



Dr. Vishwanath Karad  
**MIT WORLD PEACE**  
**UNIVERSITY** | PUNE  
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS



2023 - 24

Faculty of Engineering  
and Technology

## B.Tech

A University for Students'  
Life Transformation

- + Civil Engineering
- + Civil Engineering (Smart Infrastructure and Construction)
- + Mechanical Engineering
- + Mechanical Engineering (Robotics and Automation)
- + Chemical Engineering
- + Bioengineering
- + Materials Science and Engineering
- + Electronics and Communication Engineering
- + Electronics and Communication Engineering (Artificial Intelligence and Machine Learning)
- + Electrical and Computer Engineering
- + Computer Science and Engineering
- + Computer Science and Engineering (Artificial Intelligence and Data Science)
- + Computer Science and Engineering (Computer Science and Business Systems)
- + Computer Science and Engineering (Cyber Security and Forensics)
- + Petroleum Engineering
- + Direct Second Year (Lateral Entry After 3 Years) Engineering Diploma

**WORLD'S FIRST UNIVERSITY FOR  
LIFE TRANSFORMATION**

**MIT-WPU**



With a rich legacy of 40 years in fostering world-class academic excellence and over 100,000 alumni across the globe, MIT-WPU is one of the premier centres of higher learning in India that offers over 150 programmes. The programmes are developed by leading Indian and International academicians focussing on theoretical as well as practical aspects. Students at MIT-WPU benefit from a hands-on learning approach, mentor-mentee relationships, internships, and immersion programmes that provide opportunities for real-world learning and personal growth.

**WE LIVE  
IN AN ERA OF  
TECHNOLOGICAL  
PROGRESS**

# MIT-WPU Faculty of Engineering and Technology

The MIT-WPU Faculty of Engineering and Technology offers an ideal combination of practical knowledge and problem-based, experiential, and collaborative learning. MIT-WPU's academic fraternity is highly experienced and takes pride in its strong industry-academia connections that allow students to acquire the best theoretical knowledge while also getting proper industry exposure through application-oriented pedagogies, guest lectures, seminars, workshops, national and international tours, and more. Students also gain valuable experience through a variety of capstone projects that emphasise brainstorming and problem-solving while encouraging innovation at every stage.

Furthermore, the Centres of Excellence, in collaboration with multiple MNCs, prepare students for successful careers in the future.

## Highlights

- Choice-based learning pedagogy
- Hands-on training in technologies and tools like iOS Training using Swift, mobile application development (using Kotlin), full stack development, internet technologies, internet of things, data science, cyber security, etc
- Industry visits, guest lectures, seminars, and workshops by eminent researchers and industry practitioners from Cybage, Inteliment, Xpansion International, Barclays, CISCO among others
- State-of-the-art lab facilities
- Dedicated Centre for Industry-Academia partnerships for internship and placement assistance
- Skill enhancement courses such as business communication, effective presentation and many more
- Six-month industry internship for work experience
- MoUs with 231+ corporates for training, research, and development
- More than 100 student-led clubs catering to varied interests, from technology to drama
- Encouraging entrepreneurship in students through funding, mentoring, and network connection through MIT - Pune Technology Business Incubator (TBI)
- Rural, National and International immersion programmes

## Minor in Computer Engineering for Non Computer Engineering Branches

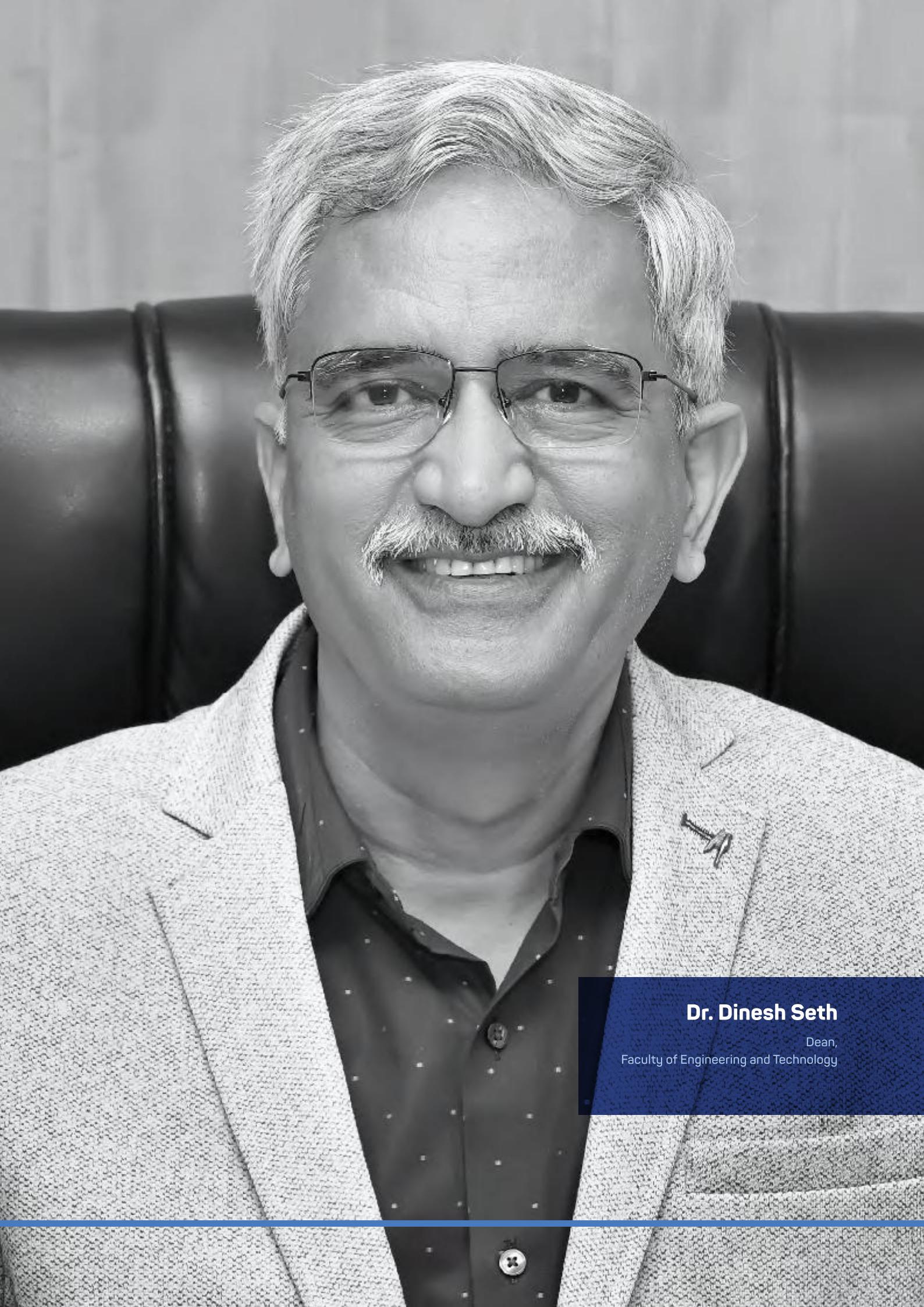
Taking into consideration the diverse application of the principles of Computer Engineering in various arenas of engineering, MIT-WPU Faculty of Engineering offers the option of pursuing a 'Minor in Computer Science and Engineering' to the students pursuing B.Tech in the university. This minor will not only give the students a competitive edge but also an additional 20 credits.

The minor, which can be pursued in their second year, will also find a mention in their B.Tech transcripts and grade sheets.

## Industry Relevant Courses in B.Tech Branches

All students pursuing B.Tech in MIT-WPU will be trained in the following industry-relevant courses for extra credits.

- Linux based Python Laboratory
- Basic IoT Laboratory
- Data Science for Engineers
- Artificial Intelligence and Machine Learning (AIML)



**Dr. Dinesh Seth**

Dean,  
Faculty of Engineering and Technology

# Dean's Message

Dear students and parents,

There is a huge demand for industry-ready manpower that is conversant with the latest technologies adopted by the industry. Therefore, it is necessary, as academicians, that we contribute to the growth of our nation by grooming professionals, who are conversant with the current advances and practices in the industry.

Building a strong industry-academia connection is a priority for the Faculty of Engineering and Technology. My team of faculty members is continuously revising the engineering curriculum in consultation with the top industry experts. Industry readiness at the global level and research and innovation are our key focus areas.

I firmly believe that our nation needs research-oriented education that pushes our young minds toward innovation that can provide solutions to real-life problems. This will truly make the dream of Atma Nirbhar Bharat a reality.

As the Dean of the Faculty of Engineering and Technology, providing infrastructural support and encouragement to my team of faculty members, along with their bright young engineering students, is a priority for me. It gives me immense pleasure to inform you that this team is currently working on several innovative, interdisciplinary projects across various domains.

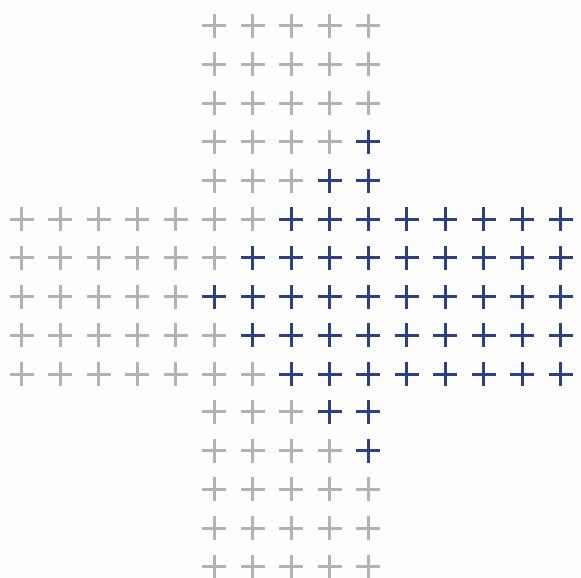
I am confident that the Faculty of Engineering and Technology at MIT-WPU will produce global professionals, leaders, and lifelong learners with holistic personalities who will contribute to the well-being of humankind.



