Information Brochure

2015-2016

3 Years M.Tech Programme

@ Kolkata Extension Centre

INDIAN SCHOOL OF MINES
DHANBAD – 826004
Jharkhand, India

About ISM

The **Indian School of Mines, Dhanbad** is one of the most reputed Institutes for technological education and research in India. From its inception in 1926 the school had a national outlook. What started as an institution to impart mining education has graduated into a full-fledged technical institution of international acclaim offering programs like B.Tech, Dual Degree, Integrated M.Tech, M.Tech, M.Sc, M.Sc. Tech., MBA, Executive MBA, and Post-Doctoral Fellowship programme. The school has relations with reputed universities worldwide.

The serene campus comprises academic buildings, student hostels and 100% residential facilities for faculty and staff apart from other infrastructure facilities for a cosmopolitan community. The School has links with reputed universities and institutes across the globe and has an alumni base all over the world. The School today is making foray into the newer areas of academic endeavors in tune with the changing times.

About Programme

Indian School of Mines, Dhanbad is going to start the three years M Tech programme for Working Executives / Academicians who cannot complete their M. Tech. as full time regular student, from 2015-2016 session. This programme will run at **ISM Kolkata Extension Centre, NBCC Shopping Complex, New Town, Rajarhat Kolkata**.

It is a slow pace programme without compromising the course structure or contents. This aims to help the Working Executives / Academicians to improve their technical aptitude and opts for Higher Degree as a regular student within the existing pace of the program with some time expansion to promote completion of program.

This is essentially self-financing programme for working class executives of the industry and academicians with adequate professional focus.

Course Structure is distributed in six semesters and is designed to prepare Working Executives / Academicians for professional careers in the area.

Candidates may be permitted to do their dissertation (in final year) in industries and other approved organizations.

Eligibility Criteria

1. Candidates seeking admission to M.Tech. Programme of the Institute should have Minimum 55% or CGPA/CPI of 5.5 in 10 point scale (without rounding off) in the qualifying degree for UR (Unreserved)/OBC candidates

2. Minimum 50% or CGPA/CPI of 5.0 in 10 point scale (without rounding off) in the qualifying degree for SC/ST candidates.

3. Executives/Academicians/supervisors with one year post qualification experience from reputed industrial/R&D, Academic Institute, public sector, Government, Semi-Government and reputed private sector organisations are desirable.

Courses

M.Tech in Electronics and Communication Engineering

Intake

Electronics and Communication Engineering (ECE) - **30**

Qualifying Degree

M.Tech in Electronics and Communication Engineering (ECE)

B. Tech./B.E. or equivalent degree in Electronics/Electronics & Communication / Electronics & Telecommunication/ Electronics & Instrumentation / Instrumentation / Electronics & Electrical Engineering.

Duration

- The M Tech Program is of three years duration (Six Semesters).
- Session commences as per ISM Academic Calendar.
- The classes will be held **at ISM Extension Centre situated at Kolkata**, NBCC Shopping Complex, New Town, Rajarhat Kolkata as follows:

  Saturday- 03:00 PM to 8:00 PM
  Sunday- 10:00 AM to 8:00 PM
  Monday to Friday - 06:00 PM to 8:00 PM (If necessary)

- Candidates may be required to visit Indian School of Mines, Dhanbad for practical classes on selected weekends (Saturdays and/or Sundays).

Course Fee

The total programme fee is **Rs. 3,30,540.00 (Three lakhs thirty thousand five hundred forty only)** payable in three instalments:

- **Rs. 1,25,462/- at the time of admission,**
- **Rs. 1,02,539/- at the time of second year registration, and**
- **Rs. 1,02,539/- at the time of third year registration.**

This is a self-financed course and therefore, no fee waiver / exemption will be allowed and there is no provision for payment of scholarship to the student under these courses.

Selection

Applicant shall have to appear for written test and /or interview to be conducted by Indian School of Mines at Dhanbad. The syllabus for the written test and /or interview is as per GATE Examination. Final selection shall be based on aggregate scores of written test, Interview and Experience. The sanctioned strength for the program is thirty (30). The reservation policy of Government of India meant for higher educational institutions is strictly adhered to.

Application Process

- Application Form for 3 Years M Tech Program will be available in the institute's website **http://www.ismdhanbad.ac.in.** from **Jun 26, 2015**.

- **Application fee: Rs. 2000/-** and should be paid through *Demand Draft drawn in favour of* **Registrar, Indian School of Mines** and *payable at* **Dhanbad**.

- The filled-in application form along with application fee and necessary documents should be submitted to **Assistant Registrar (Acad. & Exam), Indian School of Mines, Dhanbad – 826004, Jharkhand**, latest by ***5 PM on July 15, 2015***.

