

CAREER IN MECHANICAL ENGINEERING

Scope of Mechanical Engineering in India: What's next?

Mechanical Engineering, one of the oldest branches of Engineering, is evergreen branch of Engineering which over time, has contributed to several innovations.

The scope of Mechanical Engineering is vast even today. Their concepts are used in designing some of the best and most efficient state-of-the-art motor vehicles, manufacturing units, aircrafts as well as other industrial machinery. Apart from the machinery and vehicles, mechanical engineers significantly contribute towards the development of power equipment, engines and complex machinery systems. Not only the design and manufacturing, even the maintenance and testing of such machinery and equipment are considered as responsibilities of Mechanical Engineers. With the rise of modern technology, Mechanical Engineering has witnessed newfound importance with more and more students opting to learn less explored domains of, Mechanical Engineers Robotics, Mechatronics, Nanotechnology, Composites etc.



JOB PROSPECTS IN INDUSTRIES & GOVT. SECTOR FOR MECHANICAL ENGINEERS

● DESIGN	● PRODUCTION	● POWER PLANT
● ANALYSIS & TESTING	● INSTALLATION & MAINTENANCE	● RESEARCH
● NTPC/NLC	● ONGC	● IOCL
● NPCIL	● SAIL	● DEFENCE- DRDO/ISRO
		● BHEL
		● MARINE/AEROSPACE

BRIDGING SKILL GAP AND PREPARING MECHANICAL ENGINEERS FOR THE CHALLENGES @ MVIT

Companies require graduates fit to job from day of appointment. We at Department of Mechanical Engineering, MVIT groom our students to suit industry need of employable Mechanical Engineer by conducting courses beyond curriculum about present technologies used in industries by inviting experts. Bridging the skill gap is the key to grab a good job after graduating in Mechanical Engineering. From coding to communication skills, aptitude to technical, build interpersonal relationships, Engineers need to be prepared for industrial demands. We at MVIT provide the following to fulfill above needs:

- Value Added Courses on AUTOCAD, CREO, PDMs (Plant Design Management System), HYPER mesh, REVIT MEP, ANSYS, INVENTOR, SOLID WORKS, MATLAB, Fusion 360, C, Python etc.,
- Workshop / Training program on best industrial practices like 5S, KAIZEN, LEAN MANUFACTURING, TQM, TPM, SUPPLY CHAIN MANAGEMENT, INDUSTRY 4.0, INDUSTRY SAFETY AND FIRST AID, HVAC, and Industrial IoT, Quality & Reliability etc.
- Students Chapter of IE (I), ISTE, ISHRAE, NIQR (National Institution for Quality and Reliability), Energy Club, etc., for disseminating Knowledge.
- DFMA (Design for Manufacturing & Assembly), Minitab and Cut View software for Students project
- Final Year Project at: Reputed MNC's like NLC, Ashok Leyland, Lucas TVS, Renault Nissan, Caterpillar, ONGC, Sundaram Fasteners Ltd., UCAL, Supreme, TAQA, Enfield, etc.,
- Placement at Top MNCs like BOSCH, TCS, CTS, BYJU'S, WIPRO, Asahi India Glass Ltd., Milekal, Modine Thermal System, etc.,

It is evident that the demand for Mechanical Engineers will soon surpass the supply, making Mechanical Engineering as one of the most valued disciplines of Engineering again.

— With Regards —

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DEPARTMENT OF
MECHANICAL ENGINEERING
Accredited by NBA, New Delhi

SCOPE OF MECHANICAL ENGINEERING

The future scope of Mechanical Engineering and its demand in the industry seem quite promising. According to a report in 2018 by the global consultancy firm Deloitte, India is expected to grow several manifold in manufacturing in next 5 years. As per its report on Global Manufacturing Competitiveness index, India will move up 6 positions to be at 5th position. From its report, Deloitte claims that India will strengthen its hold in the manufacturing sector and thus, there would be numerous new opportunities for Mechanical Engineers in India. However, the compensation packages of the mechanical engineers are going to depend on the **SKILLS AND EXPERTISE**, which is why it has become extremely important that the skill gap be bridged in order to make the new graduates aware of the latest tools as well as technologies in the Industries.

Source: Deloitte



In 2021, India has achieved
beyond projections
Globally to 2nd Rank

THE CURRENT MARKET SCENARIO AND SCOPE

Engineering is one of the most sought after jobs in today's world. Amidst the many choices of engineering courses, students have an affinity towards mechanical engineering. If you are still wondering whether to choose Mechanical Engineering as a career choice or not?



