



## **DIFFERENT OPTIONS WHICH CAN BE THOUGHT OF AFTER COMPLETION OF B.TECH:**

**1. Job after graduation (B.Tech)** - The job opportunities after B.Tech is a good option. You can enter the software industry according to your specialization provided you possess good communication skills. It is better to get job in a company through campus placements as it is difficult to get job after you are out of the college. You can also do job for sometime after completing B.Tech and then start studying for your P.G course. We know it is not an easy task to look for a job which fulfills our requirement but in an age of so much competition it is a troublesome task. If you are economically efficient and don't need a job, it is better you go for your further studies. A specialization will always earn you more salary as well as priority during interviews and of course sound grip over subject. Otherwise you can find some job.

**2. Doing Post Graduation (M.Tech/M.S./MBA)** - Most of you think that it is better to stop education at graduation level and invests their efforts in getting a job. Very few are interested towards higher studies. Investing in higher education will yield long term benefits. As B.Tech is a bachelor level course in Technology, one cannot take it as the last and final qualification degree, especially in the present time when the market is full of competition all around. Mere earning a bachelor's degree cannot give you a job, in the present era. There are more applicants than the number of jobs available, and hence it is very essential for everyone to be specialized in their respective field. Doing post graduation not only gives an additional degree but also it enhances your intellectual and maturity levels. It makes you specialist in a particular area or field so that you will be suitable for specific job.

If one decides to do post graduation then there arises a question, weather to do M.Tech or M.S. or MBA. This decision completely depends on the person and his or her personal interest.

**Earn money and live fast- MBA/MS**

**Earn respect and live peacefully- M.Tech.**

If one is more interested in engineering line and want to work in their trade line and want to make a career with engineering projects, then without delay one should go for M.Tech. That will help them in getting a better rank and post in the same line in which they were working or wanted to work after the completion of their B.Tech degree. People who do M.Tech are more into the teaching field. Such people must prepare for entrance exams like GATE/PGCET etc. To face these exams one must prepare from 3rd year itself. Most of the syllabus in GATE includes only 2nd year and 3rd year core subjects.

**Related Exams:**



**GATE:** Conducted by one of seven Indian Institutes of Technology in rotation, Graduate Aptitude Test in Engineering (GATE) is an annual exam for admission to M.Tech and M.S. programmes in most engineering institutes in India. It is regarded as a benchmark test for engineering graduates in India. This examination is coordinated by a committee, comprising of Indian Institute of Science, Bangalore and seven Indian Institutes of Technology on behalf of the National Coordinating Board - GATE, Department of Education, and Government of India. The pattern and syllabus are usually based on a candidate's B.Tech. Or BE syllabus. Minimum eligibility for appearing in this exam is usually a B.Tech, BE, B. Arch. or M.Sc. The exam is usually conducted on second Sunday of February.

Some people will prefer doing M.S. rather than M.Tech, as M.Tech has lost its value. Most of the colleges are offering M.Tech without having proper faculty, conducting classes and even in some colleges without attending they are giving degree. Whereas doing M.Tech in reputed organizations like IITs, NITs etc certainly better than doing M.S. in foreign universities. Our IITs are best in the world in undergraduate disciplines only i.e., in B.Tech, and not in graduate disciplines. Each IIT is famous for some streams; if we join selectively then doing M.Tech in IIT is better than doing M.S. otherwise it is better to go for M.S. People who are interested to do M.S. must take exams like TOEFL/IELTS (English proficiency tests) and GRE to get scholarships. Now a day most of the foreign universities are offering graduate courses at affordable costs and many banks are providing loans for doing higher studies.

**GRE:** The Graduate Record Examination or GRE is a standardized test that is an admissions requirement for many graduate schools in English speaking countries. It is created and administered by the Educational Testing Service and is similar in format and content to the SAT. It is a computer based Online Test. The percentile scored in this exam will decide your future in doing M.S in foreign nations.