# Industry Collaborations

MIT-WPU has strong industry collaborations for student placements, research, and seed funding. These collaborations provide students with opportunities to gain practical experience, work on real-world projects, and interact with industry professionals. They also help faculty members to stay updated on the latest industry trends and developments, and provide a platform for research collaboration and funding. These collaborations help students to develop the skills and knowledge necessary for successful careers in their chosen fields, and provide a valuable source of support for faculty research and innovation. Industry partnerships also benefit the university by providing access to industry expertise, funding, and resources.

- AMDOCS Innovation Lab' is a unique lab on campus for students to transform their innovative ideas into a reality, developed in collaboration with AMDOCS India
- Certified Network Associate with Exploration Version 4.0
- Siemens has set up a "Unified Communication Lab" for research in Communication Business



## Centres of Excellence at MIT-WPU

- Centre of Excellence for Cryptography and Cyber Security with Ziroh labs
- Centre of Excellence for Blockchain Technology with Snapper FutureTech
- Centre of Excellence for Parallel/Distributed Computing with NVIDIA CUDA
- SUBSEA Lab – an initiative of MIT-WPU with Aker Powergas Subsea Pvt. Ltd., and Aker Powergas Pvt. Ltd.
- Centre of Excellence for Innovative Design and Construction Technologies with Italy's Politecnico De Milano

# Academic Partnerships and Collaborations

The Faculty of Engineering and Technology, MIT-WPU has partnered with top international universities, demonstrating its commitment for a truly global education. These programmes enable learning beyond borders through the cross-pollination of international disciplinary approaches.

MIT-WPU continues to cultivate, enhance, and sustain global relationships and expand inter-cultural networks for its students through student and faculty exchange programmes, summer and winter programmes, research associations, extra credit programmes, and other activities.

The Faculty of Engineering and Technology has collaborated with the international universities listed below.



Deakin University,  
Melbourne, Australia



Macquarie University,  
Sydney, Australia



University of La Trobe,  
Victoria, Australia



University of Vermont,  
USA



Eastern Michigan University,  
USA



Utah Valley University, Utah,  
USA



University of Massachusetts,  
USA



Virginia Commonwealth  
University, USA



University of Texas,  
USA



Nottingham Trent University,  
UK



IMT Mines,  
Albi, France



Vrije Universiteit,  
Netherlands



John Hopkins University,  
USA



# Department of Civil Engineering

The Department of Civil Engineering at MIT-WPU is dedicated to producing ethical civil engineers capable of planning, conceptualising, designing, constructing, monitoring, operating, and maintaining infrastructure, transportation, and public utility projects. Students learn to integrate their research skills and knowledge of various civil engineering materials into developing infrastructure that effectively meets the objectives and needs of the users. The two B.Tech programmes in this department provide students with a solid foundation in the field of civil engineering by instilling analytical, technical, professional, and management skills.

## Labs

The Department of Civil Engineering, MIT-WPU has the following labs equipped with the latest state-of-the-art equipment.

- Surveying Laboratory
- Transportation Engineering Laboratory
- Concrete Technology Laboratory
- Structural Dynamics Laboratory
- Heavy Structures Laboratory
- Environmental Engineering Laboratory
- Geotechnical Engineering Laboratory
- Tunnel Engineering Laboratory
- IoT Laboratory



# Civil Engineering

The B.Tech Civil Engineering programme at MIT-WPU prepares students to design and develop infrastructure by combining knowledge from mathematics, physics, mechanics, geotechnics, materials science, hydraulics, and statistical analysis. Students are taught how to use engineering and management principles to govern a project in a multidisciplinary environment while keeping environmental, legal, financial, and ethical constraints in mind. Students are taught design thinking in order to develop critical problem-solving skills in the field of civil engineering. They learn to apply their knowledge through a variety of hands-on projects, assignments, and internships in industry-related fields such as subsea engineering, structural engineering, and construction management. These projects and internships prepare students to enter the industry ecosystem with confidence.

## Major Tracks



Infrastructure,  
Construction  
Engineering and  
Management.



Structural  
Analysis and Design,  
Materials



Geotechnical  
and Foundation  
Engineering



Transportation  
(Roads, Bridges, Railway, Airport,  
Docks and Harbors)



Environmental  
Engineering



**Duration - 4 years**



**Fees - ₹ 2,50,000 PA**

## Career Opportunities

- Site Engineers
- Structural Consultants
- Construction Management Consultants
- Project Managers
- Surveying Consultants



## Collaborations and Funding at the Department of Civil Engineering

- The Department of Civil Engineering offers a collaborative programme with Burton and South Derbyshire College (BSDC) in the United Kingdom, as well as an agreement for collaborative research with organisations such as the Pune Construction Engineering Research Foundation (PCERF), the Builders Association of India (BAI), KL Structures USA, BSDC College UK, Aberdeen University, Aker

Solutions, Ajay Kadam Associates, and CWPRS, among others.

- The MODROB scheme provides funding to the Department to assess the seismic response of various infrastructures. It enables two-dimensional earthquake response and simulates all major earthquake scenarios from previous centuries.



## Accelerated Master's Programme with Nottingham Trent University

Students in the Department of Civil Engineering at MIT-WPU can earn a master's degree from Nottingham Trent University (NTU) in the United Kingdom in just one year. They can choose from the following programmes offered at NTU School of Architecture, Design, and Built Environment.

- M.Sc in Construction Management
- M.Sc in Structural Engineering with Management
- M.Sc in Project Management (Construction)
- M.Sc in Structural Engineering with Materials
- M.Sc in Quantity Surveying
- M.Sc in Civil Engineering



# Civil Engineering in Smart Infrastructure and Construction

The B.Tech Civil Engineering with a specialisation in Smart Infrastructure and Construction programme at MIT-WPU prepares students to construct innovative infrastructures by combining physical infrastructure assets and construction processes with digital technologies, also known as smart technologies. For effective infrastructure management, students learn to use smart technologies such as sensors and citizen science, actuators, data transmission, the Internet of Things (IoT), big data analytics, data visualisation, blockchain, Artificial Intelligence and Machine Learning (AI&ML), data science, dimensional building modelling & simulation and drone technology in the course curriculum.

## Major Tracks



Intelligent Transport System



Sustainable Construction Materials and Management



Intelligent Irrigation Technologies



Robotics and Automation in Civil Construction



Duration - 4 years



Fees - ₹ 2,50,000 PA

## Career Opportunities

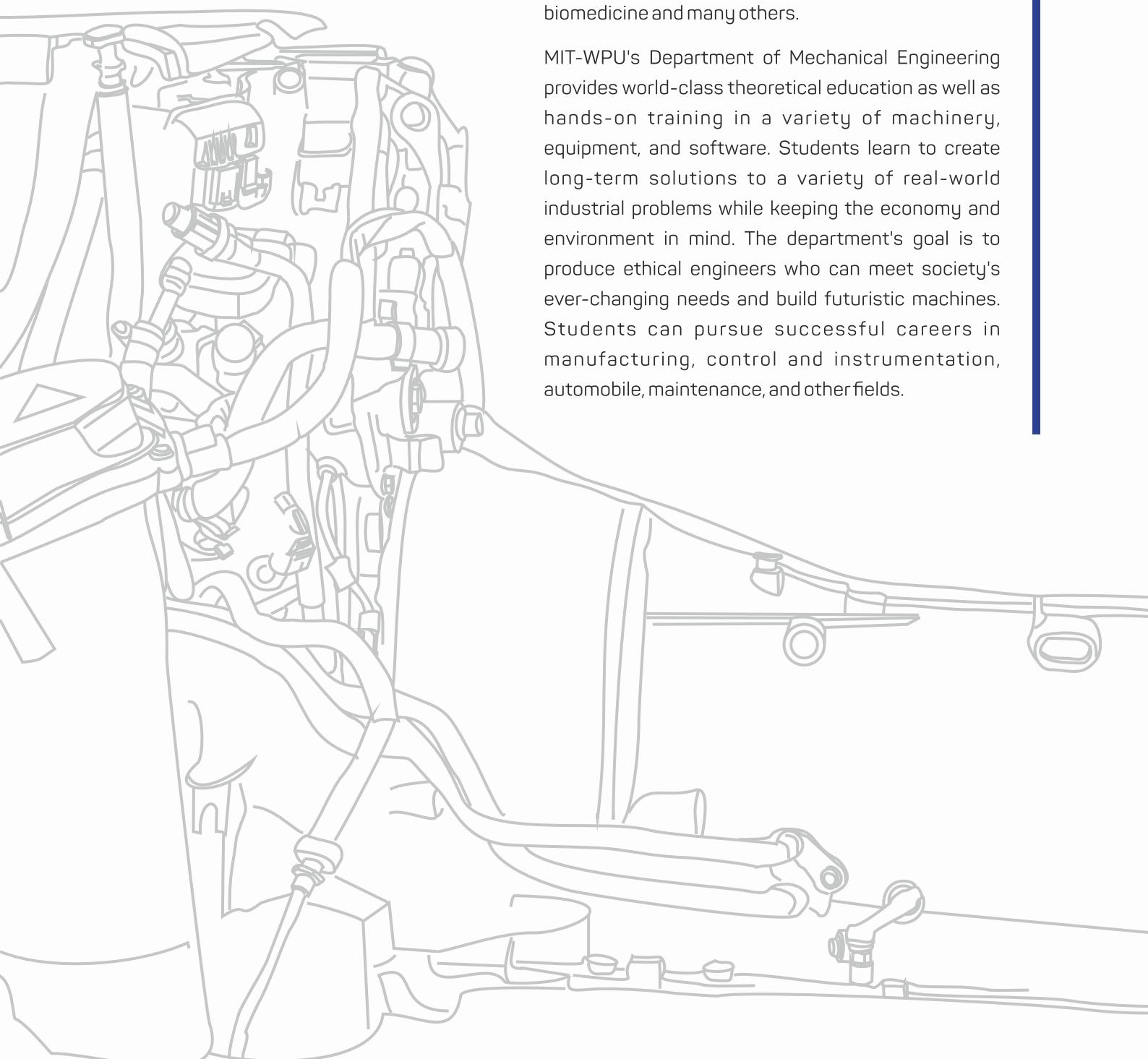
- Site Engineers
- Structural Consultants
- Construction Management Consultants
- Project Managers
- Government Engineers post-IES
- Surveying Consultants



# Department of Mechanical Engineering

Mechanical engineering is the study of the design, development, and manufacturing of products, systems, and processes in a variety of industries such as automation, aerospace, conventional and non-conventional power generation, robotics, biomedicine and many others.

