INDIAN STATISTICAL INSTITUTE

8th Mile, Mysore Road
RVCE Post
Bangalore 560059
Karnataka, India

Placement Brochure

Placement Committee

Faculty Members

1. Siva Athreya
   Phone : +91-80-26985459
   Email : courses@ms.isibang.ac.in

2. U H Acharya
   Phone : +91-80-28483007
   Email : uhacharya@gmail.com

3. Devika Madalli
   Phone : +91-9448256799
   Email : devika@drtc.isibang.ac.in

4. A L N Murthy
   Phone :+91-40-27153984/71906
   Email : simhaaln@rediffmail.com

Contact

Placement Committee
Indian Statistical Institute
8th Mile, Mysore Road
RVCE Post
Bangalore-560059

Email : plcconv@isibang.ac.in (mark subject : Placement)
Phone: +91(80)26985459
Fax: +91(80) 28484165(mark subject : Placement)

STUDENT REPRESENTIVE

- Master of Mathematics(M.Math) :

  1. Nettem Sai Sirisha
     Email : mmat1509@isibang.ac.in
  2. Poulami Mandal
     Email : mmat1510@isibang.ac.in

- Master of Library and Information Science(MS (LIS)) :

  Kumari Vandana
  Email : vandana@drtc.isibang.ac.in

- Master of Quality Management Science (MS(QMS)) :

  1. Neha Khanna
     Email : nehakhanna023@gmail.com
  2. Venkat Suhas
     Email : suhas1415@gmail.com

- Bachelors of Mathematics(B.Math) :

  Aayush Agrawal
  Email : bmat1401@isibang.ac.in

INTRODUCTION

The Bangalore Centre of the Indian Statistical Institute was conceived by Prof.P.C.Mahalanobis during 1960s, even when the city was emerging as a centre of science. It is a tribute to his foresight that the Institute is now well-established in one of the most vibrant scientific communities in Asia.

With the Statistical Quality Control unit functioning in Bangalore from 1956, and Documentation Research and training Centre from 1962, Professor Mahalanobis thought of starting a centre of ISI around the mid-sixties. The presence of several national institutes of higher learning, the salubrious climate and the growing metropolitan culture must have prompted him to consider this possibility. In 1966, Govt. of Karnataka granted ISI 30 acres of forest land full of eucalyptus trees, next to the upcoming Bangalore University on Mysore Road, at a token price.

However, Professor Mahalanobis did not live long enough to see the realisation of his dream. Due to the difficult times that ISI went through after professor's death in 1972, the project of establishing Bangalore was temporarily shelved. It was left to Professor Kallianpur, the Director of ISI during 1976-78, to revive the idea, make concrete proposals to the Government of India and get grants for the development of the land already in possession of the Institute and the construction of an Academic Block with space for a library and offices.

In the meantime, a building was rented on Church Street, in the heart of the city, and started the activities of the Bangalore Centre in September 1978. The Statistics and Mathematics Unit (SMU) was established. The Statistical Quality Control (SQC) Unit and Documentation Research and Training Centre (DRTC), which were functioning from other rented buildings at that time came to constitute the new Centre. The Economic Analysis Unit (EAU) was established.

With the completion of the construction of the Administrative Block, the various units moved to the new campus in May 1985. However, it was only in September 1996, the Bangalore Centre was formally declared as a Centre of ISI. With the increasing faculty strength, computer and library facilities the Bangalore Centre has by now became an institution well-known for its academic activities in Mathematics and Statistics, Statistical Quality Control and Operations Research, Library and Information Science, and Quantitative Economics.

Systems Science and Informatics Unit (SSIU) was added in August 2009.

