

# Master of Technology (M.Tech.) Electrical Engineering

2 Years      Post Graduate      Full Time

f i t G+ P t



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## Master of Technology (M.Tech.) Electrical Engineering

## About Course

Electrical engineering is one of the most popular branches of engineering, emphasizing the study and application of electricity, electronics, and electromagnetism. However, to gain advanced knowledge, you need to study MTech or its equivalent, a master's degree in engineering is required. MTech Electrical Engineering has been working 2 years in India and 1-2 years abroad (MSc) highlighting concepts such as testing and design of capacitors, inductors, integrated circuits and resistors. You will also learn about computer systems, electronic circuit design, control system development, electrical wiring, etc.

## Course Highlights

Particulars	Values
Course Name	M.Tech in Electrical Engineering
Course Level	Post Graduate (PG)
Course Duration	2 Years
Examination Type	Semester Based

### Students also visited



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Eligibility Criteria	B.B/B.Tech in Electrical Engineering from a recognized University with minimum 50% aggregate
Admission Process	Entrance Based
Specialization	Electrical Engineering
Types of Courses	Full time, Online, Distance Learning
Internship	Yes
Entrance Exams	GATE, AMUEEE, PG CET, BHU PET
Course Fee	INR 80,000 - 10,00,000
Average Annual Salary	INR 4,12,000 - 8,91,000 P.A.
Top Recruiting Companies	General Electric Co., Larsen & Toubro, IBM Global Services, Panasonic, NHPC, PowerGrid, etc.
Job Profiles	Power Engineers, Broadcast Engineer, Telecommunication Engineer, Design Engineer, Shift Supervisor, Senior Application Engineer, Electrical Engineering Trainee

### Why Study M.Tech in Electrical Engineering?

When choosing a career, applicants often ask themselves whether they are opting for an engineering branch. Among all engineering majors, many candidates choose M.Tech in Electrical Engineering. Demand in the market has increased greatly and electrical engineers are in high demand. There are many other benefits of doing electrical engineering.

MTech courses for EEE can increase your practical knowledge as they mainly focus on internships and thesis work. The MTech degree not only improves your skills in qualitative and quantitative analysis, but also broadens your horizons by developing your own search function. You can be a senior engineer, design engineer, mechanical engineer, project manager, scientist, site manager, maintenance manager, etc.

### Types of M.Tech in Electrical Engineering

#### DISTANCE/ONLINE LEARNING

Distance education is becoming a popular educational medium of the new era. Distance education or online education gives you a head start to apply UG and PG according to your qualifications and also can do industry related jobs at the same time. Distance education plans are also affordable and save you time by not having to attend regular distance education courses.

#### FULL TIME EDUCATION

The full-time Mtech in Electrical Engineering is a 2-year degree divided into 4 semesters, covering advanced studies in Electrical Engineering, Computer Science and Communications, and Electronics, Electrical, Transmission and Manufacturing.



## Eligibility Criteria

Applicants wishing to study M.Tech in Electrical Engineering must meet certain eligibility criteria in order to enroll in the program. Admission criteria may vary by university, so applicants should ensure they review the eligibility criteria before applying to any course. Some of the eligibility criteria are as follows:

- Applicants must have completed a BE/B.Tech degree in any branch of the relevant engineering field.
- Applicants must obtain at least 50% of the total score or equivalent CGPA score from a recognized institution.
- There is no age limit for studying electrical engineering.
- Applicants must also pass a national entrance exam such as GATE or another separate exam

## Admission Process

In order to enter the field of electrical engineering, applicants must meet certain criteria and complete admission formalities. Although it can vary from college to college, the basic formalities are pretty much the same.

Most colleges offer merit-based admissions, while other colleges have entrance exams. After gaining admission to any top electrical engineering university, the candidate will:

1. Check the official website regularly for new notifications
2. Applicants must complete an online or offline application form
3. Applicants must fill out the form and pay the required fees
4. Applicants must pass an entrance exam such as GATE, JEE Mains, etc.
5. Applicants with valid entrance exam results will be invited to further rounds such as counselling process and group interview.

## Skills Required for MTech in Electrical Engineering

Graduates with a master's degree in electrical engineering should demonstrate good written communication and problem-solving skills. You must have good organizational skills and should come up with innovative ideas for projects. Some skills required for Electrical Engineering College graduates are:

1. Programming Skills
2. Project Management
3. Basic Circuit Knowledge
4. Problem Solving Skills
5. Critical Thinking Skills
6. Communication Skills
7. Numerical Skills
8. Work Ethic

## Entrance Exams for MTech in Electrical Engineering



Some of the best colleges offering M.Tech in Electrical Engineering have an admissions process based on entrance exams. Some colleges consider National Level GATE merit entrance exam, while others hold their own entrance exams. Some of the best M.Tech electrical engineering entrance exams are:

- GATE
- AMUEE
- PG CET
- BHU PET
- TANCET

## Fee Structure

The M.Tech Electrical Engineering fee in various colleges in India is around INR 20,000 – 2 LPA. Course fees may vary depending on the type of institution, location, infrastructure, faculty and available facilities.

