INTRODUCTION

The Department of Management Studies at the Indian Institute of Science (IISc) is one of the oldest departments of management in India. It has been running post graduate programmes and the doctoral programme since the mid-1950s. Being a premier research institute of higher learning, it positions itself to train students in futuristic areas like technology management, business analytics and policy analysis.

The origin of the Department can be traced back to 1947 when the Section of Economics and Social Sciences was setup. This pioneering step was largely a result of the long-term vision of J.N. Tata, who had sown the seeds of management education and research in the country. This vision was given substance by the resolution of the Indian Institute of Science to establish a ‘...Philosophical and Educational Department, including methods of education, ethics and psychology, Indian history and archeology, statistics and economics, and comparative philology.’”
ACADEMIC PROGRAMMES

The Department offers Postgraduate (PG) & Doctoral (Ph.D) Programmes. The Master of Management (M.Mgt) is the PG Programme offered. PhD Programmes are offered under three streams:
- Regular Programme
- External Registration Programme (ERP) and
- Quality Improvement Programme (QIP).

RESEARCH AREAS

Business Analytics • Energy & Environmental Policy and Management
• Empirical Finance and Applied Statistics • Human Resource Management
& Organizational Behaviour • Industrial Economics • Innovation
Management • Operations Research • Operations Management • Project
Management & Entrepreneurship • Public Policy • R&D Management
& Knowledge Management • Strategic Management & Marketing
• Technology Management

ACHIEVEMENTS

Since 1969, the Department of Management Studies has awarded over 129 PhD and 464 post graduate degrees. More than 300 journal papers and another 300 conference papers have been published by the faculty along with 50 books and monographs. The alumni of the department hold important positions in several organizations across the globe.
INDUSTRY CONSULTANCY AND COLLABORATION


RESEARCH FUNDING FROM NATIONAL / INTERNATIONAL AGENCIES

The Section of Economics and Social Sciences was setup in 1947.

A Diploma Program (DIIsC), designed solely for the executives of Public sector, was started in 1954-55. This represented the earliest academic program in management for India’s industrial enterprises.

The Section of Industrial Engineering and Administration was set up in 1957.

In 1960, a research program known as Master of IISc was introduced.

In 1965, the Section of Economics and Social Sciences and the Section of Industrial Engineering & Administration were merged, to form Department of Industrial Management.

In 1967, One year PG Diploma in Industrial Management was started.

During 1982-1985, research on national issues including Public Sector Enterprises, Economic Planning and Small Scale Industries were taken up.

In 1985, the Department of Industrial Management was renamed as Department of Management Studies. The Diploma Program was replaced by M.Tech Program in Management Studies.

Research pioneered in energy planning, internalizing environmental concerns and assessing rural technologies.

In 1990, the Operations Research Society of India – Bangalore Chapter, was set up and a national conference on operations research was conducted.

A National Doctoral Consortium in Management Research for students was formed in 1997.

2000 saw the introduction of the MBA Program and integration of the Foreign Languages section.

In 2001, the National Doctoral Consortium was re-introduced in the form of Consortium of Students in Management Research (COSMAR). International Collaboration with George Mason University and Pforzheim Business School were established.

In 2008, the Department celebrated its 60th year along with Centenary celebrations of the Institute.

In 2011, the new PG Program, Master of Management (M.Mgt) is introduced.
The Faculty

M H Bala Subrahmanya
PhD (ISEC, Bangalore)
Professor
Industrial Economics, Innovation Management & Policy Studies

K B Akhilesh
PhD (IISc, Bangalore)
Professor
Human Resource Management, Organizational Behavior, Knowledge Management, R&D Management and Technology Management

C Mukhopadhyay
PhD (Missouri, USA)
Professor
Finance & Applied Statistics, SQC & Reliability

M Mathirajan
PhD (IISc, Bangalore)
Chief Research Scientist

Anjula Gurtoo
Fellow (IIM, Ahmedabad)
Professor
Policy Studies & Behavioral Science

Parthasarathy Ramachandran
PhD (Oklahoma State, USA)
Professor & Chairman
Operations Management, Discrete Optimization, Revenue Management & Dynamic Pricing, Web data Mining