DURATION AND VENUES
OF
VARIOUS PROGRAMMES

Program	Duration	Venue
Bachelors of Mathematics (Hons.)	3 years	Bangalore
Master of Mathematics	2 years	Bangalore, Kolkata
Master of Science in Library and Information Science	2 years	Bangalore
Master of Science Quality Mangement Science	2 Years	Bangalore, Hyderabad
Bachelor of Statistics (Hons.)	3 Years	Kolkata
Master of Statistics	2 Years	Kolkata, Delhi, Chennai
Master of Quantitative Economics	2 Years	Kolkata, Delhi
M. Tech in Computer Science	2 Years	Kolkata
M. Tech in Quality, Reliability and Operation Research	2 Years	Kolkata
Post Graduate Diploma in Statistical Methods	1 Years	Tezpur (Assam)
PG Diploma in Computer Applications	1 Year	Giridih

MASTER OF MATHEMATICS

Introduction

Recently, there has been an unprecedented surge in the demand for skilled people who are sufficiently accomplished in Mathematical Modelling and Data Science. With the increasing complexity and sophistication of modern industry; people who are able to formulate precise and accurate mathematical models and can implement solutions and can convey these ideas are becoming a necessary part of many organizations and companies. The M.Math program offers unparalleled training in Mathematics, from both academic and industrial perspectives so that students gain unrivalled problem solving skills based on a strong and rigorous analytical foundation. Successful completion of the course would enable students to be sufficiently adept in tackling a variety of applied math and statistical problems in any task requiring mathematical expertise.

Master of Mathematics students inside M.Math classroom

Admission

Students with B. Math. (Hons.) Degrees from the Indian Statistical Institute are offered direct admission to the M. Math. Programme without any selection test and interview. For other eligible candidates, including students with B. Math. (Pass) degree from the Indian Statistical Institute, selection for admission to the M. Math. Programme is based on academic record, performance in written selection tests and subsequent interview.

The selection tests will comprise of objective and/or short-answer type questions in Mathematics at a level corresponding roughly to the Mathematics Honours/Mathematics Major of Indian Universities, with special emphasis on Real Analysis, Linear and Abstract Algebra.

Program Description

The programme comprises coursework in the core areas of Analysis, Algebra, Topology and Geometry reaching a level of sophistication that permit the students to go into any area of Mathematics and Applied Mathematics. Apart from the core courses, there are a number of advanced topic courses which acquaint the students with contemporary developments in the subjects. Courses like Probability Theory, Stochastic Processes, Graph Theory and Combinatorics, Automata Theory familiarise students with diverse and most successful tools in modern day application of Mathematics. A strong background in Algebra and Analysis helps them get a firm grasp on advanced courses like Measure Theory, Partial Differential Equations and Differential Geometry etc. An M.Math student acquires a strong and wide base in diverse branches of Mathematics at an early stage, and thereby equips himself/herself to make contributions in the frontiers of Mathematical research and applications.

Course Structure

The M.Math. programme comprises five courses in each of the four semesters. The courses are divided in two groups, one consisting of thirteen compulsory courses and seven optional courses.

Compulsory Courses:

1. Measure Theoretic Probability
2. Linear Algebra
3. Fourier Analysis
4. Complex Analysis
5. Analysis of several variables
6. Differential Geometry
7. Functional Analysis
8. Algebra I
9. Algebra II
10. Differential Topology
11. Topology I
12. Topology II

Optional Courses:

1.Markov Chains
2. Advanced Probability
3. Stochastic Processes
4. Random Walk on Graphs
5. Partial Differential Equations
6. Elementary Number Theory
7. Advanced Functional Analysis
8.Operator Theory
9. Algebraic Number Theory
10. Commutative Algebra
11. Elliptic Curves
12. Graph Theory & Combinatorics
13. Algebraic Geometry
14. Ergodic Theory
15.Lie Groups
16. Topology III
17. Topology IV

A detailed program description is available at:

http://www.isibang.ac.in/~statmath/stinc/database/

Students

- The success rate in the ISI admission process is 1 out of 150, in comparison to 2% for the IITs and IIMs, and an even lower success rate of B. Stat. (Hons.) admission test, where a meagre number of around 50 are selected compared to thousands in case of IITs .

- Even the selected students undergo rigorous training and course-work, under the best tutors in the field, and only those who keep to the standards survive the entire course.

- Students being awarded the best national scholarships like KVPY, NBHM, NTSE, INSPIRE and having won reputed national and international level Olympiads testify their highest levels of excellence.