- The envelope containing the application form and other necessary documents should be super-scribed with "**Application for Admission in 3 years M.Tech.-2015 in Electronics and Communication Engineering (ECE)**".

- *Late submission of application form due to postal delays or any other reasons will not be considered by any means.*

NOTE: The institute will not issue any letter to any candidate regarding appearing for written test or attending interview as well as selection to the Programme. The candidates must consult institute's website (www.ismdhanbad.ac.in) regularly in this regard or for any updates, if any.

Important Dates

- Availability of Application Form in the Website: **June 26, 2015**
- Last Date of Receiving Application Form: **July 15, 2015**
- Date of Written Test/Interview at ISM Dhanbad: **July 18-19, 2015**
- Publication of Result on website: **July 24, 2015**
- Admission of selected candidates: **July 27, 2015**
- Admission of wait listed candidates: **July 30, 2015 (if necessary)**
- Commencement of classes: **August 02, 2015**

Course Structure

FIRST SEMESTER

Advanced Optical Communication
Project Management
Advanced Optical Communication Lab
Elective - I (any one)
Microwave Devices and Circuits
Integrated Optics
Microwave Remote Sensing
Advanced Signal Processing
Computer Communication Networks
Digital VLSI Circuits Design
Nanoelectronics

SECOND SEMESTER

Embedded System Design
Advanced Communication Theory
Embedded System Design Lab
Elective- II (any one)
Optical Networks
Fiber Optic Sensors
Numerical Techniques in Electromagnetics
Advanced Antenna Theory
Microwave Metamaterials
Microwave Photonics
Digital Image Processing
Wireless Sensor Network
Multicarrier Communication
Internet Technology
Computational Intelligence
VLSI Interconnect
Analog VLSI Circuit Design
Advanced Solid State Devices
Current Mode Analog Circuits

THIRD SEMESTER

Microelectronics and VLSI
Microelectronics and VLSI Lab
Elective - III and Four (any two)
Advanced Engineering Electromagnetics
Microwave Measurement
Advanced Optoelectronic Devices
Digital Speech Processing
Cryptography & Network Security
Detection and Estimation Theory
VLSI Technology
Computational Electronics
VLSI Circuits and Testing

FOURTH SEMESTER

Mobile Communication
Mobile Communication Lab
Dissertation – Part I
Comprehensive Viva – Voce

Electronics and Communication Engineering

Course Structure

FIFTH SEMESTER

- Industrial Training/Minor Project
- Seminar and Viva-voce on Industrial Training / Minor Project
- Dissertation – Part II
- Seminar and Viva-voce on Dissertation – Part II
- Teaching Assignment Evaluation/Lab Development Works, etc.

SIXTH SEMESTER

- Dissertation – Part III
- Seminar on Dissertation – Part III
- Viva-voce on Dissertation – Part III
- Teaching Assignment Evaluation/Lab Development Works, etc.

About Department

Department of Electronics Engineering

The department of Electronics Engineering was established in 1976 as supporting department and it became a faculty department in 1998. The department has expertise in the areas of Microprocessors, Electronic Devices, Optical Fiber Communication and Sensors, Digital Image and Signal Processing, Microwaves & Antennas, Computational Electromagnetics, Instrumentation and Digital Control, Computer Vision and Microelectronics. The department has excellent faculty members, who are underpinning the knowledge, skill and talents of the students.

Major R & D projects funded by various organizations (including DST, DRDO, ISRO, MHRD and Ministry of Information & Technology, Govt. of India) are ongoing/completed in the areas of Digital Signal Processing, Computer Vision, RF & Microwave Engineering, Distributed Control System, Broadband ASE Fiber Source, Erbium Doped Fiber Amplifiers, Robotics, Analog Current Mode Circuits and Nano-structure semiconductor Devices. The department runs two B.Tech programme in Electronics & Communication Engineering and Electronics & Instrumentation Engineering also actively engaged in Ph.D programs catering to every field of Electronics Engineering. The M. Tech. Program in Electronics & Communication Engineering is in full swing from July, 2006. In addition to regular academics the department undertakes R&D and consultancy projects.

The Society of Electronics Engineering under the department caters to the professional needs of the students and reckons various events such as technical events, seminars, etc. Guest lectures are regularly organized to inform students about the latest developments in the field of electronics. It also has active association with IEEE and ACM.

Contact Details

Department of Electronics Engineering

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JURISDICTION: *In case any claim or dispute arises in respect of M.Tech. admission and related issues, it is hereby made absolutely clear that the Courts at Dhanbad and Dhanbad alone shall have the exclusive jurisdiction to entertain and settle any such dispute or claim.*