

B. Tech Mechanical Engineering



Engineering is the profession in which knowledge of mathematics and natural sciences is used to the benefit of mankind. Engineers develop solutions to the problems of society within the constraints of economy and environment. Their primary job function includes activities such as design, analysis, manufacturing, research, sales, management, consulting and many more. New generation engineers are required to cope up with rapid changes in both, domain knowledge and nature of problems to be solved. Engineering profession is becoming increasingly interdisciplinary; making demands on knowledge, skills as well as personality. Our B. Tech Programme is based on the three cardinal principles: providing social context to education, giving maximum choice to the student to choose a career path and encouraging active learning.

Why to Choose B Tech. Mechanical Engineering

At MIT-WPU, we focus on developing versatile Mechanical Engineers as per industry requirements. Emphasis would be given on providing appropriate skills to meet the ever changing needs of Mechanical and allied industry at both national and international levels. The curriculum includes essentials and principles of physics, mathematics, core electrical and electronic subjects with an interdisciplinary approach. MIT-WPU programmes ensure an overall development of students through social internship, national and international certification programmes and study tours moulding them into winning personalities.

Mechanical Engineering is essentially important branch wherein students will learn following practices as

- Inspire students to come up with ground-breaking solutions for our world family
- Foster the spirit of scientific inquiry in students, to push the envelope of human knowledge and wisdom

- Nurture the ability in students to apply scientific knowledge for the well-being of the world
- Develop solutions to the problems of society within the constraints of economy and environment
- Design, develop and up-grade the products, systems and processes in every walk of human life
- At MIT-WPU, we develop Mechanical Engineers with sound human values and sense of world citizenship

Also students may have an access to the public sector for employment through competitive exams likes UPSC, MPSC. The public sector undertakings are the Indian Railways, Indian Army, The Indian Aviation Authority, Nuclear Power Corporation of India, Power Plant sector etc.

The employment opportunities are available in the private sector with leading automobile companies like TATA Motors, Hyundai, Mahindra & Mahindra, Volkswagen, Mercedes Benz, and many more.

Mechanical Engineers can prepare themselves be entrepreneurs and start their own companies, get employed with various consulting organization or be consultants themselves. Mechanical Engineers can opt for post-graduation and further Ph.D. and can be researchers as well as faculty members in Academic Institutes.

At MIT WPU, the department has strong liaison with industries in and around Pune city. Also students can align themselves with the ongoing projects/studies available with experienced faculties. The department has well established and well-equipped laboratories.

Programme Objectives

B Tech Mechanical Engineering Program is a 4 year 12 Semester Choice Based Credit System Pattern Program with Industry Training to make Industry ready Engineer.

B Tech Mechanical Engineering Program is a blend of practice through active and problem based learning, with added elements like Philosophy, Extra Curricular and Co-Curricular Activities.

Students have a choice to select his elective subjects from pool of subjects to meet their individual professional targets.

Opportunity to understand Corporate World during industry visits. Students have a chance to explore possibilities of higher studies and research, while visiting research organizations and premium institutes.

International Study Tours to Foreign Universities with unique Modular Certificate Course will help in developing global competencies among students.

Better carrier opportunities with Strong Placement Training and Support

Major focus is to have Overall Holistic development of an individual.

Salient Features

- Active Learning pedagogy
- Facility to learn through MOOCs
- Choice of elective subjects from wide spectrum of subjects to meet individual's professional goals.
- One semester Industrial Internship for all the students as a part of curriculum
- Emphasis on social context in engineering education
- National as well as International exposure to enhance students' vision and enrich their personality
- Experiential learning in association with industry
- Additional inputs from national and international experts
- An ideal blend of academics with sports, culture, yoga and holistic lifestyle.
- Inclusion of philosophy and World Peace teachings in curriculum
- International Study Tour of four weeks duration with unique Modular Certificate Course and visits to various distinguished universities and international exhibitions
- Dedicated training and placement support
- One week Rural Immersion Programme for exposure to community issues/ needs

- National Study Tour of two weeks includes visits to Industries, Industrial Exhibitions, Research Laboratories and Research Organizations and Premium Institutes of National and International repute.
- Mentoring to realize individual learning path

In this Programme, You will learn....

First year Provides foundation of basic sciences including living systems. Since design is an activity central to the engineering profession, students in very first year are exposed to design thinking. Social internship in first year is credit based and exposes the students to the problems faced by community. This is expected to sow the seeds of socially oriented innovation in the student's mind. Second year courses are designed to provide grounding in basic engineering sciences from the chosen disciplines. Summer internship at the end of second year involves guided study tour. The tour will expose the student to our diverse culture technology achievements and challenges.