Current Batch Strength

18 students (2 female/16 male)

Master of Science in Quality Management Science

Introduction

The MS(QMS) course is the latest addition to the list of some of the unique programs that ISI offers, with an exceptional blend of theory and practice. Course structure has been evolved based on future requirements in the industry and academia. The faculty brings experience from multiple disciplines and has hands on expertise in working with diverse range of industrial and scientific organisations. The program aims at providing the requisite knowledge and skills essential for data analytics and modelling together with a comprehensive understanding of the tools available to systematically access, analyse and evaluate organisational needs/problems. Students are trained in using tools like MATLAB, R, MINITAB, SPSS and LINGO in addition to contemporary Quality Management methodologies like QMS (ISO, TS etc.), Six Sigma (DMAIC and DFSS) and Lean Manufacturing. The students undertake dissertation to highlight their ability to work on challenging and innovative ideas concerning recent developments in the field. In the fourth semester, the students would be undertaking live projects addressing the concerns of the industry under the guidance of the faculty, which involves the application of theoretical knowledge gained.

Our Mission

To develop professionally competent specialists for industry, trade and administration. To impart in-plant, industry wise and general orientation, appreciation and technical training in the tools and techniques of Quality Control, Operations Research, Reliability Analysis and allied methods to workers, technologists and scientists. To undertake project studies and service assignments in all aspects relating to organisation, development, training and research in Quality Control, Operations Research and allied methods for the improvement of efficiency and national productivity, as well as the lowering of costs of goods and services. To promote quality, reliability and OR applications, development and research in the methods and procedures of quality control and allied methods.

MS(QMS) Second year Students at ISI Hyderabad Campus

Our Objectives

1. To promote the study and dissemination of knowledge of statistics, to develop statistical theory and methods and their applications, generally with special reference to problems of planning of national development and social welfare.
2. To undertake research in various fields of natural and social sciences, with a view to the mutual development of statistics and these sciences.
3. To provide for and undertake the collection of information, investigations, projects and operational research for purposes of planning and improvement of efficiency of management and production.

Our Approach: Key Elements

- We sell results, not services
- We help your people achieve these results
- We see projects through to completion
- We take holistic approach
- Every engagement is a partnership
- Customer learning is part of the project
- Success = Result + Skill Transfer

Our Values

1. Deliver lasting, break through results by integrating technical / operational, cultural, customer and leadership aspects of improvements
2. Transfer capability to customer organizations to sustain and replicate improvements, independent of consultants
3. Deploy seasoned consultants with experience to the field
4. Interdisciplinary team work for and with customer

Our Capabilities

1. Knowledge base in statistical concepts and techniques
2. Experience in implementing improvement projects
3. Blending theory with practice
4. Proven techniques in change management that recognizes cultural aspects of change
5. A consulting process that assures knowledge transfer
6. Commitment

Course Structure

The course is divided into four semesters with the following major topics:

Compulsory Courses:

Semester I:

1. Statistics for decision Making-I (SDM-I)
2. Statistical Process Control (SPC)
3. Project Management
4. Reliability, Maintainability and Safety–I (RMS-I)
5. Project Management
6. Operations Research –I (OR-I)

Semester II:
1. Statistics for decision Making–II (SDM-II)
2. Advanced Statistical Process Control (ASPC)
3. Industrial Experimentation (IE)
4. Reliability, Maintainability and Safety–II (RMS-II)
5. Operations Research –II (OR-II)

Semester III:
1. Trouble Shooting & Problem Solving for Quality Improvement
2. Six Sigma – Business Excellence Strategy & Problem Solving Framework (SS)
3. Supply Chain Management (SCM)
4. Operations Research – III (OR-III)
5. Dissertation Semester IV: Live Project (Internship) in an Industry

Elective Courses:

Semester II: Elective (any one of the following):
Game Theory; Capability Maturity Models; Applied Regression Analysis; Marketing Research; Data Base Management; Pattern Recognition; Neural Network; Multivariate Data Analysis; Markov Analysis and Modelling

Semester III: Elective (any one of the following):
Total Quality Management; Quality Audit; Measuring Customer Satisfaction; Software Reliability; Human Factors in Continuous Improvement.