**TOEFL:** The Test of English as a Foreign Language (or TOEFL®, pronounced "toe-full" or sometimes "toffle") evaluates the potential success of an individual to use and understand Standard American English at a college level. It is required for non-native applicants at many English-speaking colleges and universities. A TOEFL score is valid for two years and then is deleted from the official database.

However, if one is more interested in working in the management aspect of companies rather than engineering line, one should go for the MBA degree. The focus today is on acquiring multiple skills and cross functionality rather than specializations: Today organizations are not made up of different departments each of them having a focused task and a limited role; instead today they are made up of teams. These teams consist of people who although have specialized skills but have to synergize their efforts in achieving a common goal. MBA will enable them to work from the management front where they can manage the resources for the benefits of various aspects of the business. A B.Tech from an IIT with an MBA from an IIM is the dream combination as widely approved. And it need not be a B.Tech from an IIT too, any student passing out from IIMs can get upto 15-20 lakhs per month. Also one takes an MBA after M.Tech too, but it is the getting into top B-Schools that matter. CAT



conducted by the IIMs (Indian Institute of Managements) is considered as the world's toughest exam even though the syllabus is just the portions up to standard 10 in school. Some of the B Schools are conducting their own entrance examination and some are conducting common entrance like MAT. Also we can do management programs in foreign universities by taking GMAT.

**GMAT:** The Graduate Management Admissions Test, better known by the acronym GMAT (pronounced G-mat), is a standardized test for determining aptitude to succeed academically in graduate business studies. The GMAT is used as one of the selection criteria by most respected business schools globally, most commonly for admission into an MBA program.

**CAT:** Common Admission Test is conducted by IIMs in India for entry to various IIMs present in India. Admissions are based on the scores in CAT exam

### Examinations Schedule

**MBA/PGDM admissions:** The most important exams are the CAT and the MAT. Nearly all the B Schools in India admit students based on the score in them.

January: Faculty of management studies entrance exam (FMS, New Delhi)

January: XAT – XLRI Jamshedpur School of Management test

February: ATMA – AIMS Test for Management Admissions

May: Narsee Monjee Management Aptitude Test – NMAT

September: MAT September (MAT is usually conducted 4 times in a year in February, May, September and December)

November: The Indian Institute of Foreign Trade – IIFT

November: Common Admission Test by IIMs

Mid December: JMET – Joint Management Entrance Test by IITs for their MBA programmes.

3rd week of December: SNAP – Symbiosis National Aptitude Test

GMAT (for management studies abroad)———can be taken at any time at the respective centres.

### MTECH/MS:

February second week ——GATE conducted by IITs and IISc

GRE (for graduate studies abroad)

### 3. Other Options

a) **Preparing for Civil Services:** The Indian Civil Service serves as the backbone of India and carries great respect and responsibilities. India's best brains vie for entry into the Indian Civil Services as officers. Even though corporate jobs may offer the best of salaries and perks, a majority of youngsters and their parents still crave entry to the prestigious Indian Civil Services held by the UPSC. The very fact that a big share of every year's top posts in the civil services exams are bagged by professionals from various streams, shows that the IAS is still the dream job for many.



**b) Preparing for Defence Services:** A graduate can join through the Combined Defence Services examination as a regular/short service commissioned officer. Training for regular commissioned officers is carried out at Indian Military Academy, Dehradun, known as the cradle of Military leadership. Those desirous of joining the Short Service Commission get trained at Officer's Training Academy at Chennai and serve for a period of five years. On completion of this term he can either resign or opt for an extension for five years or a permanent commission.

Engineering graduates can join in the pre-final or that final year through the University Entry Scheme or after completion of graduation through Technical Graduate Scheme without any written examination, by appearing before the Service Selection Board. In both the cases the candidate gets an ante-date seniority of two years and gets commissioned as a captain.

