M.Tech.
Artificial Intelligence
Indian Institute of Science

WHY

AI has broad impact in all walks of life

- World class AI expertise at IISc
- Rankings of participating Departments
- Strong demand from industry across areas of engineering & science, placement and internship opportunities with top firms and start-ups
- Among the first AI focused programmes with a strong partnership between academia and industry

WHAT

Wide coverage of domains: NLP, Vision, Speech, Robotics, AI Hardware

- Course types: Foundations/theory & application-oriented, focused programming modules
- Dedicated year-long project on a cutting-edge AI area
- State of the art compute facilities: 4 industry-funded AI labs equipped with modern high-end GPU clusters

HOW

Participating Depts

Industry partners

TATA · TATA ELXSI · SBI card Pehel · groupm · TIMKEN · Mindtree

AI @ IISc

WHO

- Student intake from diverse backgrounds: EE, CS & ECE.
- Attractive awards and fellowships for top performing students and incentives for women candidates
- Over 30 faculty from different domains teach as well as guide M.Tech. projects

INDIAN INSTITUTE OF SCIENCE
भारतीय विज्ञान संस्थान

MORE INFO

M.Tech (CSE)

A two-year degree program, offered by
Department of Computer Science and Engineering,
Indian Institute of Science (IISc), Bengaluru

WHY

- Strong foundations in theory and practice of computer science
- Strong demand for graduates among large companies as well as startups
- Prepares you for further research or study should you choose
- Located in Silicon Valley of India!
- Department is ranked 94 in the world as per the prestigious csrankings.org, ranked first in India

WHAT

Rich variety of courses, across three streams.

- Theoretical Computer Science Stream.
- Computer Systems and Software Stream.
- Intelligent Systems Stream.

WHO

- Should possess 4 year BE/BTech or equivalent degree
- Indian citizens, OCI with degree from India or domiciled in India:
  - Initial shortlisting based on GATE (CS) score
  - Shortlisted candidates to appear for programming test
  - Final selection based on 70% weightage for GATE score & 30% weightage for programming test.
- Foreign Nationals are welcome to apply.
  Selection based on GRE/GRE Subject/GATE score & performance in previous studies.

HOW

- 43 credits of course work: 8 credits soft core from each stream, rest electives.
- 1-year project, with exposure to world-class research work (21 credits)
- Summer internships encouraged
- Emphasis on soft skills, coding boot camps, and placement readiness