Name of College	Average Annual Fees
Birla Institute of Technology and Science, Pilani	INR 4.30 LPA
IIT Kanpur	INR 2.14 LPA
Shri Ramswaroop Memorial University, Lucknow	INR 2 LPA
IIT BHU, Varanasi	INR 36,815 P.A.
Indian Institute of Science, Bangalore	INR 26,000 P.A.

## Selection Process

The M.Tech Electrical Engineering course selection process in India is mainly based on the candidate's GATE which is a nationwide entrance exam or assessment. Some colleges have entrance exams for admission. Based on the student's results in the proficiency test or entrance exam, successful candidates are invited to group discussions and one-on-one interviews conducted by higher education institutions. Successful candidates will be offered admission to the program based on overall student scores. In principle, admission is only granted to students who meet the minimum requirements of the respective university and meet the admission criteria. M.Tech in electrical engineering. Admission card and other exam details will be made available in advance on the college website. Students will be notified of the results by email or can visit the university's official website.

## Course Comparison

Two of the common degrees evaluated in Master’s Program for Engineering are MTech Electrical Engineering and MTech in Power Engineering on the basis of a few parameters:

Parameters	MTech in Electrical	MTech in Power Engineering
Course Name	Engineering	Master of Technology in Power Engineering



Course Overview	Mater of Technology in Electrical Engineering	MTech Power Engineering course is a subfield of electrical engineering. It has the involvement of generation, transmission, distribution and utilisation of power. It deals with the instruments used for electricity. Most of this course would deal with the 3-phase AC power.
Course Duration	MTech Electrical Engineering course program deals with designing and learning the use of equipment, devices etc to study the generation of electricity and electromagnetism and much more.	2 Years
Course Level	2 Years	Post Graduate (PG)
Eligibility Criteria	Post Graduate (PG)	B.E/B.Tech in relevant field from a recognized university with 50% aggregate
Admission Process	B.E/B.Tech in relevant field from a recognized university with 50% aggregate	Entrance Based
Career Prospect	Entrance Based	Assistant Engineers, Site Engineers, Field Test Engineer, Research & Development Software Engineer, Customer Support Engineer, Network Planning Engineer,etc.
Average Annual Salary	INR 8 to 11 LPA	INR 8 LPA

Top Colleges of MTech in Electrical Engineering

Listed below are some of the top MTech in Electrical Engineering College in India which offer the course:

Name of College	Average Annual Fee (INR)	Location
Asansol Engineering College (AEC)	INR 1,90,000	Asansol, West Bengal
IIT Bhilai	INR 67,000	Bhilai, Chhattisgarh



Alakh Prakash Goyal Shimla University (APGSU)	INR 2,40,000	Taradevi, Himachal Pradesh
Birla Vishwakarma Mahavidyalaya (BVM)	INR 1,34,000	Anand, Gujarat
DAV Institute of Technology	INR 1,25,000	Jalandhar Punjab

## Jobs and Placements in M.Tech in Electrical Engineering

M.Tech Electrical Engineering's area of responsibility mainly includes systems and electronics. The electrical engineering department is significantly involved in the development countries and therefore offers graduates a wide range of opportunities. The scope after M.Tech electrical engineering range is available in many different sectors.

### PRIVATE JOBS

The non-public quarter gives many possibilities for electric engineering M.Tech graduates. Private jobs are available in equipment manufacturing and telecom sector, industries involved in productions and manufacturing, energy sector (solar and wind), etc. Upon completion of the course, students can go directly to work or pursue higher education, depending on their skills and interests. Starting salary for Tech Electrical Engineering is around INR 4-8 LPA. Some paid positions include:

Job Designation	Salary
General Manager	INR 10 LPA
Senior Application Engineer	INR 7.88 LPA
Assistant Manager	INR 5.81 LPA
Shift Supervisor	INR 4 LPA

### GOVERNMENT JOBS

Many governmental organizations in India employ M.Tech Electrical Engineering graduates in various positions such as Assistant Engineers, Civil Engineers and other officer level positions. Most of the time, recruitment is based on an entrance exam, followed by a personal interview with the graduates. Electrical engineering college salary in India is around 3-10 LPA. Government positions in Civil Engineering are offered by many organizations and departments including Central and Public Education Institutions, R&D Units, BHEL, Indian Railways, Indian Armed Forces, HAL, BSNL, State Wise Electricity Commissions, DRDO, Hydroelectric power plants, combined heat and power plants, etc.

Job Designation	Salary
Senior Data Scientist	INR 10 LPA
Assistant Professor	INR 6.18 LPA
Assistant Engineer	INR 5.41 LPA





Electrical Design Engineer	INR 4.05 LPA
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ABROAD JOBS

M.Tech Electrical Engineering graduate jobs are available not only in India but also abroad. Many graduates working in leading multinational companies are offered a transfer abroad. Graduates can take certificate courses or pursue higher education to increase their chances of gaining employment abroad. With increasing knowledge and experience, job opportunities abroad show an upward trend.