**c) Entrepreneurship:** If you have good financial resources, you can also start your own company.

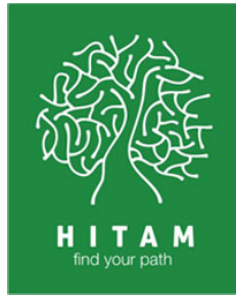
## Career as Engineer:

**Mechanical Engineers** design, operate and maintain machines, components, machine tools, manufacturing systems and processes, components of thermal power stations, solar energy, air conditioning and refrigeration and industrial engineering. They are involved in both the fundamental and applied aspects of these areas

### Career options for aspiring mechanical engineers:

Most mechanical engineering jobs require **design experience**. When a need comes about for a new or improved product, companies call upon mechanical engineers to do the job. Engineers have to push beyond the limits of their previous work and use innovative technology to meet project requirements successfully.

**A second major area of employment** for mechanical engineers is manufacturing. Manufacturing jobs cover nearly everything involved in developing a product, from selecting the appropriate materials to choosing the correct machinery to manufacture the product. Most mechanical engineers in this industry work for equipment manufacturers, aerospace companies, utilities, material processing plants, transportation companies, and petroleum companies. They also work with small firms, consulting practices, universities, and government research labs.



**Some mechanical engineering titles and their functions include:**

**Automotive engineer:** Mechanical engineers design many car parts for the automobile industry. As an automotive engineer, you could solve transportation and safety problems by creating better and more efficient engines or by developing improved safety features

**Biomedical engineer:** Mechanical engineers work with a variety of medical professionals to design mobility aids, prosthetics, and artificial organs.

**Consulting:** Once mechanical engineers have gained significant on-the-job experience and developed a high level of expertise, they might choose to work for themselves as consultants or independent contractors. Here they can work on projects of their choosing for clients they respect. The consulting field offers opportunities in large and small engineering service firms and in private practice.

**Heating, ventilation, and air conditioning (HVAC) engineer:** In this field, engineers design refrigeration systems for making frozen foods, or air-conditioning and heating systems for businesses and industrial buildings, residential homes, autos, hospitals, and schools.

**Nuclear engineer:** The design of nuclear power plants requires the services of a mechanical engineer. The engineer must understand the fundamentals of nuclear design, know how to operate the plant efficiently, and evaluate the environmental factors associated with nuclear plants.

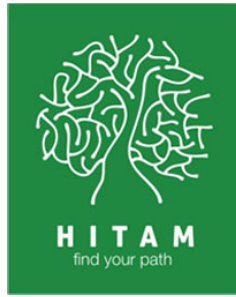
**Robotics engineer:** A mechanical engineer may design machines that build other machines. For instance, a robotics engineer may be involved with creating the devices that are used in assembling automobiles. Engineers are concerned with the robot's structure, its joint mechanisms, bearings, and heat transfer characteristics.

**Teaching:** A desire to help mold the next generation of engineers motivates some mechanical engineers to move into academic careers. Engineers in colleges oversee research activities, manage laboratories, and mentor students. They also write and publish books and technical papers about mechanical engineering.

Options for B.Tech mechanical engineers are **get a job in government sector.**

This could include various positions in:

- ONGC (Oil & Natural Gas Corporation)
- DRDO (Defence Research and Development Organization)
- SAIL (Steel Authority of India)
- NTPC (National Thermal Power Corporation)



- VSSC (Vikram Sarabhai Space Center)
- ISRO (Indian Space Research Organisation)
- IOC (Indian Oil Corporation) etc..

Another idea that comes to mind is go for **GATE Mechanical Engineering**. This could let you pursue:

### **M.Tech or M.E. (Mechanical Engineering)**

Here you can choose some subject for specialization.

- Automobile Engineering
- Industrial Engineering
- Thermal Engineering
- Product Design and Development
- Computer Integrated Manufacturing
- Manufacturing Engineering
- Material Technology
- Engineering Design
- Computer Aided Design & Manufacturing
- Energy Engineering & Management
- Mechatronics Engineering etc.