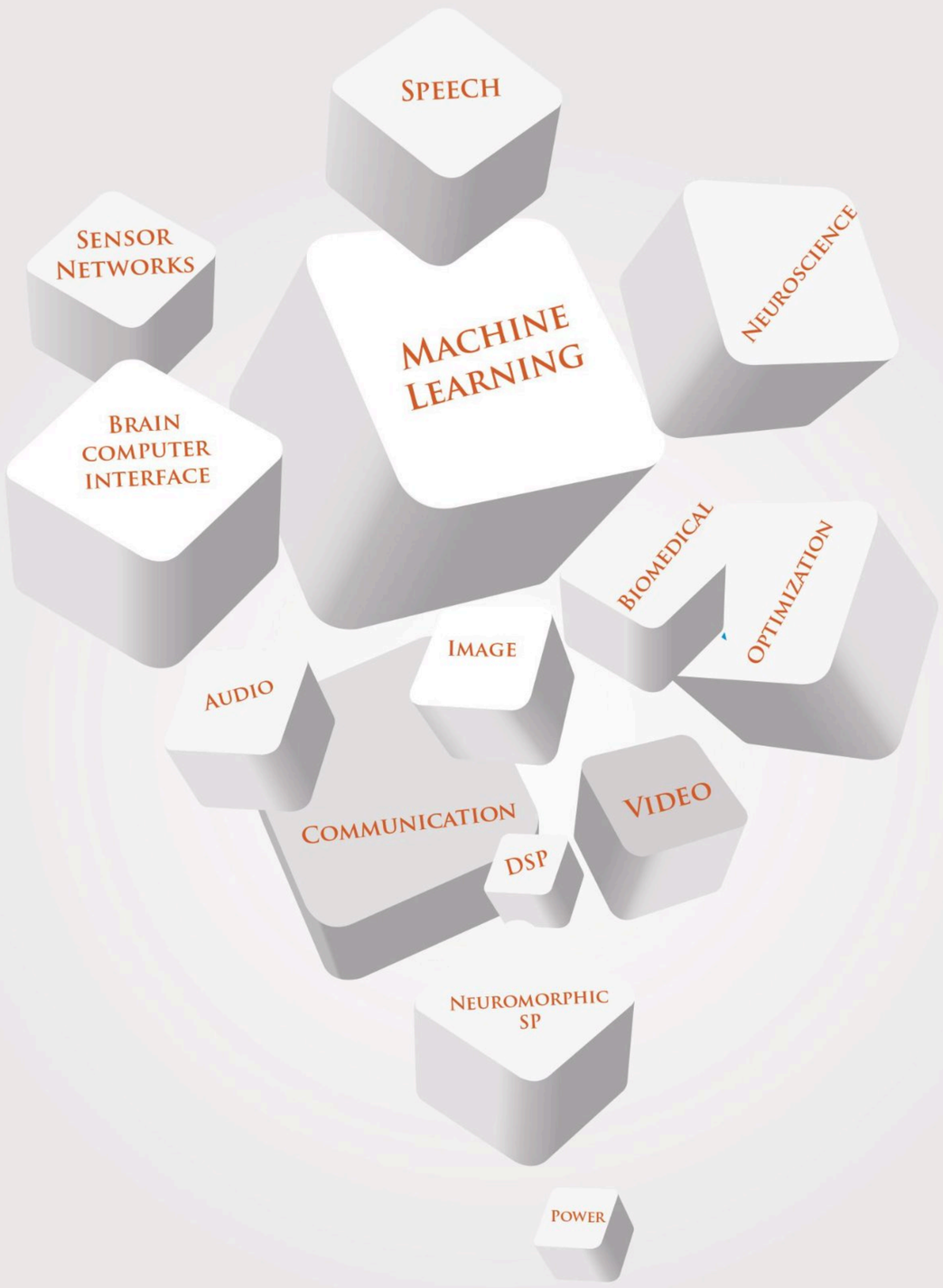
MORE INFORMATION www.csa.iisc.ac.in

https://iisc.ac.in/admissions/m-tech-m-des/ [Indian citizens]

https://oir.iisc.ac.in/index.php/m-tech-course-program-admission/ [Foreign nationals]

M.Tech. Signal Processing (SP)

Indian Institute of Science



Application

- Bachelor of Engineering/ Bachelor of Technology in Electrical Engineering, Electronics and Communication Engineering
- Valid GATE score in EE or ECE
- Deadline for online submission of applications March 22, 2022

MORE INFO

Curriculum

- Revamped curriculum with state-of-the-art courses in Signal Processing, Machine Learning, and various specializations
- Year-long project work leading to innovative technologies and publications in premier conferences and journals

- The highest ranked Indian university in the Times Higher Education World University Rankings 2021
- India's No. 1 Institute according to National Institutional Ranking Framework (NIRF) 2021 in both University and Research categories
- IISc Bangalore is world's top research university as per the citations per faculty indicator, according to the QS World University Rankings 2022.
- One of the 5 Institutions in India to be granted the Institution of Eminence (IoE) status in 2018
- State-of-the-art infrastructure, world-class faculty, excellent publication record, strong industry interaction
- Top-class placements
- Excellent launchpad for PhD in India and abroad

Placements

DRDO

भारत इलेक्ट्रॉनिक्स BHARAT ELECTRONICS

Google IBM Microsoft

Texas Instruments NVIDIA CISCO

SAMSUNG QUALCOMM

ADMISSIONS

SP PROGRAM

For more details | http://www.ee.iisc.ac.in/academics-courseprograms.php

http://ece.iisc.ernet.in/index.php/academics/degree-programs/mtech-signalprocessing