Shashi Jain
PhD (TU Delft, Netherlands)
Assistant Professor
Quantitative Finance, AI, Machine Learning in Finance, Financial Risk Management, in Department Level(Academic Structure)

Prasanna Bapineedu
MBA (IIM, Bangalore)
Assistant Professor
Marketing Management, Digital Marketing, Revenue Management

Prashant Kumar
PhD (IISER, Pune)
Professor
Economics, Finance, Financial Risk Management

Yadnyvalekha
MS (Moscow), MA (CIEFL, Hyderabad)
Principal Research Scientist
Russian language & literature, Motivation factors & their impact on language learning, Scientific & Technical Translation, Russian classic literature, Lexicology, Methodology

P Balachandra
PhD (IISc, Bangalore)
Principal Research Scientist
Adjunct Professors

Mr. Vivek Kulkarni
IAS officer (Retd.)
Chairman & CEO - Brickwork India

Prof. Narendar Pani
Professor, NIAS

Dr. Prahalada
Vice Chancellor of D.I.A.T
DS & CC R&D, DRDO

Dr. Abhinanda Sarkar
Independent Consultant

Dr. Roland Haas
Founder QSO Technologies

Dr. Raghuram Devarakonda
Managing Partner, Accenture

Staff

Mr. C. Saleem Ahmed
Junior Scientific Assistant

Ms. D. Tharakeshwari
Personal Assistant
Masters of Management (M.Mgt) Program

In recent times, India is emerging as one of the global hubs of technology intensive organizations and R&D. Technology-based and R&D intensive industries need executives with exposure and training in Technology Management and Business Analytics. These executives need to have the ability to understand, assess and forecast how technologies impact the systems within and outside the organization (environment, economy and society at large). Formal education in analytics will strengthen the capability of these executives to perform robust analyses to make decisions in information and data driven organizations.

The Department of Management Studies is trying to build a niche in these areas by introducing a new Masters of Management Program focusing on Technology Management and Business Analytics. Located within Indian Institute of Science, a premier research institute of the country, students will have a unique advantage. They will be exposed to scientific processes, new technologies and product development within the R & D environment of the various laboratories of the Institute. Further, the vast computational and analytical expertise of the faculty in different departments of the Institute will be used to create leadership in the area of Business Analytics.

Students will be encouraged to do summer internships and projects as part of their curriculum. This exposure to live problems and challenges of running an enterprise, leads to an understanding of application aspects of management.

Minimum Qualification:  I Class BE/B Tech or equivalent degree and should qualify in CAT or GATE or GMAT.

Selection Process:  Group Discussion and Personal Interview
# Course Structure

## Course Work Details:

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Courses</td>
<td>24</td>
</tr>
<tr>
<td>Stream Courses</td>
<td>12</td>
</tr>
<tr>
<td>Electives</td>
<td>12</td>
</tr>
<tr>
<td>Project work</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>64</strong></td>
</tr>
</tbody>
</table>

## Term-Wise Breakup:

### First Term

**Hardcore courses:**  
MG 201, MG 212, MG 221, MG 231, MG 251.

### Second Term

**Hardcore courses:**  
MG 211, MG 241

**Stream core courses:**  
MG 271, MG 281, Two elective courses

### Third Term

**Hardcore course:**  
MG 261

**Stream core course:**  
MG 271, MG 298, Two elective courses

### Fourth Term

**Project work**  
16 credits

## Hard Core Courses

### Basic Disciplines
- MG 201 3:0 Economics
- MG 212 2:1 Behavioral Science
- MG 221 2:1 Applied Statistics
- MG 231 3:0 Principles of Management

### Functional Areas
- MG 211 3:0 Human Resource Management
- MG 241 3:0 Marketing Management
- MG 251 3:0 Finance and Accounts
- MG 261 3:0 Operations Management

## Stream Core Courses

### Technology Management Stream
- MG 271 3:0 Technology Management
- MG 274 2:1 Management of Innovation and Intellectual Property
- MG 281 3:0 Management of Technology for Sustainability
- MG 298 2:1 Entrepreneurship for Technology start-ups

### Business Analytics Stream
- MG 223 3:0 Applied Operations Research
- MG 225 3:0 Decision Models
- MG 222 3:0 Regression and Time Series Analysis
- MG 265 2:1 Data Mining
### Course Structure