MIT-WPU's Department of Mechanical Engineering provides world-class theoretical education as well as hands-on training in a variety of machinery, equipment, and software. Students learn to create long-term solutions to a variety of real-world industrial problems while keeping the economy and environment in mind. The department's goal is to produce ethical engineers who can meet society's ever-changing needs and build futuristic machines. Students can pursue successful careers in manufacturing, control and instrumentation, automobile, maintenance, and other fields.





## Labs

The Department of Mechanical Engineering, MIT-WPU has the following labs equipped with the latest state-of-the-art equipment.

- EVehicle & Electrical Mobility Lab
- RAC & Cryogenics Lab
- Hydraulics Lab

- Pneumatics Lab
- Robotics Lab
- Automation Lab
- Advanced Material Characterisation & Metrology Lab



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- Noise Vibration and Harshness (NVH) Lab
- Tata Technology Visualisation & Competency Centre-I
- Mechatronics & Sensor Technology Lab
- Computer Aided Design (CAD) Lab
- Steam and Power Generation Lab
- Thermal Engineering & Nanofluidics Research Lab
- Hydraulics Machinery Lab
- Advance Heat Transfer & HVAC Lab

# Mechanical Engineering

Mechanical engineers create a wide range of everyday utility devices such as batteries, athletic equipment, medical devices, personal computers, air conditioners, automobile engines, and power plants. The B.Tech in Mechanical Engineering programme at MIT-WPU prepares students to design, manufacture, and maintain complex mechanical systems in fields such as e-mobility, biomedicine, aviation, and energy. Students are trained through research and industry projects, as well as industry tours and immersion programmes. They can find jobs in areas such as manufacturing, automation, industry, the Internet of Things (IoT), and artificial intelligence.



## Major Tracks



Design Engineering



Robotics and Artificial  
Intelligence



Energy Engineering



Materials, Manufacturing  
and Automation



Duration - 4 years

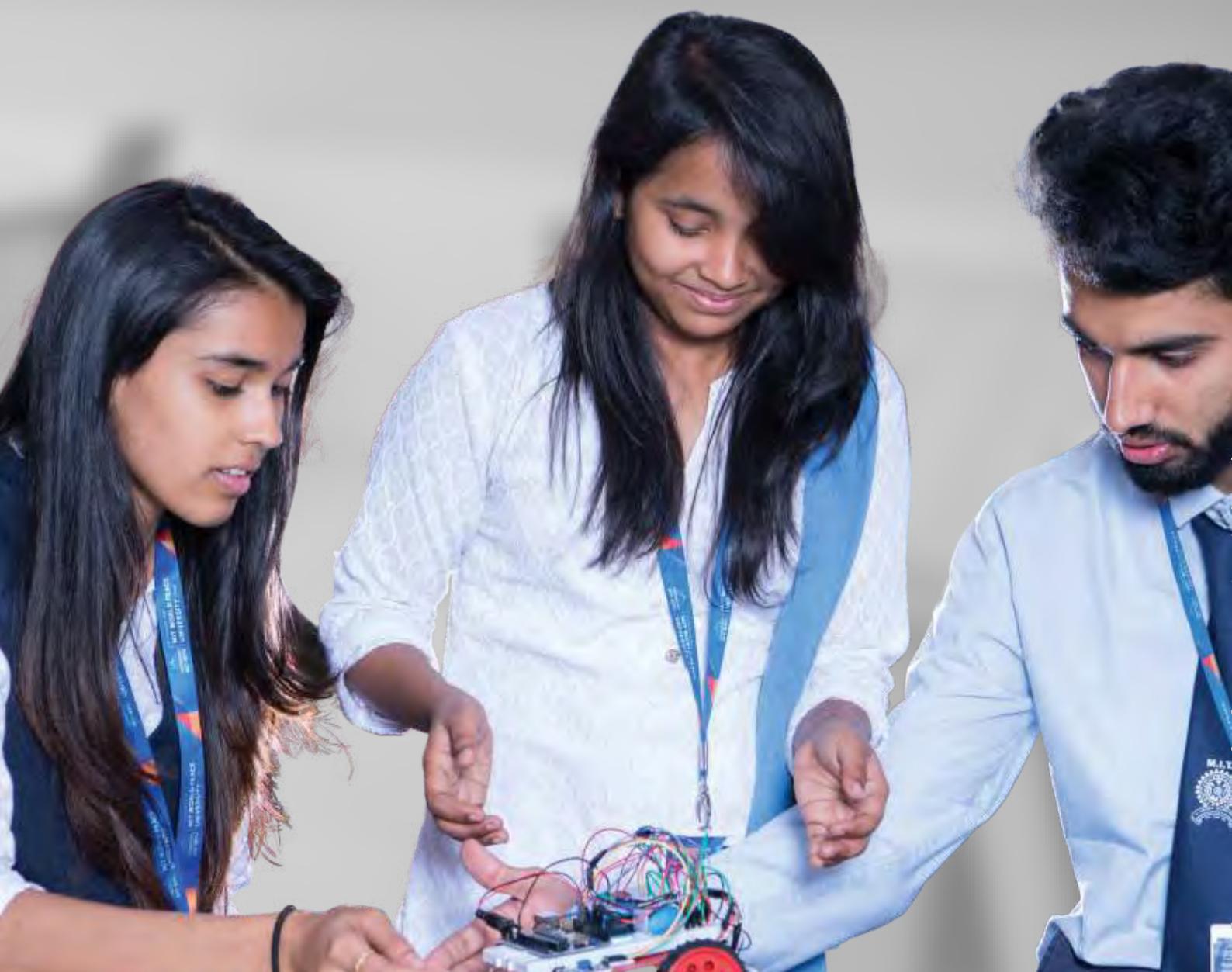


Fees - ₹ 3,10,000 PA

## Career Opportunities

- Automotive Engineers
- Maintenance Engineers
- Research and Development Supervisors
- Manufacturing Engineers
- Control and Instrumentation Engineers
- Mechanical Engineers





# Mechanical Engineering (Robotics and Automation)

The B.Tech Mechanical Engineering programme with a specialisation in Robotics and Automation is an interdisciplinary programme that combines the knowledge of mechanical, electrical, robotics, and computer science. The programme teaches students how to design and build robots and intelligent control systems. Students learn to design and customise robotic components by combining design tasks, algorithms, and control. They are taught to solve real-world industrial automation problems using electromechanical and computer engineering principles. They can work in a variety of fields such as industrial automation, manufacturing, mining, aerospace, healthcare, defence, and so on.

## Major Tracks



Mechanical Design  
and Simulation



Control  
Engineering



Robot System  
Building



IoT and Artificial  
Intelligence



Materials, Manufacturing  
and Automation



Duration - 4 years



Fees - ₹ 3,10,000 PA

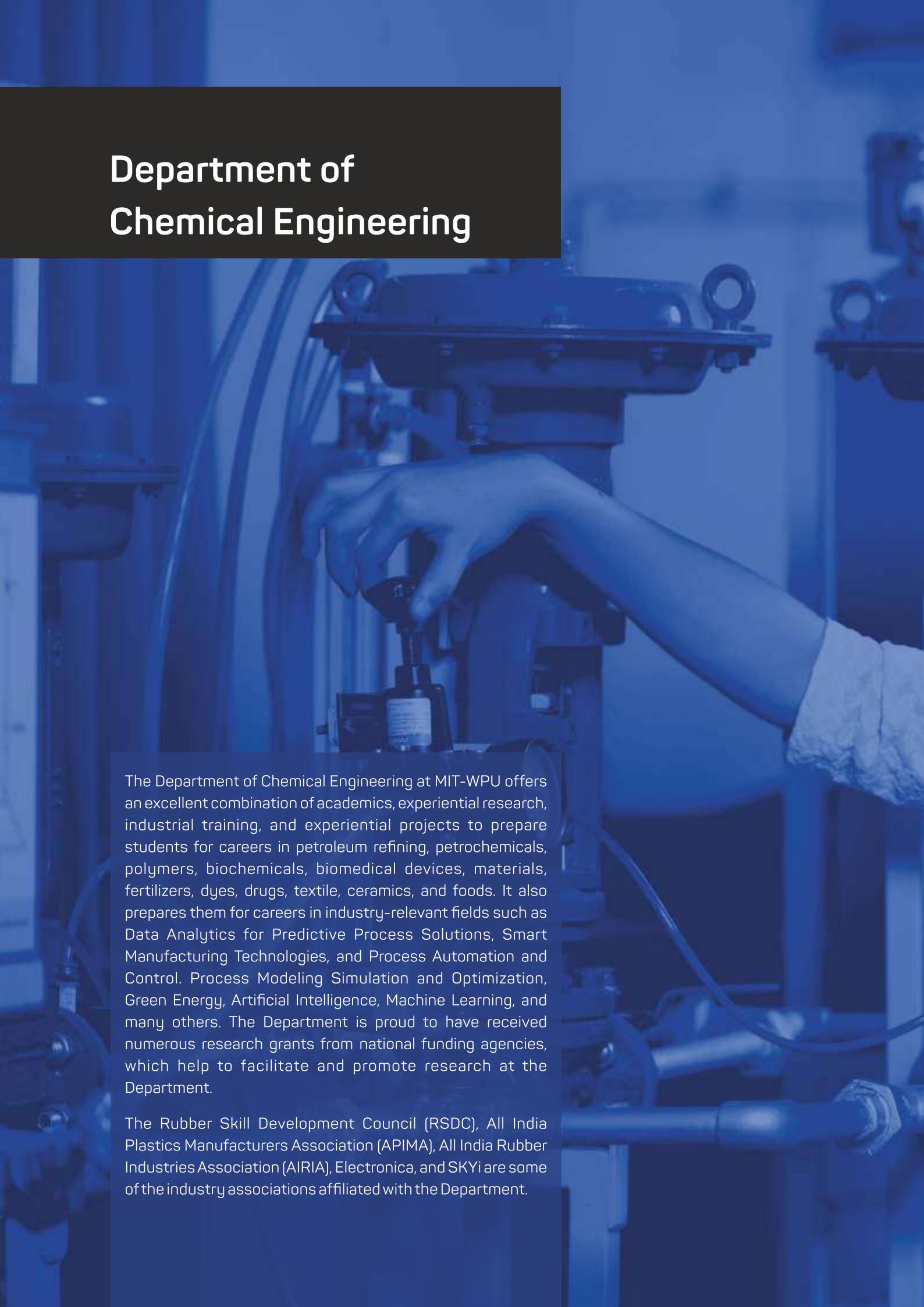
## Career Opportunities

- Robotic Research Engineers
- Robotic Engineers
- Robotic Test Engineers
- Automation System Engineers
- Associate Engineer: Robotics Automation
- Robotic Simulation Engineers
- IXO Robotics