Indian Institute of Science
भारतीय विज्ञान संस्थान

M.Tech. (ECE) at IISc

A flexible masters programme with coursework that provides solid foundational training on topics such as:

- COMMUNICATIONS AND NETWORKING
- DIGITAL COMMUNICATIONS
- INFORMATION AND CODING THEORY
- MACHINE LEARNING
- MICROELECTRONICS DEVICES AND CIRCUITS
- MICROWAVE ANTENNAS AND RF CIRCUITS
- OPTICAL COMMUNICATIONS

ADMISSION PROCESS

QUALIFICATION AND ELIGIBILITY -

B.E./ B.Tech or equivalent degree with a GATE paper in EC/EE

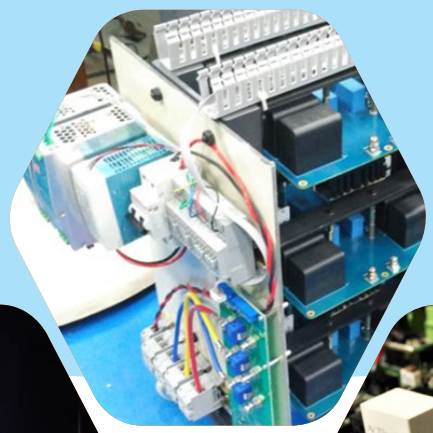
After the screening, the candidate will be called for an interview

The final selection will be based on GATE and the interview

For online applications visit:
https://admissions.iisc.ac.in/
http://ece.iisc.ac.in/

MTech (EE) @ IISc

A two-year degree program offered by the Department of Electrical Engineering (EE) Indian Institute of Science (IISc), Bengaluru




WHAT

- Focus on three major areas: Power electronics, power systems and high voltage engineering.
- Course work aims to develop strong fundamentals in theory and practical skills through hands-on training in cutting edge technologies.
- The year-long project provides an opportunity to work on exciting problems in the frontiers of research.
- The system development experience both in hardware and firmware is a unique feature of this program.

WHY

- World-class faculty, fabulous infrastructure, and cutting-edge research.
- Strong demand from industry, 100% placement record, opportunities with top companies and start-ups.
- Excellent launchpad for students who want to pursue a PhD in India or abroad.

WHO

- Bachelor's degree in Engineering or Technology or equivalent degree in Engineering.
- Valid GATE score in Electrical Engineering discipline. It is expected that the students will have a strong mathematical background.

HOW

- Shortlisting for a technical interview is done based on the GATE score.
- The final selection will be based on the performances in GATE and interviews.

PLACEMENTS

NVIDIA, GE, intel, Texas Instruments, Analog Devices, Lam Research, Siemens, ABB, Hitachi, MATLAB, Bajaj

and many more...