Another idea is to go for a **career in IT Sector** to work on **mechanical/automobile** related projects.

Following companies regularly recruit Mechanical Engineers in India for various IT-Mech projects:

- Infosys
- Tata Consultancy Services (TCS)
- Wipro
- IBM
- Tata Technologies
- Accenture

Another idea is to go for **M.S. from abroad universities**

There are many specialized programs to suit your interests. Major countries that have top ranking universities for students wanting to pursue in a branch related to Mechanical engineering for M.S. (Master of Sciences) are:



- USA
- Germany
- Japan etc.

**COMPUTER ENGINEERS** design, manufacture, and maintain computer hardware and computer based information and control systems

Computing professionals might find themselves in a variety of environments in academics, research, industry, government, private and business organizations -- analyzing problems for solutions, formulating and testing, using advanced communications or multi-media equipment, or working in teams for product development. Here's a short list of research and vocational areas in computing.

**Artificial Intelligence** -- Develop computers that simulate human learning and reasoning ability.

**Computer Design and Engineering** -- Design new computer circuits, microchips, and other electronic components.

**Computer Architecture** -- Design new computer instruction sets, and combine electronic or optical components to provide powerful but cost-effective computing.

**Information Technology** -- Develop and manage information systems that support a business or organization.

**Software Engineering** -- Develop methods for the production of software systems on time, within budget, and with few or no defects.

**Computer Theory** -- Investigate the fundamental theories of how computers solve problems, and apply the results to other areas of computer science.

**Operating Systems and Networks** -- Develop the basic software computers use to supervise themselves or to communicate with other computers.

**Software Applications** -- Apply computing and technology to solving problems outside the computer field - in education or medicine, for example.

*There is lot of fields in computer science. Let have a look at the each field, and required skill set to get a job in these fields.*

JOB Category	Required Skill Set
Web Designer	HTML, HTML5 , Javascript, Flash
Web Developer	J2EE, ASP.Net, PHP
Application Developer	C, C++, Core Java, .Net, Java Swing
Database Administrator	PI SQL, Database Tuning





Network Engineer	CCNA, CCNP Certification
Embedded Systems	Embedded C
VLSI programmer	Verilog, VHDL
Enterprise Applications	SAP
Hardware Engineer	CSE Basics
Computer Scientist	Complex Problem Solving Skills
Big Data Analytics	Hadoop

**ELECTRONIC ENGINEERS** are concerned with electronic components, integrated circuits and microprocessors. They design, fabricate, test, maintain and supervise the manufacture of electronic equipments

**ECE branch: Short-term courses** in core electronics will help one to improve their skills in specific areas within limited time frame. These courses can improve the technical proficiency of the candidates and thereby their career prospects

- PCB Designing
- VLSI Testing
- Embedded Systems
- Networking courses such as CCNA, MCSE
- Circuit Designing
- Fibre Optic Technology
- Industrial Automation
- Digital Signal Processing
- Real time Distributed Systems
- Robotics course
- Telecom and Wireless course
- SCADA Communication
- Robotics

**Short-term courses in Embedded systems are..**

- Advanced Diploma in Real Time Operating Systems (6 months)
- Diploma in Embedded Systems Design-DESD (24 weeks)
- Advanced Diploma in Embedded System (4 months)
- Advanced Certificate Course in Embedded System Design
- PG Diploma in Embedded Sys-tem Design (20 weeks)





- Advanced Diploma in Real-time and Embedded Systems (4 mon-ths)
- Advanced Diploma in Embedded System Design
- Certificate course in Embedded Systems (5 months)
- Diploma in Embedded micro-controllers and processors (3 months)
- Certificate courses in Real Time Operating System
- Microcontrollers and Embedded C (1 month)
- Certificate Course in Embedded Systems Design (6 months)
- Certificate Course in Advanced Embedded Systems Design

