



Department of Industrial & Management Engineering (MTech) Indian Institute of Technology, Kanpur



Session 2020-21



ABOUT DEPARTMENT

Set up in 1974, the Department of Industrial and Management Engineering (IME) at IIT Kanpur is *one of the first in the country to recognize the strength of combining the training of engineers with management education*. The class being a heterogeneous mix of engineers from diverse fields naturally enriches the learning environment, turning it into a fountainhead of vibrant ideas.

The **MTech** program is the **flagship program** of IME department. It is one of the oldest to introduce industrial engineering in India. The program provides a perfect blend of industrial engineering and management science to its students. The well-defined structure of course work and a year-long thesis work provides in-depth knowledge of concepts to students. The intervening summer internships is used for practical project work in industries.

The program focuses on developing expertise in **Analytics** and **Operations** fields. It covers diverse topics from both the management and engineering paradigms. **Statistical Modelling** , Improvement of Productivity, Quality and Profitability in the Manufacturing sector, **Supply Chain Management** and application of **Optimization Techniques** and **Business Intelligence Tools in economics, finance, marketing and IT** are some of the areas to which students are exposed.





DEPARTMENTAL FACILITIES

IIT Kanpur boasts of world class infrastructure facilities. The department has been endowed with enviable computational facilities. In addition the department is equipped with the latest tools and systems used in the industries for the students to obtain hands-on experience. Having some of the most complicated software like product life **cycle management, simulation, statistical analysis, financial modeling, process design and control**, etc. in the well-equipped laboratories allow the students to learn the vital skills allowing them to succeed in future; both in industry and academia.



The IME department has the following labs

- Energy Analytics Lab
- Smart Systems and Operations Lab
- Product Lifecycle Management Lab
- Management Computing Lab
- Virtual Lab– Production Shop Simulation Lab of MHRD
- Management Simulation Lab
- Departmental Library



DEPARTMENTAL ACTIVITIES

Technologies Developed

Department of Industrial and Management Engineering (DIME) at IIT Kanpur as developed the following technologies.

- Train Running and Loco Performance Simulation Software (RDSO & BHEL)
- TrackSafe: Decision Support System to Enhance Safety of Railway Track WorkersISTP-GITA

Extra Curricular Activities

- Students of IME have active participation in **Student's Senate, Counseling Service Team & Overall Coordinators, Hall Executive Committee, Entrepreneurship Cell Executives.**
- They also participate in Annual Cultural and Tech Fest- Antaragni and Techkriti.
- Some students have excelled in the field of adventure sports (trekking etc.)

Research And Development

- Sponsored projects (in 5 yrs.) worth : **350 Million INR**
- Total papers published : **58**

Events/ Conferences/ Workshops

- IME Doctoral Colloquium 2018
- GIAN Courses- **Multi-objective Optimization Using Metaheuristic**
- **Data Analytics For Operations Research**
- Industrial visits
- Weekly industrial and academic seminars on **Analytics, Operations and Finance** from recognized speakers.
- Prabandhan - National level Management Festival

CURRICULUM

OPERATIONS

- Operations Research For Management
- Advanced Decision Models
- Supply Chain Management
- Design Of Production Systems
- Operations Management
- Total Quality Management
- Project Management

MANAGEMENT

- Financial Engineering,
- Financial Modelling
- Simulation And Optimization
- Human Resources Management
- Business Process Management
- Business Management Using Cloud
- Software Project Management

COMPUTING

- Introduction To Computing
- Computer Aided Decision Support Systems

ANALYTICS

- Probability And Statistics
- Statistical Modeling For Business Analytics
- Data Mining And Knowledge Discovery
- Big Data For Management
- Marketing Research
- Advanced Statistical Methods For Business Analytics
- Applied Machine Learning
- Introduction To Stochastic Processes
- Economic Analysis For Management
- Introduction To Game Theory

TOOLS/SOFTWARE

- PYTHON
- R
- JAVA
- SPSS
- SAS
- GAMS
- POM-QM
- PHP
- SQL
- Hadoop



SUMMER INTERNSHIP

The two year MTech program requires students to do a **compulsory summer internship** at the end of first year between May-July for a period of two to Three months. To cater to the growing industry demand most of the students undergo internship in the field of **Data Science, Business Analytics, Marketing, Finance and Operations.**

THESIS

One year long thesis work is aimed at providing means to get deeper knowledge in the field of interest. These thesis cover exhaustive areas of analytics, industrial engineering and management science such as **Market Basket Analysis, NLP, Big Data Analytics, Financial Analytics, Optimization, ERP, Heuristic development, Simulation of business systems and Supply Chain Management.**