Batch Strength

Second Year : 11 students (4 female/7 male)

First Year : 11 students (2 female/9 male)

Master of Science in Library Information Science

Introduction

The Documentation Research & Training Centre (DRTC), a unit of ISI, founded by Prof. S. R. Ranganathan is an internationally recognized centre for advanced training and research in Library and Information Science. DRTC has been conducting an Associate ship Programme since 1962 which is upgraded to a 2 years Master's degree programme with the primary objective of preparing the next generation information and knowledge managers. The course structure is ICT intensive and is developed in such a way that students who complete the course would be competent to work in leading research, S&T organization libraries, IT industry, R&D organizations and institutions of higher education & research.

Eligibility

The minimum qualification for admission to the M.S. in Library and Information Science programme is a Bachelor’s degree in any discipline from a recognized Indian or foreign university. Selection of candidates is based on academic records and performance in written test and interview.

Programme Description

With the emergence of knowledge centered economy and the knowledge society, information & knowledge management has emerged as a major area of study and importance to large corporate houses, R&D Institutions and Governments. DRTC-ISI conducts advanced educational and research programmes for information professionals.

Course Structure

The course is divided into four semesters with the following major topics:

- Information Organisation & Knowledge Management.
- Cataloguing and Metadata.

- Library Management and Automation.
- Foundations of Computer and Information Technology.
- Information Sources, Systems and Services.
- Elements of Statistics and Research Methodology.
- Digital Libraries.
- Data Structure and Computer Programming.
- Information Storage, Retrieval and DBMS.
- Content Management Systems.
- Informatics and Scientometrics.
- Web Technology and Web-based Information Services.
- Networking Technology and Library Networks.
- Semantic Web & Ontology
- Colloquium, Seminar, Dissertation

Our strengths

- Digital Libraries and data repositories
- Use of statistical software packages
- Use of Library automation & e-learning soft ware's and platform
- Web/Portal designing using CSS, HTML, XML & Content Management Systems (Drupal,Joomla)
- Networking technology & Library networks
- Ontology & linked data tools
- General tools such as SQL, PostgreSql, programming languages, semantic web

Some indicative universities and companies where our alumni are working

Universities and Organizations (select indicative):
Jawaharlal Nehru University, Delhi
Banaras Hindu University, Varanasi
University of Calcutta, Kolkata
ISRO, DRDO, CSIR, IITs IIMs
TERI

Delhi Companies (select, indicative):
IBM, Accenture, Vodafone, TCS, Honeywell

Indicative job titles:
Information Manager, Knowledge Manager, IRC Managers, Librarians, Researchers and Academic designations

Current batch strength

Second year students: 7 (3 female/4 male)
First year students: 10 (2 female/8 male)

Bachelor of Mathematics (Hons.)

Introduction

With the increasing complexity and sophistication of modern industry; people who are able to formulate precise and accurate mathematical models; who can implement solutions and can convey these ideas are becoming a necessary part of many organizations and companies. The B Math program offers advance level training in Mathematics, so that students gain good analytical and problem solving skills built upon a background of Mathematics, Statistics and basic sciences. On successful completion of the course (depending on electives) students would be able to work in different areas of industry.

B.Math Third Year Students in ISI Bangalore Campus

Scope

The B.Math.(Hons.) degree programme offers comprehensive instruction in basic mathematics along with rudimentary courses in probability, Statistics, Computing and Physics. It is so designed that on successful completion, the students would be able to pursue higher studies in the areas of Mathematics, Statistics, Computer Science, and Mathematical Physics or take up a career in applications of Mathematics. The total duration of the B.Math.(Hons.) programme is three years.

Method of Selection

Each candidate applying for admission to this programme has to take a selection test comprising objective type and short answer type questions in Mathematics at the Higher Secondary level (10+2 years programme). Based on performance in the tests, a selected list of candidates are called for Interviews. The final list of candidates selected for admission to the programme is announced after the interviews. Also students selected for INMO are directly called for interviews.

Course Structure

The B.Math Program comprises four courses each in the first two semesters and five each in the last four. The courses are divided into 25 compulsory courses and 3 elective courses, plus a maximum of 3 non-credit.