**Institutes:**

- Autarchy Technologies
- Centre for Development of Advanced Computing (C-DAC)
- Cranes Varsity
- DOEACC Centres
- Embedded Competency Centre
- Emertxe
- Kiona
- M.S. Ramaiah School of Advanced Studies
- Oasis
- Quest
- Sandeepani
- Sigma Solutions
- Signals and Systems (SANDS)
- University of Pune, Department of Electronic Science and Integrated Circuit and Information Technology (ICIT)
- UTL Technologies
- VEDA IIT
- Waveaxis

**VLSI Design**

- Advanced Certificate Course in VLSI Design
- Advanced Post-Graduate Diploma in VLSI Design
- Certificate courses in Verilog and VHDL
- Certificate program in VLSI design (Physical Design or Logic Design)
- Diploma in VLSI Design
- Post Graduate Diploma in VLSI Design
- VLSI System Design

**Institutes:**

- Accel Technologies
- Bennis Technologies
- C-DAC
- DOEACC
- Emblitz
- Kiona
- M.S. Ramaiah School of Advanced Studies
- Sandeepani



- Signals and Systems (SANDS)
- Silicon Labs
- TTM Institute of Information Technology
- UTL Technologies
- VEDA IIT
- VEDANT (VLSI Design Education and Training)

#### **Industrial Automation**

- A course on Electrical & Electronics for Automation
- Advanced Diploma course in industrial Automation and System Design
- Automotive Electronics
- Certificate course in Industrial and Control Engineering
- PG Diploma course in Industrial Automation System Design

#### **Institutes:**

- DOEACC
- J.R.D. Tata Automation Training Centre
- CITD, Bangalore
- M.S. Ramaiah School of Advanced Studies
- C-DAC

#### **Digital Signal Processing**

Digital signal processing (DSP) is the mathematical manipulation of an information signal to modify or improve it in some way. It is characterized by the representation of discrete time, discrete frequency, or other discrete domain signals by a sequence of numbers or symbols and the processing of these signals.

The goal of DSP is usually to measure, filter and/ or compress continuous real-world analog signals.

#### **Short-term courses in Digital Signal Processing are..**

- Boot Camp Training Program (DSP Concepts)
- Diploma in DSP
- Applied Digital Signal Processing
- Digital Signal Processor and Applications
- Diploma in DSP Applications
- Certificate Course in Digital Signal Processing
- Certificate courses in Analog Devices and Texas Instruments DSPs
- Institutes:
- Aureole Technologies
- Cranes Varsity
- Kiona
- M.S. Ramaiah School of Advanced Studies
- Signals and Systems (SANDS)
- Center for DSP Training (CDT)
- University of Pune, Department of Electronic Science and Integrated Circuit and Information Technology (ICIT) n Quest

#### **Telecom and Wireless**



Telecom Training, Networking, Wireless Training, LTE Training, VoLTE, VoIP Training, IMS, SIP, MPLS Training, GMPLS, RF Engineering Training, RF training, Antenna Engineering Training, Radar, DAS, SATCOM Training, VSAT, GSM, CDMA, CDMA2000 UMTS, 3G, 4G, WiFi, Bluetooth Training, Zigbee Training.

**Short term courses in Telecom and Wireless are..**

- Post Graduate Diploma in Wireless and Mobile Computing
- Advance Diploma in Wireless Technology
- Wireless and Mobile communications
- Advanced Wireless Communications

**Institutes:**

- C-DAC
- Institute of Emerging Technologies
- Emblitz
- M.S. Ramaiah School of Advanced Studies
- Lorion

**Job opportunities:**

**Electronics and Communication Engineers** are acquired by top recruiters (both private and government) like DMRC, Siemens, Motorola, Intel, Texas Instruments, BEL, ISRO, DRDO, Accenture, Wipro, HCL Technologies, nVIDIA, Samsung, Tech Mahindra, Infosys, TCS, Conexant, MTNL, AIR, BSNL, Indian Air force, Indian Navy, Railways, Bharat Electronics Ltd and Flextronics and Philips Electronics.