Third and fourth years will include subjects belonging to the chosen track in his/her own trade. International study tour of four weeks duration will offer global exposure whereas semester long industry internship in the final year will offer real life industry experience. Capstone project in the eighth semester and inter-disciplinary project in the seventh semester will inculcate problem solving skills, team spirit, professional ethics and habit of self-learning.

How will this Programme be taught?

Number of Years	Four (Trimester Pattern)
Number of Semester	Twelve
Evaluation Pattern	Continuous Evaluation, Mid-term and End-semester Examination along with Practical and Oral Examination
Electives	Choice based Electives to follow specialization tracks
Industrial Internship	Twenty to Twenty four weeks, Live projects, inclusion in Research projects
Value Added Certification	Social Internship, World Peace and Philosophy Certification, International Modular Certification jointly with a reputed organization

Tracks under Mechanical Engineering Programme:

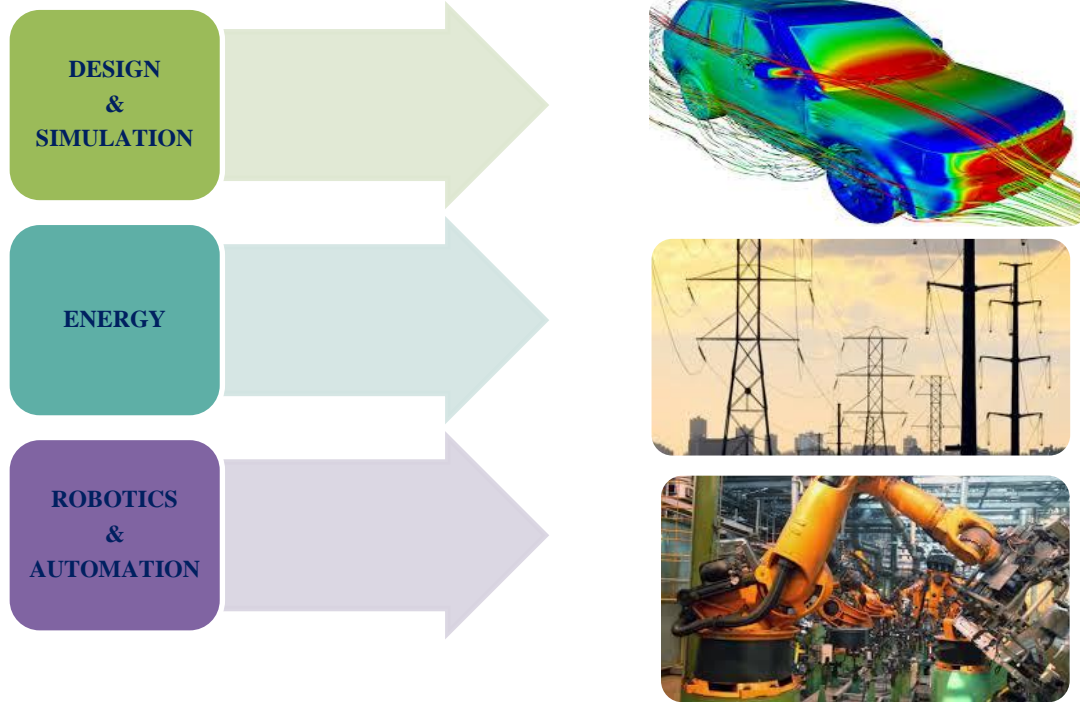
Mechanical Engineering involves design development and up-gradation of products, systems and processes in every walk of human life. At MIT-WPU, we develop Mechanical Engineers with sound human values and sense of world citizenship. Our objective is to offer students with real life industrial exposure. National and international study tour will offer global exposure to our students. Our programme offers three tracks of specialization which lead to careers in cutting edge technologies like Design and Simulation, Energy and Robotics and Automation. Mechanical Engineering curriculum is imparted with active learning methods like Problem Based Learning (PBL), experiential learning and collaborative learning. Choice based course selection, capstone projects and electives across disciplines offer much needed inter-disciplinary approach to budding Mechanical Engineers. We are equipped with highly experienced faculty and strong industry-academia connect.