#### ELECTIVES FROM OTHER DEPARTMENTS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE 290</td>
<td>3:0</td>
<td>Modeling and Simulation</td>
</tr>
<tr>
<td>SE 294</td>
<td>3:1</td>
<td>Data Analysis &amp; Visualization</td>
</tr>
<tr>
<td>E0 230</td>
<td>3:1</td>
<td>Computational Methods of Optimization</td>
</tr>
<tr>
<td>E0 238</td>
<td>3:1</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>E0 268</td>
<td>3:1</td>
<td>Practical Data Science</td>
</tr>
<tr>
<td>E0 270</td>
<td>3:1</td>
<td>Machine Learning</td>
</tr>
<tr>
<td>E0 306</td>
<td>3:1</td>
<td>Deep learning: Theory and Practice</td>
</tr>
<tr>
<td>E1 222</td>
<td>3:0</td>
<td>Stochastic Models and Applications</td>
</tr>
<tr>
<td>E1 251</td>
<td>3:0</td>
<td>Linear and Non-linear Optimization</td>
</tr>
<tr>
<td>E1 254</td>
<td>3:1</td>
<td>Game Theory</td>
</tr>
<tr>
<td>E2 201</td>
<td>3:0</td>
<td>Information Theory</td>
</tr>
<tr>
<td>E2 202</td>
<td>3:0</td>
<td>Random Processes</td>
</tr>
<tr>
<td>E2 204</td>
<td>3:0</td>
<td>Stochastic Processes and Queuing Theory</td>
</tr>
<tr>
<td>PD 209</td>
<td>3:0</td>
<td>Product Planning &amp; Marketing</td>
</tr>
<tr>
<td>PD 218</td>
<td>2:1</td>
<td>Design Management</td>
</tr>
<tr>
<td>PD 231</td>
<td>2:1</td>
<td>Applied Ergonomics</td>
</tr>
<tr>
<td>ME 239</td>
<td>3:0</td>
<td>Modeling and Simulation of Dynamic Systems</td>
</tr>
<tr>
<td>ST 202</td>
<td>3:0</td>
<td>Energy Systems and Sustainability</td>
</tr>
<tr>
<td>ST 203</td>
<td>3:0</td>
<td>Technology and Sustainability</td>
</tr>
<tr>
<td>MA 261</td>
<td>3:0</td>
<td>Probability Models</td>
</tr>
</tbody>
</table>

#### ELECTIVES FROM THE DEPARTMENT

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG 202</td>
<td>3:0</td>
<td>Macro Economics</td>
</tr>
<tr>
<td>MG 203</td>
<td>3:0</td>
<td>Industrial Policy &amp; Development</td>
</tr>
<tr>
<td>MG 213</td>
<td>3:0</td>
<td>Organizational Behavior</td>
</tr>
<tr>
<td>MG 226</td>
<td>3:0</td>
<td>Advanced Analytics</td>
</tr>
<tr>
<td>MG 242</td>
<td>3:0</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>MG 244</td>
<td>3:0</td>
<td>Services Marketing</td>
</tr>
<tr>
<td>MG 258</td>
<td>3:0</td>
<td>Financial Instruments and Risk Management Strategies</td>
</tr>
<tr>
<td>MG 272</td>
<td>3:0</td>
<td>R&amp;D Management</td>
</tr>
<tr>
<td>MG 273</td>
<td>3:0</td>
<td>Change Management</td>
</tr>
<tr>
<td>MG 276</td>
<td>3:0</td>
<td>Energy Policy</td>
</tr>
<tr>
<td>MG 277</td>
<td>3:0</td>
<td>Public Policy Theory and Process</td>
</tr>
<tr>
<td>MG 282</td>
<td>3:0</td>
<td>Technology and Society</td>
</tr>
<tr>
<td>MG 283</td>
<td>3:0</td>
<td>Science &amp; Technology Policy</td>
</tr>
<tr>
<td>MG 286</td>
<td>3:0</td>
<td>Project Management</td>
</tr>
</tbody>
</table>

#### SUMMER INTERNSHIPS

Interested students are encouraged to do internship with (i) Public / Private Sector R&D Organizations, and (ii) High-tech Industries in the Corporate Sector. Alternatively, students can get exposure to (i) Business Incubation, (ii) Venture Capital Funds, and (iii) Successful Start-Ups.
Research Program - Regular

The Department offers full-time research programme in management towards Ph.D degrees of IISc for candidates with following qualifications.