**Major Industries which offer Jobs for ECE engineers are**

- Electronics Circuit Design
- Signal processing
- Wireless Communication
- Optical Communication
- Robotics
- Embedded Systems
- Analog electronics
- Digital electronics
- Telecommunications
- Power Electronics
- Consumer Electronics
- Solid State Physics
- Control systems
- VLSI
- Defense
- Nanotechnology
- Mobile Companies

In order to get Jobs in the above companies, one should have following skill sets



JOB Category	Required Skill Set
VLSI	Verilog and VHDL
Circuit Design	Electronics Circuit Design Basics
Chip Design	Transistor Process technology , Microprocessors
Mobile Communications	Network Switching, Communication Basics, Voice over Internet protocols and interactive voice recognition
Networking	CCNA or CCNP Certification

**ELECTRICAL ENGINEERS** are concerned with the generation, distribution, use of electrical power, control and instrumentation. They work with equipment that produces and distributes electricity such as generators, transmission lines, transformers, lighting and wiring in buildings. They design electric motors, machinery and ignition systems which are required by automobiles, aircrafts and all kinds of motorized vehicles and equipments

**Brief information about tools to be learned by EEE graduates:**

**MATLAB:** More than a million engineers and scientists in industry and academia use MATLAB. It is a powerful language of technical computing.

**Labview:** It is system design software that provides engineers and scientists with the tools needed to create and deploy measurement and control systems through unprecedented hardware integration.

**ECAD:** It is created for electrical control systems. This tool includes all the functionality of Auto-CAD plus a complete set of electrical CAD features.

**PSCAD:** It is software developed for analyzing and designing Analog, Digital Electronic and Electrical circuits and Power Electronic systems also.

**Mi-power:** Mi-power is a highly interactive user-friendly based power system analysis package.

**dSPACE:** It is a Prototype hardware and software. Industries like automotive, aerospace, defence, commercial and many others rely on dSPACE systems to develop and test electronic control units.

**EMTP-RV** (Electromagnetic transient program): It is for simulation and analysis of power system transients.

**ARM:** It is a family of instruction set architectures for computer processors based on a reduced instruction set computing (RISC) architecture developed by British company ARM Holdings.

A RISC-based computer design approach means ARM processors require significantly fewer transistors than typical processors in average computers.



## EMPLOYMENT OPPORTUNITIES:

### Job opportunities in Electrical Engineering

- NTPC Recruitment: National Thermal Power Corporation (NTPC) - Executive Trainees.
- NHPC Recruitment: National Hydroelectric Power Corporation (NHPC) - Trainee Engineers.
- HPCL Recruitment: Hindustan Petroleum Corporation Limited (HPCL) - Graduate Engineers.
- PGCIL Recruitment: Power Grid, the central transmission utility (PGCIL) - Executive Trainees (Electrical).
- GAIL Recruitment: Gas Authority of India Limited (GAIL) - Executive Trainees.
- MECL Recruitment: Mineral Exploration Corporation Limited (MECL) - Trainees/ Officer Trainees.
- IOCL Recruitment: Indian Oil Corporation Limited (IOCL) - Officers/ Graduate Apprentice Engineers (GAEs).
- HECL Recruitment: Heavy Engineering Corporation Ltd. (HECL) - Executive Trainees.
- DDA Recruitment: Delhi Development Authority (DDA) - Assistant Executive Engineers.
- CONCOR Recruitment: Container Corporation of India Limited. (CONCOR) - Management Trainees.
- NALCO Recruitment: National Aluminum Company Limited (NALCO) - Graduate Engineers.
- MDL Recruitment: Mazagon Dock Limited (MDL) - Executive Trainees.
- NFL Recruitment: National Fertilizers Limited (NFL) - Management Trainees.
- NLC Recruitment: Neyveli Lignite Corporation limited - Graduate Executive Trainees.