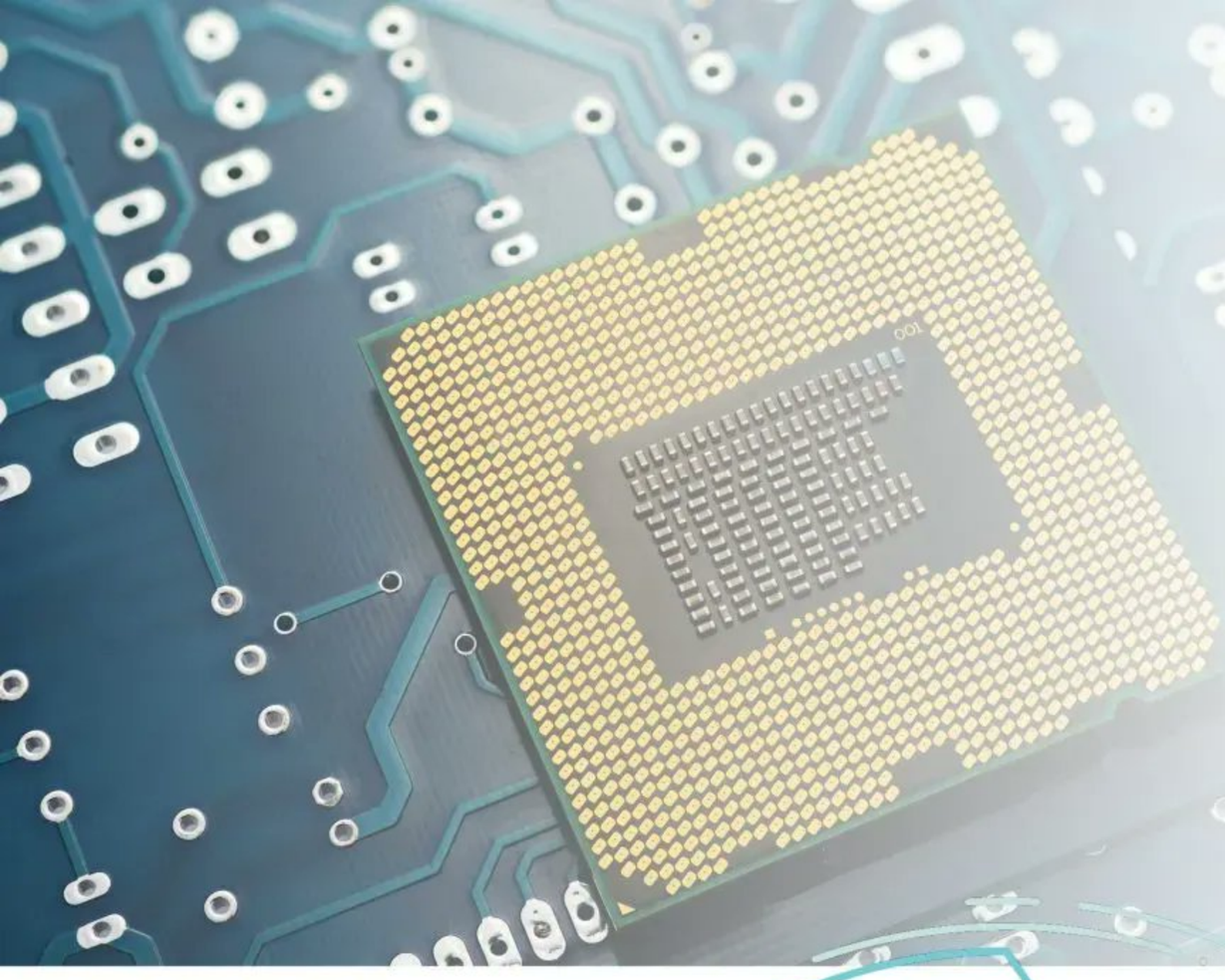
Online Application

Important dates

MTech (EE)

INDIAN INSTITUTE OF SCIENCE भारतीय विज्ञान संस्थान

IISc



MTECH (MVLSI) PROGRAMME

MICROELECTRONICS & VLSI

WHAT

Focused Course work

Digital VLSI Circuit; Analog VLSI Circuits; Semiconductor Devices and Technology; Nanoelectronics Devices; Microelectronics Lab; Digital Systems Design with FPGAs; Physics and Design of Transistors; Carrier Transport in Nanoelectronics Devices; Compact Modelling; Optoelectronic Devices; RF IC and Systems; Photonic Integrated Circuits; Design of Power Semiconductor Devices; Reliability of Nanoscale Circuits and Systems.

Why is this a first choice of GATE aspirant's and most preferred program of GATE toppers

Industry-Affiliate & Research-Centric Program

Pull from Leading Companies Like Intel, Texas Instruments, Qualcomm Etc.