Minimum Qualifications for Ph.D:
ME / M Tech or equivalent degree or MBA or equivalent PGDBM or BE / B.Tech or equivalent degree or Master’s degree in Computer Science/Application, Commerce, Economics, Mathematics, Psychology, Operations Research, Social Work, Statistics.

Selection Procedure for fulltime students:
Candidates with ME/M.Tech or an equivalent degree including MBA (post BE/B.Tech) are eligible for direct interview. Candidates with BE/B.Tech/M.Sc. or an equivalent degree opting for Ph.D in Management should qualify in any one of the following tests given below (a) to (c). They will be short-listed for interview based on their performance in the qualifying test.

a) GATE (Graduate Aptitude Test in Engineering)
b) Joint CSIR-UGC NET for JRF (with a valid certificate)
   (Please note that Joint CSIR-UGC NET for Lecturership is NOT considered as a qualifying test for admission to research programs).
c) UGC NET for JRF (with a valid certificate)

On Admission: Candidates admitted to this programme must stay on campus during their course work and also during their research until they complete their research work.
Research Program - QIP & ERP

QIP
Under the Quality Improvement Programme (QIP), teachers from recognized engineering colleges will be considered for admission to the Ph.D Programme. For further information visit the QIP website www.aicte.ernet.in

External Registration Programme (ERP) for individuals employed in an R&D environment in scientific institutions or industries:
Opportunities to individuals employed in an R&D environment in scientific institutions or industries to pursue Ph.D degree is provided under the External Registration Programme (ERP). The eligible admission requirements remain the same as for the full time regular students.

External Registration Programme (ERP) for the faculty members from Educational Institutions:
Opportunities for Faculty members from Engineering colleges (Universities recognized by the appropriate government agencies) to pursue Ph.D degree is provided under the External Registration Programme (ERP). The eligible admission requirements remain the same as for the full time regular students.

On Admission:
Candidates admitted to the program must continue to remain in the same organization and place of work until the research work is completed. If the candidate is transferred or joins a new organization before the submission of the thesis, his/her registration shall be cancelled.
Candidates once registered will not be permitted to retain the registration in case he/she goes abroad unless he/she completes the course work and the Comprehensive Examination/General Test.
Candidates shall invariably obtain prior permission from the Institute before they go abroad as part of their work.

Residence Requirements:
The candidate is required to spend a minimum of one term or two terms of continuous residence at the Institute right after admission. Otherwise, the registration is liable to be cancelled. The courses to be taken by the candidate during the residential period will be finalized by the Research Supervisor from the Institute as per the academic requirements in force.
The candidate is required to spend at least 2 weeks of continuous residence at the Institute every year for consultation and interaction with the Research Supervisor and submit a certificate to this effect.
Current Students

Master of Management Students

Research Students
The Operational Research Society of India Bangalore Chapter (ORSI-BC), initiated by the Department of Management Studies, Indian Institute of Science, Bangalore (DoMS-IISc) and the Analytic Society of India (ASI), initiated by the Data Center and Analytics Lab, Indian Institute of Management Bangalore (DCAL-IIMB) organize the International Conference on Business Analytics and Intelligence (ICBAI) every year at the Indian Institute of Science, Bangalore 560012. The aim of the conference is to create a platform and facilitate knowledge sharing on advanced data analysis, business analytics and business intelligence for distinguished academicians, practitioners and researchers from all corners of world. The conference will feature demonstration of real world applications of business analytics and business intelligence presented by academics and practitioners.

The Consortium of Students in Management Research (COSMAR) began as the National Doctoral Consortium (NDC) in 1997. COSMAR is an annual research consortium that is organized by the Department of Management Studies, Indian Institute of Science, Bangalore. It provides a forum for interaction between research scholars specializing in different areas of management and related disciplines. COSMAR has always been a purely not-for-profit student-driven academic event.