BATCH PROFILE

2019-21



Abhinav Pateria



Abhishek Rai



Ashish Ubana



Arun Kumar



Divya Sharma



Faraz Ahmad



Pradnesh Lachake



Ravi Gunjan



Saurabh Gupta



Saurabh Patare



Shivam Sharma



Shubham Sahu



Souradip Patra



Sunil Kushwaha



Uday Kumar



Vipul Kumar



Vivek Prajapat



Yash Panchal

Areas of Interest

- Data Science
- Analytics
- Operations
- Product Management
- Consulting
- Finance
- Marketing



SUMMER INTERN PROJECT DETAILS

BATCH 2019-21

End-to-End Chat-bot Preparation for Agricultural Financial Organisation and Deployment in UI

Impact of Cheap Data Availability on the Lives of People in Different Strata

Twitter Match Making and Tagging Local officials, Location scraping, Followers list

Building Valuation and Farm Score

Logistics Management

Application of Supervised and Unsupervised Deep Learning Techniques on Crop Geospatial Data

Process Mining and Process Simulation; Module preparation and integration with ML pipeline

AWS Marketplace: Personal Identifiable Information Data Scrubber

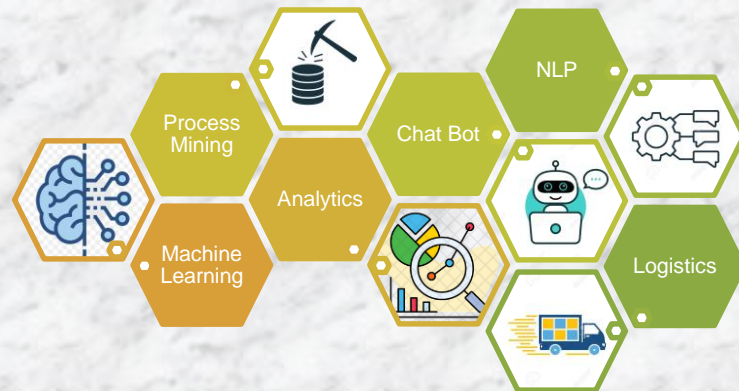
Building Footprint Regularisation and Programmable WhatsApp Messaging

Information Extraction from Files and Data Augmentation for NLP

Entity Based Summarization and Word Level Data Augmentation

Build Chat-bot using Dialog-Flow & Python

Video/Voice Profiling Model





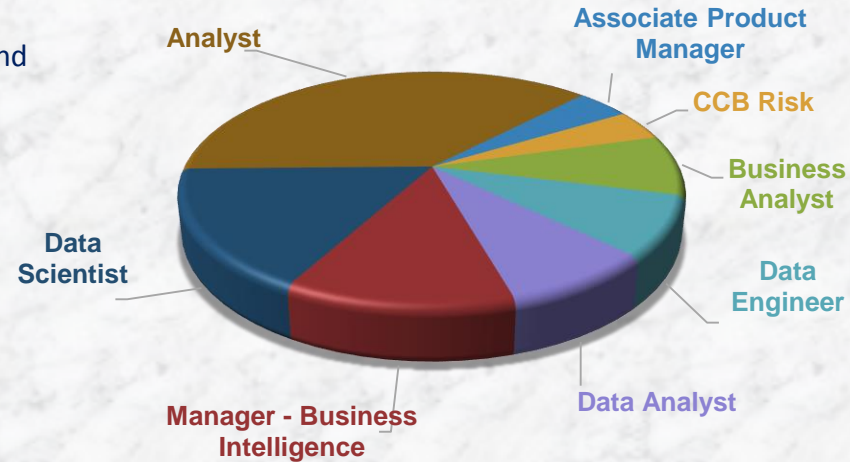
PLACEMENT STATISTICS

2018-20 BATCH

- The Batch of 2018-20 had young energetic and dynamic candidates from different streams of engineering.
- A few students of the batch also had prior work experience in different Industries.
- The students of MTech, IME Department were offered various roles and profile based on their chosen area of interest.

Total Number of Students	24
Placement Percentage	100%
Highest CTC	21.5 LPA
Top 30% CTC	17.24 LPA
Median CTC	12 LPA

PROFILES OFFERED





DISTINGUISHED ALUMNI

Name: P N Sarwade
Year: 1976
Organization: Tech Mahindra
Designation: VP Technology Procurement

Name: Deepak Saxena
Year: 1994
Organization: Ericsson
Designation: Account Director

Name: Vaibhav Dobriyal
Year: 2004
Organization: Crisp Analytics
Designation: Founder & CPO

Name: Vipul Agarwal
Year: 2007
Organization: Citi
Designation: Vice President

Name: Khem Aithani
Year: 1983
Organization: ITC
Designation : Senior VP

Name: Shobhit Mathur
Year: 1996
Organization: eRx Solutions Pvt Ltd.
Designation: Co-Founder & Director

Name: Sachin Namdeo
Year: 2005
Organization: Citi
Designation: SVP, Digital Marketing & Media

Name: Prabhakar Rao Koyyana
Year: 2007
Organization: Citi, Mumbai
Designation: VP & Site Leader