Besides, Comprehensive Theory & Practical Training to undertake Ph.D. Research at World Leading Universities like IISc or those Abroad

PROJECT

Individually Mentored Year-Long Project Work; Innovative R&D In Cutting-Edge Technologies; Peer Reviewed International Publication/Patent; Industry Engagement

HOW

Learn From Leading Experts Having Expertise in Scientific Research & Technology Development

Key Components of the Program

- VLSI Circuit/System Design
- Microelectronic Devices & Technology

Lab-Mode Industry-Oriented Training

State of the Art Laboratory Facilities with Industry Standard EDA Software, Outstanding Test Instrumentation, World-Class Clean Room & Fabrication Facility

Program Jointly Conducted by Department of ESE & ECE

WHO Can Enroll

BE/BTech or Equivalent Degree (with a GATE Paper in EE; EC; CS; IN)

Given It's The Most Sought-After Program of The Country, the GATE Cut-Offs are Extremely High. However, We also Encourage GATE Scorers up to 500 Rank to Apply to Get a Call for the Written Test & Interview

www.iisc.ac.in

INDIAN INSTITUTE OF SCIENCE
भारतीय विज्ञान संस्थान

ESE

ECE

MTech in Electronic Product Design (EPD)

DEPARTMENT OF ELECTRONIC SYSTEMS ENGINEERING
Indian Institute of Science, Bangalore

Hands on Program to Become an Entrepreneur, Become Atmanirbhar

This is part of a "Special Manpower Development Programme" (SMDP) funded by MeiTY to give a push towards entrepreneurship and self-reliance in electronic product design..

☑ WHY

There is significant lack of entrepreneurs/industries in electronic products segment

Tech start-ups in electronic product discipline is very limited

There is a need to push towards entrepreneurship and self-reliance in electronic product design
This programme is consistent and complements the national Atmanirbhar programme.

☑ WHAT

You will learn about IoT, embedded systems, analog electronics, digital electronics, mechatronics, power aspects, electronic packaging, microfabrication, communication networks, industrial design, thermal design, product design, go-to-market projects, entrepreneurship, and tech start-up aspects

You will do 1½ year projects with strong industry relevance and stronger industry mentorship

You will be ready to become an entrepreneur at the end of the programme.

☑ HOW

By ensuring students experience all the stages and processes involved in conceptualizing, investigating, designing, and manufacturing electronic products

By training students to produce creative design leaders in electronic products and to prepare the future entrepreneurs in electronic product design

By providing strong entrepreneurship background along with strong electronic product design skills

Hand holding even beyond the Mtech programme by providing support for incubation

☑ WHO

BE/BTech or equivalent degree (with a GATE Paper in EE, EC, ME, IN)
Selection will be based on GATE and interview