18th Consortium of Students in Management Research (COSMAR) was organised on 29th and 30th November, 2018. Researchers from all over the country participated and presented their papers.
Departmental Events

COSMAR
The Consortium of Students in Management Research is an annual Conference conducted since 2001. This conference aims to provide a forum for researchers in management and allied disciplines from institutions across the country, to connect with other research students, industry professionals and leading academicians. COSMAR is the flagship event of the Department and is being successfully conducted for the past 10 years. It has been a precursor to many such conferences across the country.

RESEARCH STUDENTS SYMPOSIUM
The research symposium enables the student community to learn, understand and appreciate the work of the research scholars of department of management studies, while providing a constructive feedback to the research students.

FRIDAY SEMINAR
The Department organizes seminars by experts every Friday. These seminars provide an opportunity for students to interact with leaders in industry and academia.

BUDGET PANEL DISCUSSION
Expert panel discussion on the Budget is an annual feature.

OPEN DAY
Every year during the first week of March we have Open day celebrations. This is to commemorate the Founder’s Day. It is spread across two days; the Department is open to the public and various events such as management quiz, personality profiling and career counseling are conducted.

ALUMNI DAY
The alumni day is celebrated on the last Saturday of August every year. This event benefits the student community and encourages them to network with the illustrious alumni.

CONFERENCES
National and International conferences are hosted by the department periodically.
Department of Management Studies (DoMS), IISc has a vibrant Alumni network who are currently working in diverse profiles and holding various esteemed positions across the globe.

Our Alumni hold senior positions in private companies like:

Many of our Alumni have started their own ventures after getting rich industry experiences. Some of the companies in which our Alumni are a part of:
Anand Padi Finance ~ Brickwork India ~ Browne & Mohan ~ Compegence ~ Connected Dots ~ Cylive ~ Edex Consulting ~ EKA Techserv ~ Neev Technologies ~ Peepal Consulting ~ Raikar Metal Industries

Our Alumni hold faculty positions in academic institutiona like:
DEPARTMENT LEVEL

~ Multimedia Class Room (MMCR) with LCD projector, Video Conferencing HPC machines with 40 and 32 cores and Nvidia Tesla GPU cards.
~ Library with a collection of 2500 books and periodicals
~ Computer Laboratory with over 50 computers
~ Full-fledged classroom with all teaching aids.
~ Statistical Software Packages and databases for management teaching and research

INSTITUTE LEVEL

~ Supercomputer Education & Research Centre (SERC) with leading-edge computing systems and sophisticated software packages.
~ J R D Tata Memorial Library, which has a collection of over 5 lakh volumes of books, periodicals, technical reports and standards.
~ National Science Seminar Complex (JN Tata Auditorium), housing 4 auditoriums of various seating capacities for holding international and national seminars
~ National Centre for Science Information, which provides database access to a number of scholarly e-resources to the IISc community and digital archiving and dissemination of IISc research output.

MANAGEMENT DEVELOPMENT PROGRAMMES

Tailor made training programs for government and private organizations are offered by the faculty of the Department. Corporate and government institutions may contact the faculty for their training needs.

FOR VISITORS

We host students and faculty from institutions and universities across the world. We welcome international student exchange and invite faculty for short term visits to our department through the International Relations Cell (IRC). For more details, please refer to: http://www.irc.iisc.ernet.in/internationalstudents.html
Amenities and Campus Life

The Indian Institute of Science has a large green campus (443 acres) and provides various activities and facilities that makes the campus a wonderful place to live. Hostel accommodation is provided to all students who are admitted to the department.

The campus has a vibrant atmosphere, with many facilities for students. The IISc community is self sufficient and the facilities on campus make day-to-day life smoother and comfortable. Some of the facilities on campus are the computerized branches of Canara Bank and State Bank of India, travel agencies for both domestic and international travel, book shops, restaurants, provision stores and an amenities hall.

An in-house Health Centre provides primary health care to the staff and their dependents, students and their family. It offers round the clock out patient, in-patient treatment and emergency care. It includes a clinical laboratory, pharmacy, physiotherapy and even an operation theatre.

The Gymkhana offers world-class sports and recreational facilities to the students and staff. IISc also has a swimming club and cultural clubs to provide students with opportunity to escape from the academic rigour.