Compulsory Courses:

1.Calculus in one variable
2. Probability I
3. Group Theory
4. Programming in C
5. Multivariate Calculus
6. Probability II
7. Linear Algebra
8. Classical Mechanics
9. Vector Calculus
10. Rings and Modules
11. Exploratory Data Analysis
12. Thermodynamics & Optics
13. Optimization
14. Graph Theory
15. Field and Galois Theory
16. Statistical Inference
17. Topology
18. Numerical Methods Matlab
19. Complex Analysis
20. Differential Geometry
21. Electrostatics & Magnetism
22. Regression Analysis
23. Fourier Series and Function Spaces
24. Differential Equations
25. Quantum Physics & Relativity

Elective Courses: (3 have to be chosen)

1. Representation Theory
2. Dynamical Systems
3. Stochastics in Insurance
4. Statistical Computing
5. Algebraic Geometry
7. Differential Geometry II
8. Differential Topology
9. Topics in Optimization
10. Combinatorics
11. Markov Chains
12. Applied Stochastic Processes
13. Discrete Data Analysis
14. Design of Experiments
15. Theory of Computation
16. Mathematical Morphology
17. Design of Algorithms
18. Data Structures

Batch Strength

Third year: 23 (4 female/19 male)
Second year:25 (0 female/25 male)
First year: 34 (3 female/31 male)

Academic Calendar for 2016-2017

Semester I : July 20th to November 18th 2016

Winter break: November 19th 2016 to January 03rd 2017

Summer break: May 06th, 2017 to July 2017

Semester II : January 4th to May 05th 2017

The various slots available for placements this year are as follows:

1. 14th October - 30th October 2016
2. 04th January – 12th February 2017
3. 27th February – 16th April 2017

Some of the important dates this year are:

1. Completion of end semester of the final semester: **05th May 2017**
2. Completion of Back Paper exams: **09th June 2017**

For Students (eligible for Summer Internships), joining date for internship will be from 6th May, 2017.

Please note that the above dates give an approximate idea, the exact schedule may change.

Kindly contact the placement representatives for detailed information regarding this.

Placement Guidelines

- Placement of ISI students is facilitated by the Placement Committee.
- All correspondences in this regard should be made with the Placement Committee. Please email us at **plcconv@isibang.ac.in** (mark subject: Placement).
- Students of the M. Math., M.S.(QMS), and MSLIS courses passing out in July 2017, are eligible for placement.
- Students of different courses are available for internships during their summer break which generally starts (in mid-May) after completion of their 2nd semester examination and continues till their third semesters begins
- Students (currently enrolled) of the B.Math, M. Math., M.S.(QMS), and MSLIS courses are eligible for summer and winter internships.
- The placement session for 2016-17 begins from first week of January, 2017.
- ISI does not charge any Placement Fee.

Campus Recruitment procedure:

- Companies interested in conducting campus recruitment need to send the duly filled-in the **Campus Recruitment Form(ISI-CRF)**, preferably with relevant company literature, by email/fax/courier/post to the Convener, Placement Committee. This provides the primary basis of communicating the details of the positions offered to the students.
- Companies interested in providing internships to students need to send the duly filled-in **Student Internship Form(ISI-SIF)**, preferably with relevant company literature, by email/fax/courier/post to the Convener, Placement Committee. This provides the primary basis of communicating the details of the positions offered to the students.
- Based on the feedback of the students and other institute activities, a mutually convenient date (single day) for the company visit is finalized by the Placement Committee. This booking is done on a first-come first-serve basis.

- Any specific requirement of the company (especially for briefing company profile to the students) has to be communicated to the Placement Committee at least one week in advance to avoid any inconvenience during their campus visit.
- Companies will be assigned only one day for the complete recruitment process and they have to declare the final list of selected students at the end of the day. Please use **Result Declaration Form** , if you don't have your own declaration format.
- Detailed offer letter may be sent to the Placement Committee for distribution among the selected students. The Committee will coordinate in sending back letters of acceptance to the employer from students.
- Students will join the companies only after the completion of their respective courses.
- The date of joining should preferably be within one month from the official date of completion of the respective course.
- Campus recruitment by placement consultants or third-party recruiters is not permitted.