Those who have an aptitude and passion to *create, invent, make*

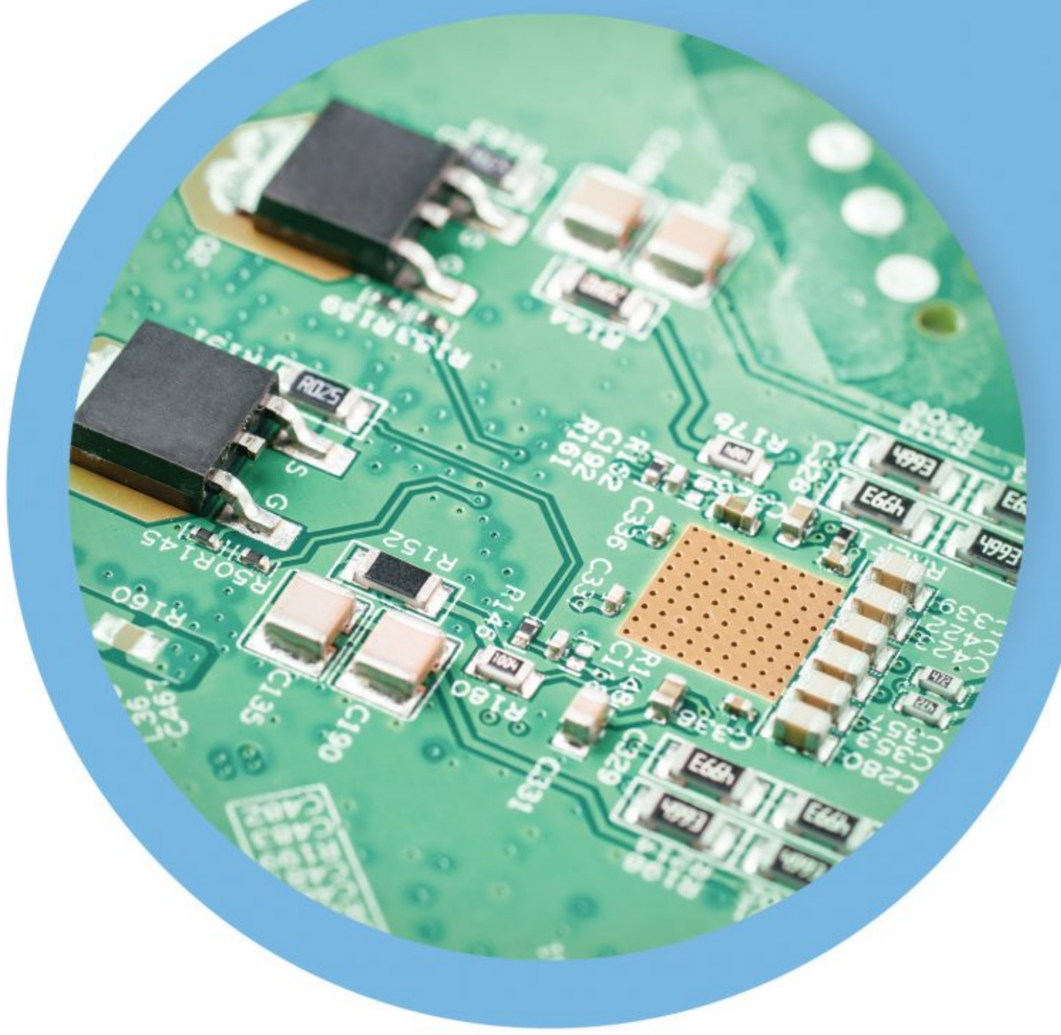
Those who have passion for hands-on work, electronics, system integration, using workshop tools, 3D printing, laser cutting, CNC operation, CAD modeling, sheet metal work, design thinking, ideation, business pitching, business ethics, company law, team work ....

https://dese.iisc.ac.in/mtech-epd
Phone: +91-80-2360 0810
+91-80-2293 2246
email: info.dese@iisc.ac.in

Department of
Electronic Systems Engineering,
Indian Institute of Science,
Bangalore-560012

MTech (ESE) Programme

Electronic Systems Engineering



WHY

Systems span systems-on-chip to systems-off-chip. Breadth and depth of skill and expertise in these areas to achieve realisable systems is a need that is seriously lacking

Systems-on-chip and systems-off-chip development is a very interdisciplinary topic. It needs to be taught in an integrated manner to realise systems

Industry needs and looks out for electronic systems engineers.

Semiconductor technologies and systems is being given a massive push for indigenisation.

WHAT

You will learn about digital VLSI, analog VLSI, IoT, FPGA, embedded systems, analog electronics, digital electronics, power aspects, electronic packaging, communication networks and about system integration and design

You will do 1 and half year projects on very industry relevant electronic systems

HOW

By ensuring students experience all the stages and processes involved in conceptualizing, investigating, designing, and manufacturing electronic systems

By training students to produce creative design leaders in electronic systems

WHO

BE/BTech or equivalent degree (with a GATE Paper in EE; EC; IN)

Selection will be based on GATE and interview

Those who have an aptitude and passion to create, invent, make

www.iisc.ac.in

ROBERT BOSCH CENTRE
for CYBER-PHYSICAL SYSTEMS
Indian Institute of Science, Bangalore