## Research at the Department of Mechanical Engineering

- IP Australia on behalf of the Australian government has granted six patents to faculties of DoME
- DoME also has 18 patents from the Indian Patent Office to its credit.
- The Department has to its name over 500 research papers, with 2000 citations, and research funding of more than 1 Crores

# Department of Chemical Engineering



The Department of Chemical Engineering at MIT-WPU offers an excellent combination of academics, experiential research, industrial training, and experiential projects to prepare students for careers in petroleum refining, petrochemicals, polymers, biochemicals, biomedical devices, materials, fertilizers, dyes, drugs, textile, ceramics, and foods. It also prepares them for careers in industry-relevant fields such as Data Analytics for Predictive Process Solutions, Smart Manufacturing Technologies, and Process Automation and Control. Process Modeling Simulation and Optimization, Green Energy, Artificial Intelligence, Machine Learning, and many others. The Department is proud to have received numerous research grants from national funding agencies, which help to facilitate and promote research at the Department.

The Rubber Skill Development Council (RSDC), All India Plastics Manufacturers Association (APIMA), All India Rubber Industries Association (AIRIA), Electronica, and SKYi are some of the industry associations affiliated with the Department.



# Labs

The Department of Chemical Engineering, MIT-WPU has the following labs equipped with the latest state-of-the-art equipment.

- Chemical Engineering Unit Operations Lab
- Chemical and Bio Analytical Techniques Lab
- Chemical and Bio-catalysis Lab
- Instrumentation and Process Control Lab
- Chemical Process Development Lab
- Bioprocess Engineering Lab
- Mass Transfer and Advanced Separation Processes Lab
- Biomedical Engineering Lab
- Transport Phenomena Lab
- Central Analytical Instrumentation Facility Lab 1
- Central Analytical Instrumentation Facility Lab 2



## Achievements of the Department of Chemical Engineering

The MIT-WPU Department of Chemical Engineering is a member of the AIChE (American Institute of Chemical Engineers) Student Chapter. This student chapter has received the Global Outstanding Student Chapter Award three years in a row, i.e. in 2019, 2020, and 2021.

### Prestigious awards:

- Donald F. Othmer Sophomore Academic Excellence Award presented by AIChE
- AIChE- Southern Asia Regional Liaison
- International Position of Regional Liaison at the Executive Student Committee- AIChE

- Freshman Recognition Award by AIChE
- Project Based Learning hackathon by IUCEE. (Indo Universal Collaboration for Engineering Education)

This 'student chapter' also assists students in engaging in co-curricular activities and social impact projects that not only develop communication skills, team-building skills, and leadership skills among students, but also sensitises them to ground level realities in order to find relevant solutions.

# Chemical Engineering

Students pursuing a B.Tech in Chemical Engineering at MIT-WPU are prepared to design, develop, produce, operate, and manage industrial processes that convert chemicals and materials into useful products. Fluid mechanics, heat transfer, mass transfer, chemical design engineering, plant design, and process control are among the topics covered in the programme. The programme prepares students for a variety of challenging roles in industries such as pharmaceuticals, healthcare, petrochemicals, specialty chemicals, polymers, biotechnology, and others.

## Major Tracks

-  Water and Wastewater Treatment
-  Polymer Technology
-  Biochemical Engineering
-  Chemical Process Modeling and Simulation
-  Refining and Petrochemical Technology

 **Duration - 4 years**

 **Fees - ₹ 3,10,000 PA**

## Career Opportunities

- Process Engineers
- Project Engineers
- Design and Commissioning Engineers
- Production Engineers
- Biochemical Process Engineers
- Technical Consultants
- Process Simulation Engineers



# Bioengineering

Bioengineering brings together the best of biology and engineering to advance research and innovation in human healthcare. The B.Tech in Bioengineering is a multidisciplinary programme that combines biological, physical, chemical, mathematical, and life sciences principles with various aspects of chemical, mechanical, electrical, and computer engineering. The programme's curriculum includes courses in bioinformatics, biomechanics, bioenergy, bionanotechnology, biopolymers, and biomedical electronics.

## Major Tracks



Biomechanics



Biomedical  
Instrumentation



Bioprocess  
Engineering



Bioinformatics



Genetic Engineering



Duration - 4 years



Fees - ₹ 3,10,000 PA

## Career Opportunities

- Biomedical Engineers
- Bioinformatics Software Developers
- Bioprocess Engineers
- Project Engineers
- Genetic Engineers
- Genetic Scientists
- Design Engineers

# Students' Achievements at MIT-WPU Faculty of Engineering and Technology (FoET)

## Piranha Racing

- Champions of BAJA SAE India-2021
- 8 trophies including AIR 1 in Overall Dynamics, Gradeability, Acceleration, All-Terrain Performance, Suspension and Traction

## Hyperloop - Vegapod

- Among Top 3 in Asia and top 30 out of 1600+ teams worldwide
- Among Top 20 out of 150 teams to qualify for European Hyperloop Week

## Smart India Hackathon

- First Prize in 2020

## Formula Student

- 1st University from India to qualify for Formula Student
- Ranked 9th at the Formula Bharat 2019 among 64 international teams

## ABU Robocon

- Ranked 5th internationally; qualified five times at the international level







QUALITY SERVICE

Mod. 5171 N. 82

# Department of Material Science Engineering

At the department of Material Science Engineering, students learn to design and upgrade products, systems, and processes across various materials, metals, polymers, ceramics, etc. Material Science Engineering finds its application across various sectors like medicine, agriculture, automation, electronics, sports, etc. This non-conventional branch of engineering at MIT-WPU prepares students to work on interdisciplinary projects through project-based learning and multiple industry associations like the Rubber Skill Development Council (RSDC) All India Plastics Manufacturers' Association (APIMA), All India Rubber Industries Association (AIRIA), Elctronica, and SKYi.

## Labs

The Department of Material Science Engineering, MIT-WPU has the following labs equipped with the latest state-of-the-art equipment.

- Materials Compounding & Rheology Lab
- Materials Processing & Operations Lab
- Mould & Die Design Lab
- Materials Synthesis Lab
- Materials Testing & Characterization Lab
- Materials Research Lab



# Materials Science and Engineering

The B.Tech in Materials Science and Engineering at MIT-WPU is an interdisciplinary programme that trains students to develop advanced polymeric, ceramic, and composite materials that can be used in various industries like energy, transportation, tissue engineering, drug delivery, construction, nanotechnology, and more. Students learn how materials are designed, manufactured, developed, processed, tested and recycled for a particular application. The programme combines engineering sciences such as fluid mechanics, heat and mass transfer, kinetics, and thermodynamics with basic sciences such as physics and chemistry.

## Major Tracks



Polymer Materials  
and Composites



Nanomaterials



Biomaterials



Materials Modelling  
and Simulations



Intelligent and  
Smart Materials



Duration - 4 years



Fees - ₹ 2,50,000 PA

## Career Opportunities

- Material Engineers
- Design Engineers
- Metallurgists
- Product Development Scientists
- Process Development Scientists

# Department of Electronics and Electrical Engineering

The study of the practical application of electricity, its generation, transmission, and distribution is the focus of the Department of Electronics and Electrical Engineering at MIT-WPU. The Department offers specially curated programmes which are in tandem with critical industry requirements. The Department also offers hands-on projects, industry visits, and internships to prepare students to enter the professional world with confidence. Electronics and electrical engineers lay the groundwork for modern communication systems and find solutions to the real-time problems of power system and electrical machine operation, maintenance, and control.

## Labs

The Department of Electronics and Electrical Engineering, MIT-WPU has the following labs equipped with the latest state-of-the-art equipment.

- EV & Automation Lab
- Control Systems & Measurement Lab
- Advanced Machine Lab
- Power Electronics & Power System Lab
- Switchgear & Renewable Lab
- Programming Smart Grid Lab
- VLSI Lab
- Embedded Lab
- AIML Lab
- IoT Lab
- Nvidia Lab
- IBM Lab
- Computer Vision Lab
- Automation Lab





## Achievements in Research at the Department of Electronics and Electrical Engineering

The Department has received funds over Rs 2 Crore from DST and ISRO for:

- Yield Prediction and Quality Assessment of Grapes in Vineyard Using LIDAR Technology (Department of Science and Technology (DST) under the Women Scientists Scheme, KIRAN).
- Design and Development of Multisensory Smart Assistive Technology for the Blind (Department of Science and Technology (DST), Govt. of India)
- Development of an Algorithm for the Analysis of Vegetation Dynamics (ISRO)
- Modification of TW3 RUS for Bone Age Assessment (Department of Science and Technology (DST), Govt. of India)

# Electronics and Communication Engineering

Students in the B.Tech Electronics and Communications Engineering at MIT-WPU learn about the concepts, technologies, hardware, and software used in the fields of telecommunications, electronics, and energy. Students also learn to tackle challenges in research and development of electronic materials, devices and circuits, microcontrollers and their interfacing devices, communication technologies, and other areas by using cutting-edge tools and software. With the rapid advancement of electronics, communication, and computing over the last three decades, electronics and communication engineers now have opportunities in a variety of fields such as automation, control, core manufacturing, transportation, water, food processing, pharmaceuticals, disaster management, smart cities, and so on.