Programme Structure

- Blending of latest industry trends with fundamental knowledge base in Mechanical Engineering
- According to the structure and syllabi the contents are categorized as
 - BS : Basic Sciences
 - EC : Engineering Core
 - DC : Departmental Core
 - DE : Departmental Electives
 - HS : Humanities and World Peace
 - SK : Skill based Courses

- **Tracks:**

- **B. Tech. (Mechanical Engineering)**



A Specimen Day Schedule includes

- Technology Courses: Theory, Laboratories and Practice
- Research, Explorations and Collaborations
- Experiential Learning : Projects, Assignments and other activities
- World Peace Courses: Yoga, Sports, Ethos, Ethics, Liberal Arts and Life Skills

Programme Structure ([Click here](#))

First Year
Applied Mathematics - I
Applied Physics
Applied Mechanics
Basic Electrical Engg.
Classical Languages ,Effective ommunication and Human Dynamics
Workshop Skills
Applied Mathematics II
Applied Chemistry
Engineering Material Science
Engineering Graphics
Computer Sci & Information Technology-I
Basics of Mechanical Engineering
Civil Engineering Survey Methods
Electronics and Telecommunication
Introduction to Engineering Design Principles.
Social Internship based Report

Advisory Board:

 <p>Anu Aga Chairman, Thermax</p>	 <p>Anand Mahindra MD, Mahindra Group</p>	 <p>Lila Poonawala MD, Alfa Laval</p>	 <p>Rajeev Bajaj MD, Bajaj Auto</p>
 <p>Rashmi Urdhwarshie Director, ARAI</p>	 <p>Avinash Dharmadhikari Former, IAS</p>	 <p>Sanjay Kirloskar MD, Kirloskar Brothers</p>	 <p>Vipin Sodhi MD, JCB</p>
 <p>Amit Patwardhan Director, IMEPL</p>			

Assessment

A blend of periodic written assessment and Continuous Assessment will be used for better student engagement and effective evaluation.

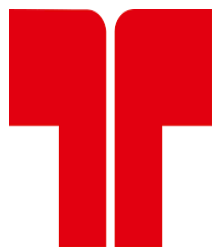
Continuous assessment of work 50%, Mid semester and End semester Examination 50 %

Placement Life @ Campus

Industry Collaborations:



Volkswagen



Mercedes-Benz



TATA TECHNOLOGIES



Powering Business Worldwide





Pernod Ricard



GRINDWELL
NORTON LTD.

Technical competitions arranged by students / college:

The institute also allows many co-curricular and extra-curricular activities such as organizing their technical festival TEXEPHYR and also has various teams like the SAEINDIA Collegiate branch of MIT, Pune, team BAJA, team SUPRA, TIFFAN which allow interaction with the outside world and make the students efficient at organizing events, making cars, etc thus allowing them to apply their knowledge and learn new abilities about handling people or sharpen their communicative skills. They also have MIT Cultural, the team which allows those having interests in drama, singing, dancing, plays, etc

Extra-curricular activities:

Annual Social Gathering, NCC, Sports, Trekking, Inspirational Movie screening, Heritage tours, visits to empower students in rural area.

Co-curricular activities:

Continuous Education Programs awarding Certificates, Technical competitions, Invited industry expert sessions, Faculty Development Programs.

Events:

ROBOCON (International and national level competitions on Robotics), ONGC Chair Programs in Oil and Gas sector.

International/Research/Placement Collaboration details:

About the MOU:

On 23rd October 2009 MAEER's Group of engineering Colleges, Pune & Mahindra & Mahindra Ltd. Kandivli, Mumbai, entered in to an agreement to have an industry-academia collaboration for the mutual benefit.

Present status:

- MOU has expired on October 2012.
- Not renewed due to the internal policies of M&M.
- However M & M is conducting various activities in MIT campus regularly till date.

Competition:

MIT Pune Tops Mahindra's "TECHRUMBLE" National Competition Students of MIT Pune, have bagged first prize in the national level competition "Tech Rumble" conducted by "Mahindra Igniters" of Mahindra & Mahindra Ltd. 75 teams from 25 different engineering colleges all over India had participated in the competition. This was a technical competition of solving case studies related to automobile problems.

- Conducted Elocution Competition on subject "Population Growth – Boon or Curse" on 25th July 2017 at MIT, Pune.
- **Mahindra Auto Quotient**
[Mahindra auto Quotient 2017](#)
[MOU Past activities with Mahindra](#)
- **Project Competitions**
[VJTI Technovanza](#)

Institute achievements- Academic, sports, co-curricular :

For the first time Team Acceleracers had registered for Formula Student India, a competition of international standards, for their 2016 edition. Team Acceleracers

achieved 9th rank in the Business Presentation and 12th in the Design Presentation out of the 50 participating teams.

Endurance test event was completely dedicated to the endurance race a 22.5 km race on the main track of the BIC. COMET 2.0 was among the 22 cars to qualify for the endurance from 180 teams that participated in the event.

The team won the following awards:

1. Engineering Design: 1st Place
2. CAE award: 1st Place
3. First car to clear TI
4. Best Pit award

Programme Intake

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Contact: Program Head

Prof. Dr. Suhasini Desai

Programme Head,
B. Tech. Mechanical Engineering
Dr. Vishwanath Karad MIT World Peace University, Pune
E-Mail- suhasini.desai@mitpune.edu.in
Phone – (020) 3027 3514
Mobile - (+91) 9422328201