M. Tech. in Robotics and Autonomous Systems at IISc

Salient Program Features

- Firm Theoretical Foundation in Control and Optimization, AI and Machine Learning, Perception and Planning, Modelling and Simulation.
- Extensive Hands-on Training on Robot Programming, Simulation Frameworks like Gazebo, ROS, Rapid Prototyping.
- Industry Exposure via industry-academia collaborative research projects.
- Entrepreneurship Opportunities through IISc Technology and Innovation Hub (ARTPARK) to incubate & translate research.
- Exciting Careers in companies/startups.

Facilities

- Asha – the Humanoid Robot
- In-house Makery
- Drone Testbed
- 5G Autonomous Vehicle Testbed
- Networked Robotics Testbed
- ARTPARK - Technopreneurship Hub

Research Themes

- Control and Optimization
- Walking and Mobile Robots
- AI and Machine Learning
- Multi-robot Systems
- Human Robot Interaction
- Autonomous Vehicles

Basic Qualifications

BE/B Tech/BS (4 years) or equivalent with GATE in CS/EE/EC/AE/ME/IN

For more details about M.Tech. in RAS visit -
https://cps.iisc.ac.in/academics/

Application Deadline: **22 March, 2022**

M.Tech. (Online)
Artificial Intelligence

About IISc

- Best University in the country according to the Human Resource Development Ministry's National Institutional Ranking Framework (NIRF), 2021.
- One of the 11 institutions in India to be granted the Institute of Eminence (IoE) status.
- Highest-ranked Indian University in the Times Higher Education (THE) World University Rankings, 2022.
- Ranked among the top 200 Global Universities as per the Quacquarelli Symonds (QS) World University Rankings, 2022.

About M.Tech. (Online)

- Master of Technology (Online) degree programme, a fully online programme, for practising engineers and scientists.
- Designed for professionals who are sponsored by organisations, who already have a BE/BTech/Equivalent degree and wish to upskill or re-skill themselves.
- The total time for completion is between 2 and 3 years.
- Equivalent to the regular full-time Master of Technology degree.

Course structure

- Strong emphasis on foundations and research in deep learning.
- Exposure to a wide variety of areas including Robotics, Edge-computing, NLP, Computer Vision and Speech.
- Curriculum (Core courses 13 credits, Electives 24 credits, Project 27 credits)
  - **Core:** Random Processes, Linear Algebra, Linear and Nonlinear Optimisation, Machine Learning
  - **Sample Elective courses:** Foundations of Robotics, Digital Image Processing, Reinforcement Learning, Deep Learning for Computer Vision, Speech Information Processing, Data Analytics, Machine Learning and Edge Computing, Advanced Deep Learning, Spectral Methods for Pattern Analysis, Machine Learning in Neuroscience.
  - **Project**: 6 credits in the first term, 21 credits in the second term.

Eligibility

- BE/BTech in CSE/ECE/EE or equivalent
- At least 70% of marks or equivalent CGPA in all degrees
- Two years of industrial experience.

For more details: https://iken.iisc.ac.in/mtech-online

M.Tech.(Online)

Electronics & Communication Engineering

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Programme Structure

- **Core courses (12 credits)**
  - Random Processes
  - Digital Communications
  - Detection and Estimation
- **Sample Elective courses (at least 24 credits)**
  - Matrix Theory
  - Error Control Codes
  - Data Analytics
  - Analog VLSI Circuits
  - Optimisation for ML and SP
  - Communication System Design
  - Wireless Communications
  - Communication Networks
  - RF ICs
  - Image Processing
  - Antenna Theory and Practice
  - Integrated Circuits for Wireless Communications
  - Compressive Sensing and Sparse Signal Processing (3:1)
- **Project (28 Credits)**

Eligibility

- BE/BTech in ECE/EE or equivalent.
- First class or 60% of marks or equivalent CGPA in all degrees
- Two years of industrial experience.