## Major Tracks



Communication  
Engineering - IoT



Signal and Image  
Processing – Computer Vision



Artificial  
Intelligence



VLSI and Embedded



Applied Electronics



**Duration - 4 years**



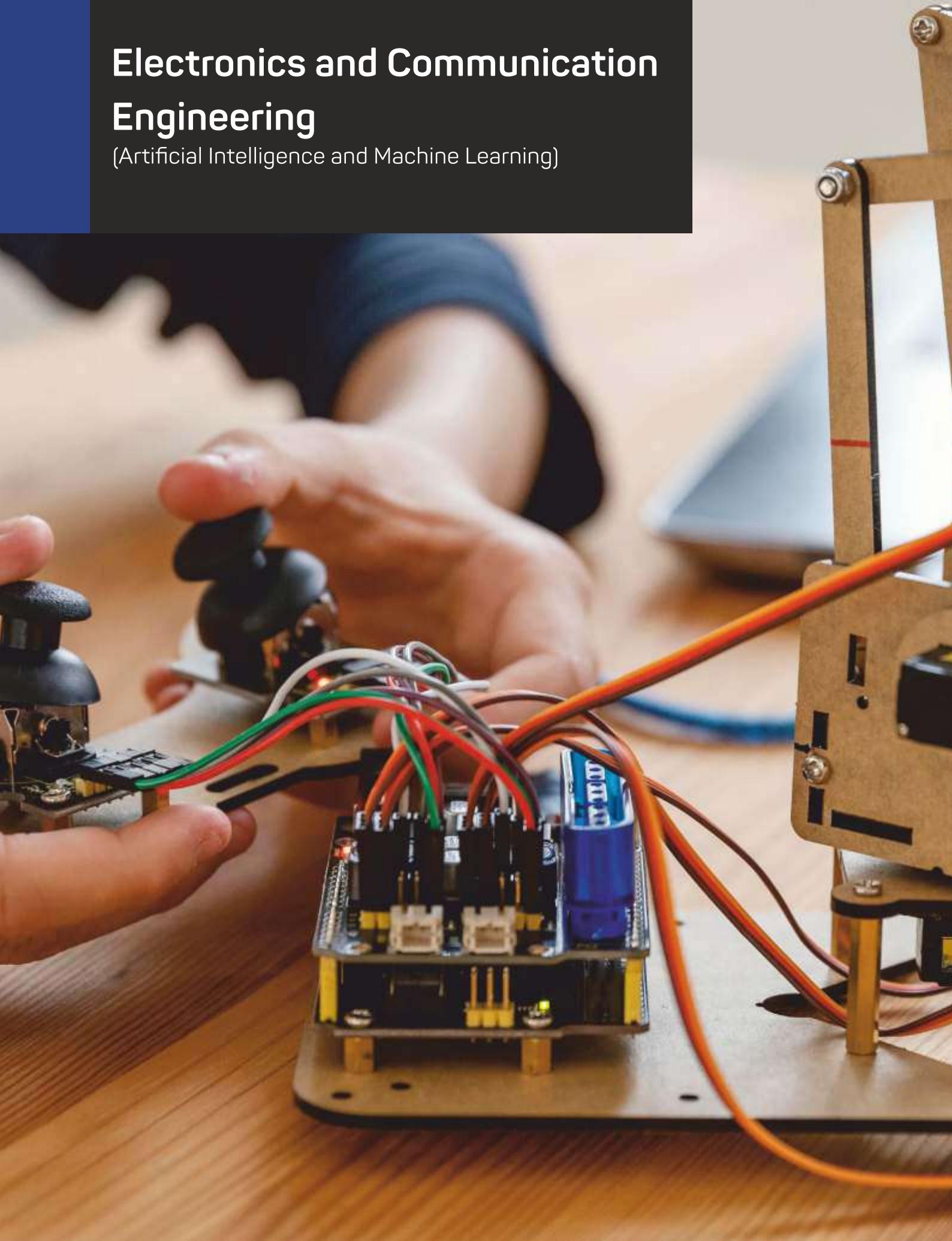
**Fees - ₹ 3,10,000 PA**

## Career Opportunities

- Telecom Engineers
- R&D Software Engineers
- Software Analysts
- Electronic Design Engineers
- Desktop Support Engineers
- Technical Managers
- Network Planning Engineers

# Electronics and Communication Engineering

(Artificial Intelligence and Machine Learning)





The B. Tech Electronics and Communication Engineering with a specialisation in Artificial Intelligence and Machine Learning (AI&ML) is designed to provide students with comprehensive knowledge of electronics and communication, as well as AI&ML, to meet the industry's current and future needs. Students learn to identify, formulate, and design intelligent solutions for fields such as computer vision, robotics, automotive electronics, biomedical signal processing, health care, human-computer interface, and business solutions, among others.

## Major Tracks



Edge Intelligence



AI in Healthcare



AI Computing Platform



Deep Learning Architectures



Augmented and Virtual Reality



**Duration- 4 years**



**Fees- ₹ 3,10,000 PA**

## Career Opportunities

- AI Architects
- Data Scientists
- Business Analysts
- ML Engineers
- Product Analysts



# Electrical and Computer Engineering

The B. Tech Electrical and Computer Engineering prepares students for careers in computer, electrical, and electronics engineering in fields such as electric vehicles, smart grids, automation, algorithms, software programming, data science, artificial intelligence, the Internet of Things, cloud computing, cybersecurity, and others. The programme provides multiple tracks and electives to prepare students for successful careers in a variety of fields.

## Major Tracks



Smart Electric  
Mobility



Robotics and Industrial  
Automation



Artificial  
Intelligence



Data Analytics



Smart Grid  
and Energy Systems



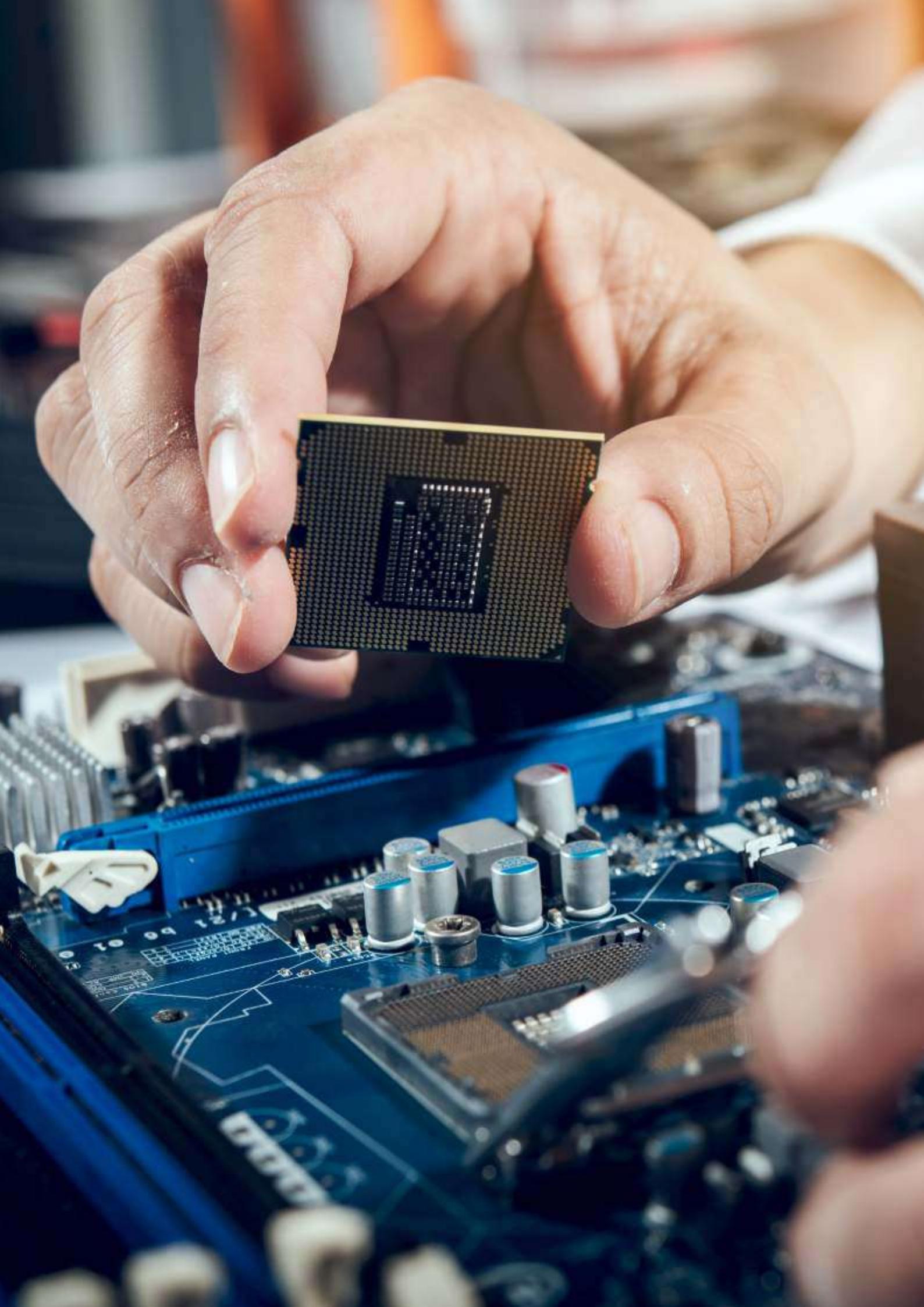
Duration - 4 years



Fees - ₹ 3,10,000 PA

## Career Opportunities

- Computer Hardware Engineers
- Communication Engineers
- Machine Learning Engineers
- Information Systems Managers
- Data Scientists