**Top International Recruiting Companies** who hire MTech in Electrical Engineering graduates are:

- General Electric Co (GE)
- SAP Labs India
- IBM Global Services
- Larsen & Toubro Limited
- Mahindra & Mahindra Ltd
- Texas Instruments
- Boeing
- Shell Oil Company
- Bosch Electric
- Apple
- Crompton Greaves
- Cummins Electronic
- Hitachi Hi-Rel Power Electronics Private Limited

Job Profiles

Some of the famous expert avenues open to successful graduates of the M.Tech in Electrical Engineer degree are indexed underneath with the corresponding salaries provided for the respective positions.

Job Profiles	Job Description	Average Salary in INR
Power Engineers	A Power Engineer works for a wind owner/developer, turbine manufacturer, or electric utility. They are responsible for evaluating interconnection standards and transmission feasibility, system impact and facility studies or testing new electrical components of wind turbine designs.	INR 4,70,000
Broadcast Engineer	They works more often than not in tv and radio and offer guide in film, concerts, and track recording to make certain first-class manufacturing and transmission of video and audio. Broadcast engineers generally works in a printed or recording studio and from time to time paintings in enjoyment venues.	INR 3,60,000



Telecommunication Engineer	The Telecommunication Engineer is responsible for the security, design, performance of computer networks, and the integration of all telecom services and devices.	INR 3,50,000
Design Engineer	Design engineers are liable for the studies and layout of a company's new merchandise and systems. They carry out diverse responsibilities in an engineering branch which includes drafting blueprints, growing check prototypes, and overseeing the producing process.	INR 3,30,000
Shift Supervisor	A Shift Supervisor is a expert who's in rate of overseeing commercial enterprise operations on their shift.They should be capable of delegate tasks, remedy problems, and make certain that the entirety is going easily for anyone at some point of a given working shift, together with stocking stock all day lengthy till last down at night.	INR 2,90,000
Senior Application Engineer	A Senior Application Engineer do researches on document, and act as subject matter expert on specified applications and participates in design and improvement processes. Coordinate facts throughout groups to create coherent merchandise and communicate with clients.	INR 9,00,000
Electrical Engineering Trainee	Electrical Engineering Trainee's responsibilities include attending meetings, conducting desktop and field research, performing all practical and administrative duties assigned by The supervisor, journeying to different websites whilst required, helping on projects, supplying hints for improvement, and writing up reports.	INR 1,80,000

## Scope for M.Tech in Electrical Engineering

The scope of M.Tech in electrical engineering covers a wide range of industries, such as B. Energy systems, communication with electronic devices, control, signal processing, teaching, transportation services, etc.

As technology advances rapidly, the demand for Electrical Engineers has also increased not only in India but worldwide. Therefore, the range of tasks for electrical engineers in various industries will continue to increase






Applicants have the opportunity to pursue higher education such as a PhD in electrical engineering, e.g. B. a PhD if applicants want to become a lecturer.



## M.Tech in Electrical Engineering: Career Prospects



Upon completion of the M.Tech Electrical Engineering degree, candidates can choose from a variety of career options and career prospects. Candidates with a master's degree in Electrical Engineering can work in the public or private sector. The various job options that candidates can pursue after an M.Tech Electrical Engineering degree include Electrical Engineers, Broadcast Engineers, Telecommunications Engineers, Designers, Consultants, Researchers, etc. The starting salary of an M.Tech electrical engineering candidate ranges from INR 3 to 6 LPA.

 <b>Campus</b>	 <b>University</b>	 <b>Delivery Mode</b>
Bhubaneswar	Shiksha 'O' Anusandhan University	
<b>Eligibility</b>	 <b>Duration</b>	 <b>Type of Course</b>
B.Tech/B.E./MCA/ M.Sc. (Physics/ Math)/ M.Sc. (Electronics) M.Sc. (CS/IT)with min . 50% marks	2 Years	Post Graduate

**Syllabus of Master of Technology (M.Tech.) Electrical Engineering**

S.No	1st Year Syllabus of M.Tech. in Electrical Engineering
1	Advanced power system operation control
2	Advanced protective relaying switchgear
3	Power system dynamics
4	EHV AC and HVDC transmission
5	Applied linear algebra and matrix computation
6	Cyber security
7	Computer-aided power system analysis
9	Advanced power system stability
10	Power electronics in power system
11	Substation engineering and automation
12	Power system simulation lab

S.No	2nd Year Syllabus of M.Tech. in Electrical Engineering
1	Practical training
2	Project



Shiksha ‘O’ Anusandhan University Highlights

Established in	2007
University Type	Deemed University
Recognized by	UGC , AICTE , BCI , PCI , DCI ,
Courses	63

Top Courses

Management  
Pharmacy  
Science  
Law

Top Institue

Amity University Jaipur  
Chandigarh University  
Manipal University, Jaipur  
Kalinga University  
SGT University

Online Course

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Other Useful Link

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