-Reliability & Survival Analysis

#### Major Electives

- Demography
- · Optimization Techniques
- · Actuarial Statistics

ValueAddedCourse-ComputerApplication in Statistics and Finance.

#### Semester - IV

· Statistical Analysis of Big Data

#### Specialization Module

#### Industrial Statistics

- Operations Research
- Reliability Theory
- Statistical Quality Management

#### 2. Business Analytics

- Econometrics
- Financial Time Series
- Machine Learning in Finance / Financial Econometric

#### Biostatistics

- Survival Analysis
- · Clinical Trials
- Statistical Genetics / Epidemiology

FULL COURSE LINK: https://www.sxuk.edu.in/pdf/SXUK M.Sc Statistics Curriculum.pdf

## **COURSE HIGHLIGHTS**

#### THEORY / CORE KNOWLEDGE

**Inferential Statistics:** Utilization of diverse techniques in Interval Estimation, Point Estimation and Bayesian Inference to examine the attributes of a population.

Sampling Techniques and Design of Experiments: Exploration of different approaches in data Sampling and Data Analysis in diverse experimental scenarios.

Multivariate Analysis: Statistical methodologies to investigate the interrelationships among multiple variables and draw meaningful conclusions.

**Time Series Analysis:** Scrutinizing and predicting, sequence of data points collected over a specified time interval.

#### INDUSTRY RELEVANT KNOWLEDGE

**Regression Analysis:** Utilization of diverse techniques in Interval Estimation, Point Estimation and Bayesian Inference to examine the attributes of a population.

Advanced Data Analytic Techniques: Exploration of different approaches in resampling techniques, missing data analysis and logitudinal data analysis.

**Statistical Analysis of Big Data:** Statistical methodologies to investigate the interrelationships among multiple variables and draw meaningful conclusions.

#### RELEVANT SKILLS

R, Python, MS-Excel

# COURSE STRUCTURE OF M.Sc. COMPUTER SCIENCE

The Computer Science curriculum at SXUK is designed in alignment with global standards. The programs cover a blend of core subjects—Programming, Data Structures, Algorithms, Operating Systems, Computer Networks, Database Systems, with advanced electives like AI, Deep Learning, Block chain, Quantum Computing, and Internet of Things (IoT). Practical learning is emphasized through project-based coursework, industry-driven labs, and internship opportunities. The course also includes skill-development workshops, certification programs (e.g., AWS, Microsoft, Google Cloud), and collaborative research projects. Students graduate with a strong portfolio that makes them industry-ready and research-oriented.

#### Curriculum of Computer Science

Semester - I				
Course Code	Course Title	Туре		
MCSR110C	Advanced Analysis of Algorithms	Th + Pr		
MCSR120C	Distributed System	Th + Pr		
MCSR130T	Automata and Compiler Design	Th		
MCSR140C	Statistical Analysis using Python	Th + Pr		
MCSR150C	Artificial Intelligence and Soft Computing	Th + Pr		

Semester - III				
Course Code	Course Title	Туре		
MCSR310C	Computer Vision	Th + Pr		
MCSR320C	Data Warehouse and Mining	Th + Pr		
MCSR330T	Mobile and wireless Computing	Th		
MCSR360P	Smart Analytics System Design Lab	Pr		
MCSR370J	Project - Phase 1	Project		
Specialization	Bucket: 01 (Networking and Cyber Security	)		
MCSR341T	Cloud Computing	Th		
MCSR351T	Network Security			
Specialization	Bucket: 02 (Data Analytics)	7/2		
MCSR342T	Business Intelligence	Th		
MCSR352T	Deep Learning			

Semester - II				
Course Code	Course Title	Туре		
MCSR210C	Cryptography and Cryptanalysis	Th + Pr		
MCSR220C	Machine Learning	Th + Pr		
MCSR230C	Embedded and Real Time Systems	Th + Pr		
MCSR240C	Advanced Software Engineering	Th + Pr		
MCSR250C	Operation Research and Research Methodology	Th + Pr		

Semester - IV				
Course Code	Course Title	Туре		
MCSR440J	Term Paper	Project		
MCSR450J	Project - Phase II **	Project		
MCSR460V	General Viva-Voce	Viva		
Specialization E	Rucket: 01 (Networking and Cyber Security)			
MCSR411T	Cyber Law and Ethics	Th		
MCSR421T	Security for Cyber Physical system			
MCSR431T	IOT and Smart Systems			
Specialization E	Pucket: 02 (Data Analytics)			
MCSR412T	Bio-informatics	Th		
MCSR422T	NLP and Text Analytics			
MCSR432T	Social Network Analytics			

\*\* Publication of at least ONE research paper in UGC recognized Journal is Desirable udents need to select any 1 specialization bucket

FULL COURSE LINK: https://www.sxuk.edu.in/pdf/Computer\_Science\_MSC.pdf

# Course Highlights Of M.Sc. Computer Science

#### Theory / Core Knowledge

- Strong foundation in mathematical, algorithmic, and statistical principles including automata theory, advanced algorithms, and operations research for rigorous problem solving.
- In-depth understanding of core computer science domains: Distributed Systems, Compiler Design, Artificial Intelligence, Software Engineering, Embedded and Real-Time Systems.
- Exposure to advanced topics like Cryptography, Machine Learning, Computer Vision,

Cloud Computing, and Data Mining, blending theory with applied computational models.