GLOBAL MANUFACTURING RISK INDEX - INDIA RANKS - II



»»» Educate ★ Empower ★ Excel

NEW TRENDS AND FUTURE SCOPE FOR MECHANICAL ENGINEERS

The scope of Mechanical Engineering no longer remains limited to just manufacturing and testing of huge machinery and equipment. With technology making new advancements, there are several new domains in Mechanical Engineering which are being taken up by passionate engineers. These domains include Robotics, New Materials, Nanotechnology, Computer-aided Design, Geomechanics, etc. The two highly pursued domains are Robotics & Mechatronics, both of which combine the knowledge of Mechanical Engineering with other streams to deliver state of the art products.

ROBOTICS

Robotics is an interdisciplinary stream of engineering that combines Mechanical Engineering, Electrical Engineering and Computer Science with an aim to design and develop robotic systems along with computer systems to control them. With the AI revolution already started, Robotics as a stream has been on the rise and is expected to grow in both reach and demand in the coming decade.



MECHATRONICS

Mechatronics too, is an interdisciplinary branch of engineering which usually combines Mechanical Engineering, Electrical Engineering and Information Technology. A Mechatronic Engineer is responsible for designing complex engineering systems, can assist in process automation and also test the systems in use in the processes.

From automobiles to heavy-duty lifting machines and even the modern aircrafts that defy speed barriers, a variety of modern systems are being designed under the supervision of expert Mechanical Engineers. You will not find Mechanical Engineers limiting themselves to the manufacturing industry anymore.

Mechanical Engineers are being welcomed in various industries with open arms and high compensation packages, provided that the candidates are skilled and proficient.

AUTOMOBILE INDUSTRY

One of the fastest growing industries, the automobile industry offers a variety of opportunities to Mechanical Engineers. From design to manufacturing and even maintenance, some of the top automobile brands have begun to invest in recruiting of new talent for research as well as the development of transport systems like driverless cars, bullet trains as well as pod-based transportation systems.



AEROSPACE INDUSTRY

From developing flying cars to reusable satellites as well as rockets, the aerospace industry is not far behind when it comes to innovation and inventions. With the technological advancements, the aerospace industry is rapidly expanding its reach and thus, the need for skilled Mechanical Engineers with practical Knowledge.



DEFENCE ENGINEERS

Defence Engineers have a more significant advantage in defense as a lot of machinery is used by defense forces. The Indian army recruits Engineers based on exams conducted to test their technical abilities in this field. Designing and building prototypes is a requirement in defense, and the Mechanical Engineers fulfill that. Mechanical Engineers make airplanes that require sophisticated machinery. They are the backbone of this industry.

POWER AND METAL PLANTS

POWER AND METAL PLANTS The Power industry is one of the major contributors to the economy of our nation. There are several thermal power plants in private and public sector, all over the country and since the power plants use the principles of thermodynamics and material science, Mechanical Engineering graduates are required here as well.



RAIL INDUSTRY



Different aspects of the rail industry are 1) motive power availability 2) Rolling stock management 3) Traffic restoration in case of accidents 4) Production units like locomotives and coaches 5) repair and manufacturing 6) crew management. These are the aspects where a Mechanical Engineer can work. Mechanical Engineers also head the locomotive business here which has a broader work range. Mechanical Engineers lead workshops in the Rail industry.

STEEL PLANTS

As per the 2016 reports, India stood as the third-largest steel producer. The demand for steel never goes down. It is mainly due to the availability of the raw material. The raw materials required to produce steel is available domestically in huge quantity. It has been continuously growing as steel products are used in every other industry right from making rockets to mending tools. Due to its vast scope, Mechanical Engineers can opt for this industry in production or maintenance division.



DRONE INDUSTRY



Drone is experiencing high growth market. The utility of drones is picking up traction in niche segments like crowd monitoring, parcel delivery, mapping, contouring, crop management, warehouse management, recreational flying, etc. Simultaneously, they continue to find a use for structural and defence surveillance and analysis, remote equipment surveillance, hazardous area operations, safety inspection and so on – the list can be endless, just like the possibilities that drone technology brings with it – all one step at a time!

MAKE IN INDIA INITIATIVE by Govt. of INDIA

Make in India is a major National programme of the Government of India designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country.



IDEAS FOR MECHANICAL ENGINEERS TO ESTABLISH STARTUP BUSINESSES

Mechanical Engineering field is a huge one and most of the Engineers in this domain have the entrepreneurial spirit in them. As they have a great scope, they should not always wait to be employed by companies rather start off their own business and give employment to others.