Name: Vishnu Potty
Year: 1990
Organization: Cognizant Tech Solutions
Designation: VP

Name: Manish Gupta
Year: 1997
Organization: Microsoft
Designation: Director

Name: Ashish Chandra
Year: 2005
Organization: United HealthCare Corporation
Designation: Associate Director

Name: Ekta Gupta
Year: 2009
Organization: Fiserv
Designation: Senior Business Analyst

Name: Mukul Srivastava
Year: 1992
Organization: Crompton greaves
Designation: VP

Name: Vikas Wadhvani
Year: 2000
Organization: aPriori INC
Designation: Director, Workday Integrations

Name: Saurabh Aggarwal
Year: 2006
Organization: Wipro Limited
Designation: Managing Consultant

Name: Deborshi Mallick
Year: 2013
Organization: Goldman Sachs
Designation: Business Analyst - Equity Research

Name: Sharat Sinha
Year: 1994
Organization: VMware, Singapore
Designation: VP

Name: Shobhit Shrotriya
Year: 2001
Organization: Accenture, Bangalore
Designation: VP

Name: Abir Mukherjee
Year: 2006
Organization: Citi
Designation: VP

Name: Hemendra Pandey
Year: 2014
Organization: Amazon
Designation: Program manager

FACULTY

Dr. Anoop Singh

Fellow in Management (IGIDR Mumbai)

Areas of Interest: Power Sector Regulation, Policy & Finance. Energy analytics, Energy Economics, Energy Pricing, Energy Efficiency. Former Deputy Director Economics, Haryana Electricity Regulatory. Member of the Working Group on Power for the 12th Five-Year Plan, Planning Commission.

Dr. Faiz Hamid

Fellow in Management (IIM Lucknow)

Areas of interest: Combinatorial Optimization, Network Optimization, Artificial Intelligence, Fuzzy Logic, Data Mining, Recommender Systems

Dr. Deepu Philip

Ph.D (MSU Bozeman USA)

Areas of Interest: Business Intelligence, Production and operations management, Systems engineering and simulation, Local search and optimization, Unmanned Aerial System

Dr. Devlina Chatterjee

Ph.D (IISc Bangalore)

Areas of Interest: Managerial Economics, Applied Econometrics, Rural Economics, Empirical Finance.

Specialization areas: Applied Economics, Statistical Modelling, Rural and Agricultural Markets.

Dr. B.V Phani

Ph.D (IIM Calcutta)

Areas of interest: Financial Analytics, Credit Risk Modelling, Securitization, Entrepreneurial Finance, Innovation and Entrepreneurship, Market microstructure and valuation.

-Associate Dean, Innovation & Incubation IIT Kanpur

Dr. Vanamalla V

Ph.D (IISc, Bangalore)

Areas of interest: Applied Operations Research, Optimization and Game Theory.

Dr. Subhas C Misra

Ph.D (Carleton University)

Areas of interest: Business Process Management, Enterprise Resource Planning (ERP), ERP and Supply Chain Management, Business Analytics/Data Analysis, e-Governance, Project Management

Dr. R.R.K Sharma
FPM (IIM Ahmedabad)

Areas of interest: Operations Research, Operations Management, Strategy. 117 publications (24 book chapters; 16 international conferences published and 57 journal publications) till date. Published two books (one on MRP systems and one on management control systems of organizations).

Dr. Avijit Khanra
Fellow (Ph.D) (IIM Ahmedabad)

Areas of interest: Inventory and Demand Management; Stochastic Modelling, System Analysis and optimization.

Dr. Amit Shukla
Fellow in Management (IIM Lucknow)

Areas of Interest: Emerging Employment Relationship, Citizenship Behaviour, Psychological Ownership, Positive OB, Academic Excellence, Staffing, Talent and Performance Management
Gold Medallist, B.Tech ISM Dhanbad 2001

Dr. Raghu Nandan Sengupta
Fellow in Management (IIM Calcutta)

Areas of interest: Sequential Estimation, Statistical and Mathematical Reliability Theory, Risk Analysis and its Optimization Techniques in Finance, Meta Heuristic Techniques.

Dr. Shankar Prawesh
Ph.D (Muma College of Business, USA)

Areas of interest: Big Data, Recommender Systems, Social Media, Agent Based Simulation.

Dr. Rahul Varman
Fellow in Management (IIM Ahmedabad)

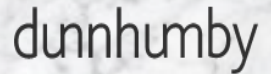
Areas of Interest: Organisation Theory, Industrial Relations, Business & Society. Founding head of the incubation center at IIT Kanpur.

Dr. Vipin B
Ph.D(IIT Madras)

Areas of interest: Decision Theory, Behavioral Operations Management, Supply Chain Contracts, Optimization in Operations Management.



PAST RECRUITERS





CONTACT



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