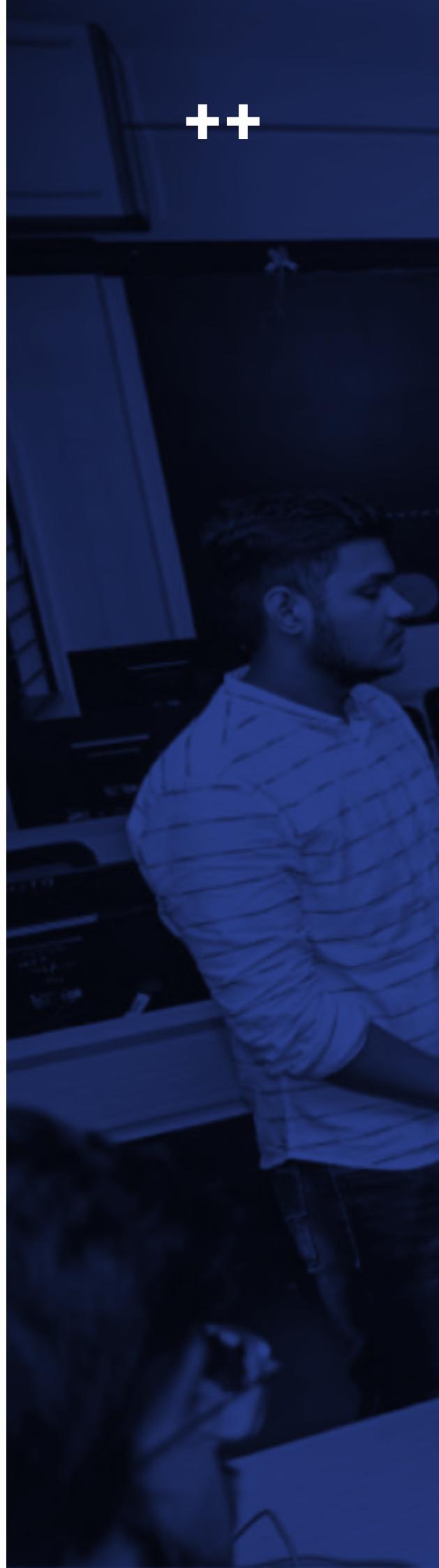
# Department of Computer Engineering and Technology

Innovation, design, development, deployment, usability, and presentation skills are in high demand in the field of computer engineering and technology. To meet the unprecedented demand for aspiring engineers, the Department of Computer Engineering and Technology offers cutting-edge programmes with specialisation in Artificial Intelligence and Data Science, Cyber Security and Forensics, Computer Systems and Business Systems. These programmes are an excellent combination of academics, industrial exposure, research opportunities, and a wide range of co-curricular and extracurricular activities. The Department also hosts a number of workshops and skill-building courses to provide hands-on experience with software such as Linux, Python, IoT, Data Science, Blockchain, Deep Learning, Cyber Security, AR/VR, Edge computing, and many more.

# Labs

The Department of Computer Engineering and Technology, MIT-WPU has the following labs equipped with the latest state-of-the-art equipment.

- Emerging Technology Laboratory
- Object Oriented Programming Lab
- Software Development Laboratory
- High Performance Computing Laboratory
- Embedded System Laboratory
- Microprocessor Laboratory
- Cyber Security Laboratory
- Big Data Analytics Laboratory
- System Software Laboratory
- Cloud Computing Laboratory
- Image Processing Laboratory
- IoT Technologies Laboratory
- BlockChain Technology Laboratory
- Web Technology Laboratory
- HCI Laboratory
- AR/VR Laboratory
- Computer Networks Laboratory
- Wireless Networks Laboratory
- Operating Systems Laboratory
- Artificial Intelligence Laboratory
- Machine Learning Laboratory
- Digital Electronics Laboratory
- Data Science & Analytics Laboratory (PG)
- NMCS Laboratory (PG)





# INDUSTRY 4.0

Concepts • Initiatives

ENGINEER YOUR FUTURE

# Computer Science and Engineering

The B. Tech in Computer Science and Engineering program at MIT-WPU is designed to impart comprehensive knowledge to students in the field of computer science and engineering. The students are trained in the fundamental principles of hardware and software, which are the building blocks of computer engineering. They gain a thorough understanding of algorithmic analysis, which is essential for designing efficient and effective software systems. They also learn how to analyze, design, and develop software systems, as well as gain expertise in programming languages such as C, C++, JAVA, and Python. In addition, students will acquire strong mathematical and scientific knowledge, which will help them in problem-solving and critical thinking.

The programme provides the students with research and innovation skills in computer engineering, and they will learn to conduct research, analyze data, and develop innovative solutions to complex problems.

## Major Tracks



Data Science



Software Design  
and Development



Multimedia  
and Computer Vision



Information  
and Cyber Security



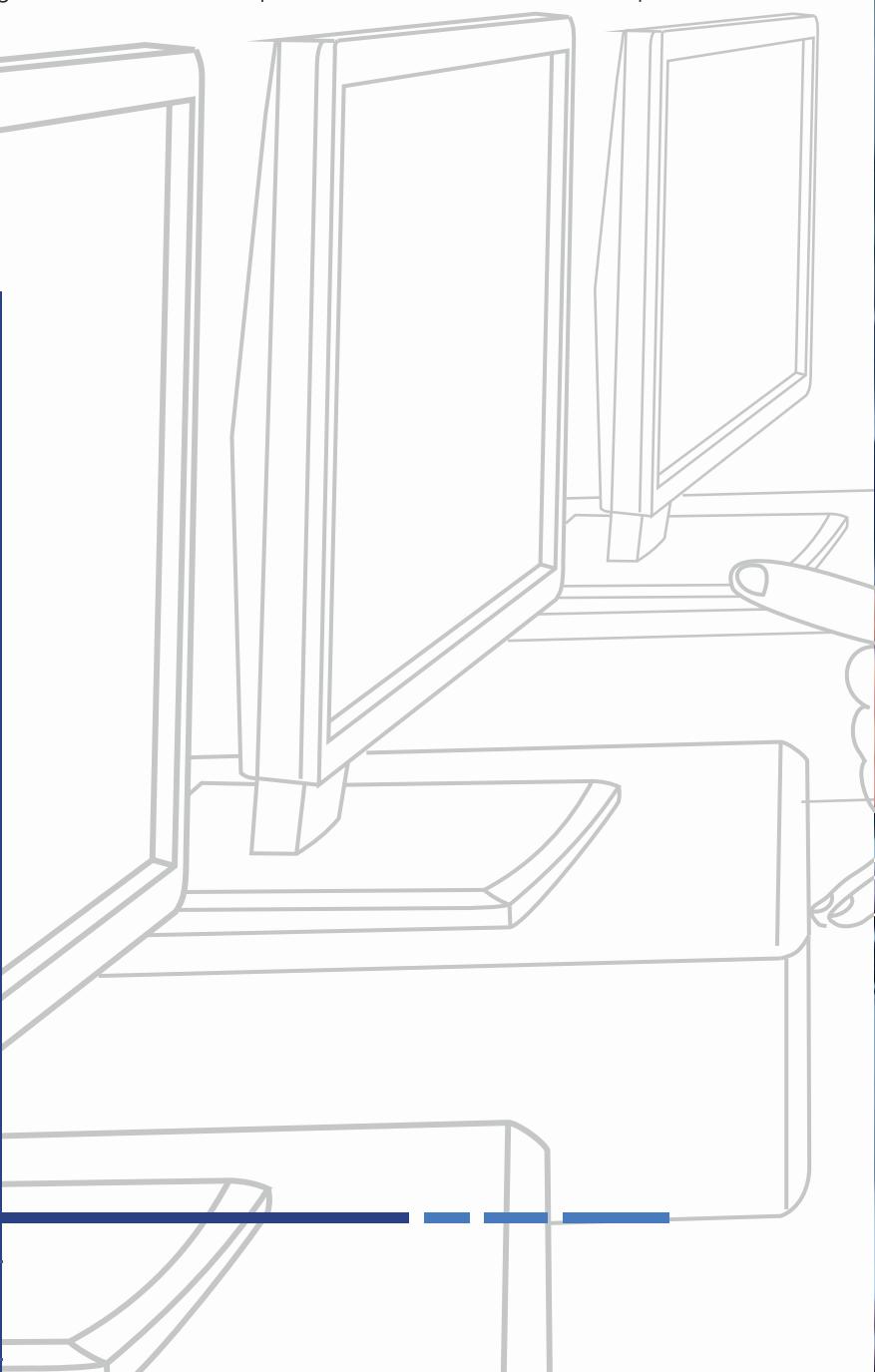
Duration - 4 years



Fees - ₹ 3,50,000 PA

## Career Opportunities

- Software Developers
- Data Scientists
- Full Stack Developers
- Software Architects
- Product Developers
- AI and ML Developers







# Computer Science and Engineering (Artificial Intelligence and Data Science)



The B.Tech in Computer Science and Engineering with a specialisation in Artificial Intelligence and Data Science programme at MIT-WPU is designed to prepare students to tackle real-world challenges in the fields of statistics, knowledge discovery, machine learning, big data analytics, data visualisation, cognitive computing and deep learning.

This programme is interdisciplinary in nature and helps students to develop the skills and knowledge necessary to solve problems in a variety of domains using artificial intelligence and data science techniques. Graduates of this programme are well-equipped to work in a variety of industries and organisations that rely on data-driven decision making and advanced analytical techniques.

## Major Tracks



User Interface Design



Systems and  
Edge Computing



Extended Reality



Business Analytics



**Duration - 4 years**



**Fees - ₹ 3,50,000 PA**

## Career Opportunities

- Software Developers
- Artificial Intelligence Engineers
- Data Scientists
- Data Analysts
- Product Analysts
- Business Intelligence Developers



# Computer Science and Engineering (Computer Science and Business Systems)

The B.Tech in Computer Science and Engineering with a specialisation in Computer Science and Business Systems programme has a one-of-a-kind curriculum designed in collaboration with TCS that prepares students for careers in engineering, computer science, and business systems. The programme aims to produce engineers who are well-versed in core topics such as computer science, technology abstraction, business principles, business discipline, and service orientation, as well as have an eye for innovation and entrepreneurship. The programme prepares the students for facing the challenges of Industry 4.0.