#### Industry-Relevant Knowledge

- Practical expertise in Python-based statistical analysis, data wrangling, and visualization to support modern data-driven industries.
- Application-oriented learning in Cyber Security, Network Security, and Cyber Law, preparing graduates for real-world risk management and compliance frameworks.
- Integration of AI/ML, Deep Learning, NLP, and Smart Analytics systems for industry 4.0 solutions in finance, healthcare, agriculture, and logistics.

#### Relevant Skills

- Hands-on programming skills in Python, OpenCV, machine learning libraries, and distributed environments for building deployable systems.
- Research, analytical, and professional skills developed through mini projects, term papers, and dissertation work, encouraging entrepreneurship and higher studies.

### INDUSTRY - ACADEMIA LINKAGE

# Scope of Interdisciplinary Study & Research in India & Abroad

- Mr. Saurav Mukherjee, Vice President, Corporate Treasury of Goldman Sachs

#### Analytics Life Cycle & its Application in Industry

- Mr. Saurav Mukherjee, Vice President, Corporate Treasury of Goldman Sachs

#### Statistical Insights through Resampling Methods

- Dr. Tapan Kumar Chakrabarty, Professor of Statistics, North-Eastern Hill University (NEHU), Shillong

#### Group Testing Designs: A Combinatorial Marvel

- Prof. Bikas Kumar Sinha, Indian Statistical Institute, Kolkata

## 3-day workshop on "Data Analytics and Machine Learning"

- Dr. Bhaswati Ganguli, Department of Statistics, University of Calcutta
- Mr. Sourabh Mukherjee, Associate Managing Director, Accenture

#### Remote Sensing Techniques and Application

- Dr. Raj Kumar, Former Director of NRSC, ISRO

#### Industry Academia Collaboration with WEBEL

MoU between St. Xavier's University, Kolkata and Webel, a State Public Sector Undertaking, an initiative of the Department of Information Technology & Electronics, Govt. of West Bengal as part of Industry-Academia collaboration imparting IT Education and Training through Webel Fujisoft Vara Centre of Excellence in Industry 4.0.















#### WHY HIRE US?

#### 1. Quality of Education

Since its beginning, this department has maintained a strong commitment to excellence in teaching. Faculty members' contributions in their fields elevate the department's standing as a prominent source of talent in statistics and computer science. The curriculum is regularly updated to align with industry requirements.

#### 2. Suitability

The Master's program is carefully crafted to encompass both theoretical and practical aspects. It includes a robust emphasis on project work, encompassing Business Analysis, Industrial Statistics, Biostatistics, Data Analysis, and Cybersecurity.

#### 3. Industry Readiness

Following a rigorous selection process that evaluates their B.Sc. performance, students undergo intensive training with outstanding instructors. They master Python, R, Tableau, and various subjects like Regression Analysis, Operations Research, Biostatistics, Deep Learning, Business Intelligence, and more, while participating in the SXUK-Webel program to boost industry readiness through academia-industry partnerships.

#### **INFRASTRUCTURE**

St. Xavier's University offers excellent infrastructure and essential amenities to support its students in their academic pursuits. The university's library is well-supplied with books related to Statistics and Computer Science, and students have

access to resources like JSTOR and other archives. Additionally, the Faculty of Science houses two well-equipped computer laboratories, each containing 50 computers connected to a local network and high-speed internet.



### STUDENT PROFILE















Diptajit Chakraborty

M.Sc. in Statistics

Internship: Calcutta University

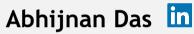
### Soumili Chowdhury in

M.Sc. in Statistics

Internship: CNCI, kolkata

#### Akashdeep Das in

M.Sc. in Statistics Internship: RBI



M.Sc. in Statistics

Internship: ISI, kolkata

#### Rajdeep Sow

in

M.Sc. in Statistics Internship: Inference.inc

### Ushosee Mukherjee in

M.Sc. in Statistics

Internship: CNCI, Kolkata

### Sudipta Samanta in

M.Sc.in Statistics

Internship: St. Xavier's college, Kolkata





Surajit Banik in
M.Sc. in Statistics
Internship: CNCI, Kolkata



Swastika Hui in

M.Sc. in Statistics
Internship: CNCI, Kolkata



Soham Manna in
M.Sc. in Statistics
Internship: Inference.inc



Sneha Saha in

M.Sc. in Statistics
Internship: CNCI, Kolkata



Anirban Nath in M.Sc. in Statistics Internship: MIT, Pune



Srijita Biswas in

M.Sc. in Statistics

Internship: ISI, kolkata



Tuhin Halder in

M.Sc. in Statistics

Internship: ISI, kolkata











Anish Barik in

M.Sc. in Statistics

Internship: Calcutta University

Mukta Mahato in
M.Sc. in Statistics
Internship: ISI, Kolkata

Aditi Shah in

M.Sc. in Statistics
Internship: Calcutta University





#### PLACEMENT COMMITTEE

#### Dean Faculty Of Science



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CS(Dr.) Mohit Show

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#### STUDENT COORDINATOR



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#### **COMPANIES**

Who visited Faculty of Science

# i∧fere∧ce

## **KANTAR IMRB**







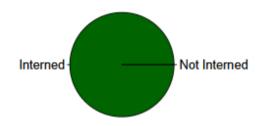




# Students who were placed (2023-2025)

#### **DEPARTMENT OF STATISTICS**

Internship (100%)



Placement (80%)



#### **DEPARTMENT OF COMPUTER SCIENCE**

Internship (100%)



Placement (33%)





#### **CONTACT US**

#### **ADDRESS**

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