For organisations such as AP Transco, AP Genco, AP Discom, Indian Railways, Bharath Dynamics Ltd, Coal India Ltd, Hindustan Aeronautics Ltd, DRDO, ISRO, NMDC, EIL etc. a written test and Interview will be conducted by the respective organizations.

*Similarly electrical engineering graduates can also find job opportunities in the following private sectors.*

- General Electric Company
- ABB
- Siemens Limited



- Crompton Greaves
- Schneider Electric Infrastructure Ltd
- Larsen and Toubro
- ALSTOM
- Tata Steels
- Tata Motors
- Jindal Steels
- Spectrum Generation Corporation
- GVK Power & Infrastructure Limited
- HBL Power Systems

Similarly electrical engineering graduates can also find job opportunities in the following organizations through IES examination conducted by Union Public Service Commission.

#### **Group A Service:**

- Indian Railway Service of Electrical Engineers
- Indian Railway Stores Service
- Central Electrical and Mechanical Engineering Service (Central Public Works Department)
- Indian Naval Armament Service
- Indian Ordnance Factories Service (IOFS)
- Central Power Engineering Service (Central Electricity Authority)
- Indian Defence Service of Engineers in Indian Navy
- Indian Supply Service (Directorate General of Supply and Disposals)
- Corps. of Electrical and Mechanical Engineers (EME), a branch in the Indian Army.

#### **STUDY ABROAD AFTER B.TECH**

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GRE revised General Test measures verbal reasoning, quantitative reasoning, critical thinking and analytical writing skills. Apart from MS programs, many universities worldwide are now using GRE score to admit students into MBA program.

### Test Content and Structure

The GRE revised General Test measures your verbal reasoning, quantitative reasoning, critical thinking and analytical writing skills

- **Verbal Reasoning** — Measures your ability to analyze and evaluate written material and synthesize information obtained from it, analyze relationships among component parts of sentences and recognize relationships among words and concepts.
- **Quantitative Reasoning** — Measures problem-solving ability, focusing on basic concepts of arithmetic, algebra, geometry and data analysis.
- **Analytical Writing** — Measures critical thinking and analytical writing skills, specifically your ability to articulate and support complex ideas clearly and effectively.

### TOEFL:

The Test of English as a Foreign Language evaluates the potential success of an individual to use and understand Standard American English at a college level. It is required for non-native applicants at many English-speaking colleges and universities. A TOEFL score is valid for two years and then is deleted from the official database.

### The New Test Format

- Reading: 3–5 passages, 12–14 questions each 60–100 minutes
- Listening: 4–6 lectures, 6 questions each 60–90 minutes
- 2–3 conversations: 5 questions each
- Break 10 minutes
- Speaking 6 tasks: 2 independent and 4 integrated 20 minutes
- Writing: 1 integrated task 20 minutes
- 1 independent task 30 minutes

**IELTS** is recognised by over 6,000 organisations worldwide

The University of Cambridge Local Examinations Syndicate (UCLES), the British Council and IDP Education Australia jointly manage international English Language Testing System. It is designed to assess the language ability of candidates who want to study or work where English is the language of communication. The IELTS tests candidates in Writing, Reading, Listening and speaking sections. IELTS is recognized by over 6,000 organizations





worldwide, including universities, employers, professional bodies, immigration authorities and other government agencies

### **Test format**

There are two modules to choose from – Academic and General Training.

Each recognising organisation sets its own entry requirements. In some cases, both modules may be accepted.

Both modules cover all four-language skills – listening, reading, writing and speaking. Everyone takes the same Listening and Speaking tests. There are different Reading and Writing tests for the Academic and General Training modules.