## Major Tracks



Computer Science



Digital Technology and Systems



Innovation, IP and Entrepreneurship



Data Science



Management Science



Sciences and Humanities



Duration - 4 years



Fees - ₹ 3,50,000 PA

## Career Opportunities

- Software Developers
- Software Architects
- Business Analysts
- Business Intelligence Engineers
- Consulting Analysts
- Web Developers



# Computer Science and Engineering (Cyber Security and Forensics)

Driving  
the future world  
through  
the power of  
computing

Cybersecurity is critical in protecting important data from theft and damage across multiple sectors, including corporate, healthcare, e-commerce, education, research, and government organisations. Cybersecurity professionals work to protect business data, customer data, and other sensitive proprietary data from the alarming rise in cyber-attacks around the world. Because of its critical role in defending against a wide range of threats, cybersecurity is now one of the most valuable assets for any organisation.

This sustains an ever-increasing industry demand for skilled computer engineers capable of dealing with real-world problems arising in the domains of cybersecurity, including physical, information, cognitive, and social. The B.Tech Computer Science and Engineering with a specialisation in Cyber Security and Forensics is a specialised programme that aims to instil core knowledge of cybersecurity and prepare students to enter the workforce.

## Major Tracks



Networking and Security



Software Design and Development



Digital forensics



Information Management



Duration - 4 years



Fees - ₹ 3,50,000 PA

## Career Opportunities

- Software Developers
- Computer Forensics Analysts
- Network Security Analysts
- Information Security Crime Investigators
- Cloud Security Specialists
- Penetration Testers



# Department of Petroleum Engineering

The Department of Petroleum Engineering, the second oldest department of its kind in any University in India, offers specialised B.Tech programmes designed by industry experts that familiarise students with the production and processing of hydrocarbons such as natural gas or crude oil. The programmes introduce students to various disciplines that are important in this interdisciplinary field, such as geophysics, petroleum geology, formation evaluation, drilling, economics, reservoir simulation, reservoir engineering, well engineering, artificial lift systems, and so on.

## Labs

The Department of Petroleum Engineering, MIT-WPU has the following labs equipped with the latest state-of-the-art equipment.

- Petroleum Engineering Laboratory
- Petroleum Production Laboratory
- Reservoir Characterisation Laboratory
- Well Engineering Laboratory
- Petroleum Exploration Laboratory





# Petroleum Engineering

The B.Tech Petroleum Engineering programme prepares students to become skilled professionals in the field of petroleum engineering. The curriculum of the programme covers a wide range of subjects related to petroleum engineering, including exploration, production, reservoir engineering, drilling engineering, and refining. The curriculum also includes courses in mathematics, physics, chemistry, geology, and computer science, which are essential for understanding the fundamental principles of the field. Upon completion of the programme, graduates can pursue careers in a wide range of sectors, including oil and gas exploration and production companies, consulting firms, government agencies, and research organizations.

## Major Tracks



Production  
Engineering



Exploration  
and Economics



Reservoir  
Engineering



Drilling  
Engineering



Data  
Analytics



Subsea  
Engineering



Health Safety  
and Environment



Duration - 4 years



Fees - ₹ 2,50,000 PA

## Career Opportunities

- Reservoir Engineers
- Drilling Engineers
- Production Engineers
- Subsurface Data Engineers
- Production Data Analysts
- Petroleum Data Analysts
- Petroleum Data Consultants

# Centre for Subsea Engineering Research (CSER)

The goal of the MIT-WPU Centre for Subsea Engineering Research (CSER) is to promote research, entrepreneurship, and innovation in a wide range of engineering disciplines.

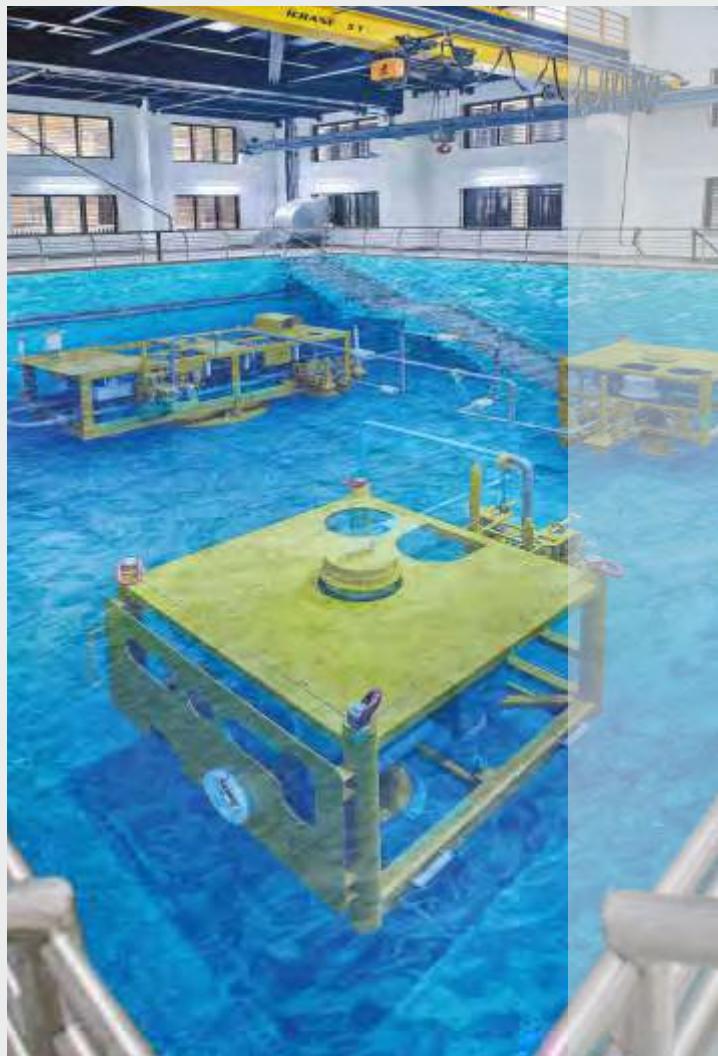
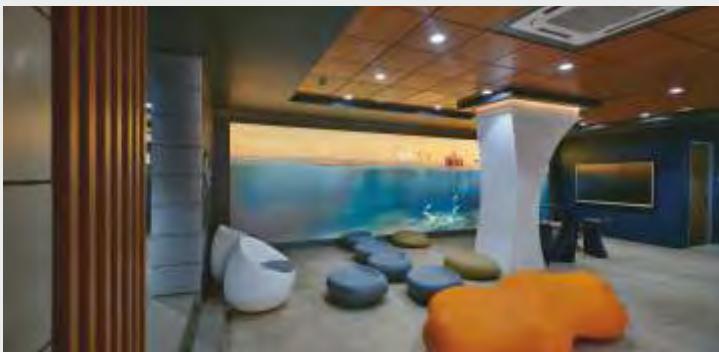
One of only three operational subsea laboratories worldwide and the first in the entire eastern hemisphere is the Subsea Engineering Research Laboratory at MIT World Peace University. This laboratory is a cutting-edge functional prototype of deep-water offshore petroleum mining activities, collaboratively built by Aker Solutions and MIT-WPU.

Through their sessions at this laboratory, the Civil, Mechanical and Petroleum Engineering students at MIT-WPU acquire sufficient knowledge of the complex processes used in subsea mining, fuel extraction, and other operations carried out on and below the seafloor. In this lab, the students are also instructed in drilling and well control procedures, industrial safety and health engineering (ISHE), and oil recovery.

MIT-WPU faculty and students are actively conducting research in the following fields in this lab:

## Vibration Analysis

- Robotics, ROVs in Subsea Engineering
- Fluid Dynamics
- Subsurface Production and Reservoir Engineering
- Surface Production Facilities Engineering
- Underwater Electronics and Fabrication
- Fluid Machinery
- Enhanced Oil Recovery
- Advanced Instrumentation and Process Control
- Flow Assurance
- Drilling and Well Control
- Pipeline Transportation
- Data Science and Analytics



## Direct Second Year (Lateral Entry)

After 3 Years Engineering Diploma



## Direct Second Year (Lateral Entry) After 3 Years Engineering Diploma

### Eligibility Criteria

Passed Diploma Course in the academic year 2022-23, 2021-22, & 2020-21 in Engineering and Technology with a minimum of 60% marks in appropriate branch of Engineering and Technology from an All-India Council for Technical Education or Central or State Government approved Institution or its equivalent (at least 55% marks, in case of Backward Class category candidate belonging to Maharashtra State only)

List of programmes in B.Tech Direct Second Year (Lateral Entry) After 3 Years of Diploma in Engineering

- B.Tech Computer Science and Engineering
- B.Tech Mechanical Engineering
- B.Tech Mechanical Engineering (Robotics and Automation)
- B.Tech Electronics and Communication Engineering
- B.Tech Electrical and Computer Engineering
- B.Tech Civil Engineering
- B.Tech Chemical Engineering
- B.Tech Petroleum Engineering with Artificial Intelligence and Machine Learning
- B.Tech Computer Science and Engineering (Artificial Intelligence & Data Science)
- B.Tech Computer Science and Engineering (Computer Science and Business Systems)
- B.Tech Computer Science and Engineering (Cyber Security & Forensics)
- B.Tech Electronics & Communication Engineering (Artificial Intelligence and Machine Learning)
- B.Tech Civil Engineering (Smart Infrastructure and Construction)
- B.Tech Bioengineering

### Selection process

The programs is based on Diploma scores and a Statement of Purpose (500 words) written by the student.(Provisional Admissions are offered based on 5th semester scores, in case results of final semester are awaited)

# B.Tech Eligibility Criteria

## Mandatory:

- All B. Tech applicants must appear in JEE 2023 / MHTCET 2023 / PERA 2023 / MHTCET-B\* 2023 / NEET\* 2023. [\*Applicable only for Bioengineering programme]
- Physics, Mathematics and English is Compulsory with Chemistry/Biotechnology\* or Biology\*/Technical Vocational Courses in 10+2/Class 12th or equivalent examination. [\*Applicable only for Bio engineering programme]
- For Computer Science and Engineering (CSE), CSE (Artificial Intelligence and Data Science), CSE (Computer Science and Business Systems), CSE (Cyber Security and Forensics), Electronics and Communication Engineering, Electronics and Communication Engineering (Artificial Intelligence and Machine Learning), Electrical and Computer Engineering and Bioengineering applicant should have a minimum 60% aggregate score in PCM/PCB or Physics and Mathematics with any Technical Vocational Subject.
- For Civil Engineering, Civil Engineering (Smart Infrastructure and Construction), Mechanical Engineering, Mechanical Engineering (Robotics and Automation), Chemical Engineering, Petroleum Engineering (Artificial Intelligence and Machine Learning) and Materials Science and Engineering should have a minimum 50% aggregate score in PCM/PCB or Physics and Mathematics with any Technical Vocational Subject.