The Academic module is for candidates wishing to study at undergraduate or postgraduate levels, and for those seeking professional registration.

The General Training module is for candidates wishing to migrate to English speaking Country (Australia, Canada, New Zealand, UK), and for those wishing to train or study at below degree level Also, one can pursue management programs in foreign universities by taking GMAT.

### **GMAT:**

The Graduate Management Admissions Test is a standardized test for determining aptitude to succeed academically in graduate business studies. The GMAT is used as one of the selection criteria by most respected business schools globally, most commonly for admission into an MBA program. More than 5,400 MBA and management programs worldwide accept the GMAT exam. The GMAT consists of four main sections - Analytical Writing Assessment, Integrated Reasoning, Quantitative and Verbal

### **Test Structure**

The GMAT consists of four main sections

- Analytical Writing Assessment
- Integrated Reasoning
- Quantitative
- Verbal



GMAT Test Section	Number of Questions	Question Types	Timing
Analytical Writing Assessment	1 Topic	Analysis of an Argument	30 Minutes
Integrated Reasoning	12 Questions	Multi-Source Reasoning Graphics Interpretation Two-Part Analysis Table Analysis	30 Minutes
Quantitative	37 Questions	Data Sufficiency Problem Solving	75 Minutes
Verbal	41 Questions	Reading Comprehension Critical Reasoning Sentence Correction	75 Minutes
Total Exam Time			3 hours, 30 min

Here is the list of available specializations in M.Tech for various branches run by IITs, NITs and state level institutions:

### M.Tech specializations in Computer Science and Engineering

#### Computer Science

- Information Technology
- Information Security
- Software Engineering
- Distributed Computing
- Image Processing
- Computer Systems and Hardware
- Database and Information Systems
- Programming languages
- Computer Networks and Distributed Systems
- Artificial Intelligence
- Advanced Computing

### M.Tech specializations in Electronics and Communication Engineering

- Advanced Communication Systems
- VLSI System Design
- Signal Processing
- Electronic Instrumentation



- Digital System
- Microelectronics & VLSI Design
- Electronics Design & Technology
- Telecommunication Engineering
- Communication & Information Technology
- Electronics & Communication Engineering

### **M.Tech specializations in Electrical Engineering**

- Power Electronics & Drives
- Power Systems Engineering
- Instrumentation & Control Systems
- Computer Controlled Industrial Power
- Communication Engg.
- Control & Computing
- Power Electronics & Power Systems
- Micro Electronics
- Electronic Systems
- Micro Electronics and VLSI Design
- Control and Instrumentation
- Photonics
- Instrumentation Engineering
- Power Electronics & ASIC Design
- Electrical Drives
- Industrial Power & Automation
- Electrical Systems
- Signal Processing & Control
- Condition Monitoring Control & Protection of Electrical Apparatus
- Integrated Power Systems
- Electronic Systems & Communication
- Industrial Electronics

### **M.Tech specializations in Mechanical Engineering**

- Thermal Engineering
- Computer Integrated Manufacturing
- Automobile Engineering
- Manufacturing Engineering



- **Material Technology**
- **Industrial Engineering**
- **Product Design and Development**
- **Industrial Safety Engineering**
- **Thermal & Fluids Engineering**
- **Design Engineering**
- **Computer Aided Design & Manufacturing**
- **Maintenance Engineering**
- **Energy Engineering & Management**
- **Refrigeration Air Conditioning & Heat Transfer**
- **Thermal Turbo Machines**
- **Cryogenics & Vacuum Technology**
- **Turbo Machines**
- **Mechatronics Engineering**
- **Industrial Tribology & Maintenance Management**
- **Welding Technology**

#### **M.Tech specializations in Instrumentation**

- **Control and Instrumentation Engineering**

#### **M.Tech specializations in Production Engineering**

- **Manufacturing Technology**
- **Industrial & Management Engineering**