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## Selection Process:

The selection process for B.Tech programmes is based on JEE 2023 / MHTCET 2023 / PERA 2023 / MHTCET-B\* 2023 / NEET\* 2023 score and a Statement of Purpose (500 words) written by the student. [\*Applicable only for Bioengineering program] for those candidates who meet the Eligibility criteria. (In case Class 12th/HSC Results are declared post the offer, submission of proof of eligibility documents remains sole responsibility of the candidate before classes commence)\*Note: MIT-WPU retains the right to make changes to any published schedule. Any other criterion declared from time to time by the appropriate authority as defined under the Act.

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## Internships

Experiential learning is an integral component of learning at MIT-WPU. The students of B.Tech pursue a six-month mandatory internship with renowned companies in their field. This internship aims to provide a platform to integrate classroom knowledge with related practical applications and skills in a professional ecosystem. The students get a chance to access real-world practical learning that instil critical perspectives for rewarding future career pathways.

**Highest Stipend: ₹60,000**

# Scholarships

MIT-WPU awards scholarships to its meritorious students based on their academic performance in requisite National/State Level Entrance Exam scores and in the MIT-WPU CET Examination, conducted by MIT-WPU, for the academic year 2023-24. These scholarships are valid for the duration of the programme\*.

The categories of Merit Scholarships are:

- Dr. Vishwanath Karad Merit Scholarship
- MIT-WPU Merit Scholarships
- Scholarships to Elite Sportsperson
- Scholarship Awarded to the wards of MIT-WPU/ MAEER's staff members and alumni

## \*Terms & Conditions:

All Scholarships are awarded on a First Come First Serve basis

All Scholarships are awarded as fee adjustments.

To continue the scholarship for the entire duration of the programme,

- a) a minimum level of the academic score has to be maintained at an 8.5 CGPA across all semesters
- b) attendance is to be maintained at a minimum of 80 percent
- c) there should be no disciplinary action against the student.

For more detailed information visit our website: [www.mitwpu.edu.in/Admissions](http://www.mitwpu.edu.in/Admissions)



Scholarship for AY 2023-24	Dr. Vishwanath Karad Scholarship (100%)		MIT-WPU Scholarship I (50%)		MIT-WPU Scholarship II (25%)	
Name of programme / Specialisation	JEE Percentile	MHT-CET Percentile	JEE Percentile	MHT-CET Percentile	JEE Percentile	MHT-CET Percentile
B.Tech Computer Engineering and Technology	97 & Above	98 & Above	96 & Above	97 & Above	95 & Above	96 & Above
B.Tech CSE with specialisation in Artificial Intelligence and Data Science						
B.Tech CSE with specialisation in CSBS						
B.Tech CSE with specialisation in Cyber Security and Forensics						
B. Tech Electronics and Communication Engineering	94 & Above	95 & Above	92 & Above	93 & Above	91 & Above	92 & Above
B. Tech Electronics and Communication Engineering (A I M L)						
B. Tech Electrical and Computer Engineering						
B. Tech Bio Engineering						
B. Tech Mechanical Engineering (Robotics and Automation)	89 & Above	90 & Above	87 & Above	88 & Above	86 & Above	87 & Above
B. Tech Civil Engineering						
B. Tech Civil Engineering (Smart Infrastructure and Construction)						
B.Tech Materials Science and Engineering	90 & Above	91 & Above	88 & Above	89 & Above	87 & Above	88 & Above
B. Tech Mechanical Engineering						
B. Tech Chemical Engineering						
B. Tech Petroleum Engineering						

Note: Best of JEE or MHT-CET Score will be considered for availing the scholarship.

# Placements

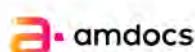
The Training and Placement Cell at MIT-WPU plays a crucial role in locating job opportunities for students by inviting reputed firms and industrial establishments for opportunities. MIT-WPU has been successful in maintaining high placement statistics over the years.

The Placement Cell organises career guidance programmes for all the students. The cell also arranges training programmes like Mock Interviews, Group Discussions, Communication Skills Workshop etc.

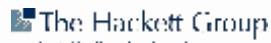
## Highest Package

**₹44.14 L\* + 2.5 L worth of additional benefits**

\*including Sign-on Bonus and ESOPs



Let's Solve



# Life at Campus

# Rural Immersion Programme

MIT-WPU's rural immersion programme is a unique educational opportunity that helps students understand and address the challenges faced by rural communities. During the programme, students visit a village and learn about the local culture, community, and landscape. They work on various projects, such as optimising irrigation systems, conserving and storing water, recycling waste, and using solar power, to improve the rural environment. This hands-on, real-life learning experience helps students develop critical thinking, problem-solving, and community awareness skills. It also helps them gain a deeper understanding of rural society and how their knowledge can lead to innovative solutions.

R.I.D.E.

R.I.D.E is an yearly national conclave hosted by the Innovation Club of MIT-WPU to expand the horizons of education beyond academics and open the pathway for students towards entrepreneurship. The conclave is meant to expose students to the emerging research, entrepreneurship, design thinking and innovation in various fields. The five day conclave witnesses a footfall of ten thousand students and showcases over a hundred start-ups from various sectors including technology, design, healthcare, agri-tech, sustainable energy and retail. More than fifty experts from the venture capital industry address students about the changing face of start-ups, innovations and the evolving market trends to encourage out-of-the-box thinking by simulating a real-world start-up environment.

# Bharatiya Chhatra Sansad

MIT-WPU's flagship social initiative and brainchild of Shri. Rahul V. Karad, the Bharatiya Chhatra Sansad (BCS) is an yearly national event which aims to regenerate youth's interest in the country's political system, governance and administration. This non-political platform aims at sensitising the youth to the changing social and political landscape of the country through debates, discussions, addresses from eminent personalities including the chief ministers and governors of various Indian states, union ministers and members of the parliament. The Sansad witnesses the participation of students from around 25,000 colleges in India.

## Other Events at MIT-WPU

MIT-WPU is known for its dynamic and engaging academic and extracurricular events, which provide students with numerous opportunities to learn, grow, and get involved in their community. In addition to the well-known events R.I.D.E. and BCS, there are over 100 student-led events that take place at the university throughout the year. These events cover a wide range of interests and topics, from cultural festivals and guest lectures to community service projects and sporting events. By participating in these events, students can gain valuable skills, make new connections, and become more active and engaged members of the MIT-WPU community. Some of the events are as follows:

- | Event                                       | Number of Participants |
|---|------------------------|
| Design Xpo                                  | +++++                  |
| Aarohan                                     | +++++                  |
| Kala Mehfil                                 | +++++                  |
| National Conference on Media and Journalism | +++++++++++++          |
| Abhivyakti                                  | +++++                  |
| TEXEPHYR                                    | +++++                  |
| Tesla                                       | +++                    |
| Techogenesis                                | +++                    |
| RoboCon                                     | +++                    |



# Peace Studies

The mandatory peace studies module at MIT-WPU aims to provide students with a holistic education that integrates various disciplines for their personal development. Through this module, students gain a greater understanding of the interconnectedness and interdependence of mind, matter, spirit, and





consciousness. They also learn about the critical spiritual laws that can help them develop a scientific temperament and a spirit of inquiry, as well as a sense of humanism.

In addition, the peace studies module introduces students to various yoga practices that help them develop their information base and cognitive abilities, as well as their critical thinking skills and personality. Upon completing the course, students will have a better understanding of how elevated consciousness can positively impact human behaviour and contribute to a happier, healthier, more peaceful, and empowered world.



## Students' Clubs at MIT-WPU

MIT-WPU is home to a diverse and active student community, with a wide range of clubs and organisations catering to a variety of interests and passions. These student-led clubs provide opportunities for students to get involved, make new connections, and develop their leadership skills.

Majorly, there are 5 categories of clubs at MIT-WPU; cultural, social, sports, co-curricular and NCC/NSS clubs which provide students with opportunities to learn about and explore their specific areas of interest.

Some examples of clubs at MIT-WPU include:

- The Innovation Club, which hosts events and workshops related to entrepreneurship and innovation.
- The Art and Photography Club, which brings together students with a shared interest in artistic expression.
- The Sports Club, which organises sporting events and activities for students to participate in.
- The Cultural Club, which celebrates the diversity of the MIT-WPU community and promotes cultural exchange.

By joining a club or team, students learn to make the most of their time while engaging their mind and developing their skills, making meaningful contributions to the community at large.



## Testimonials

I feel grateful to be a part of MIT-WPU's Faculty of Engineering and Technology. The curriculum of the various programmes are designed in a manner that it helps us to learn new things, theoretically as well as practically. It includes the latest developments in the field of engineering. The professors support us in the best possible ways and relate theory with day-to-day examples so that we can learn faster. We could also visit a few national institutes. I especially loved the immersion programmes which connected us to the grassroot of the country.

**Akshita Jain**, Final Year B.Tech

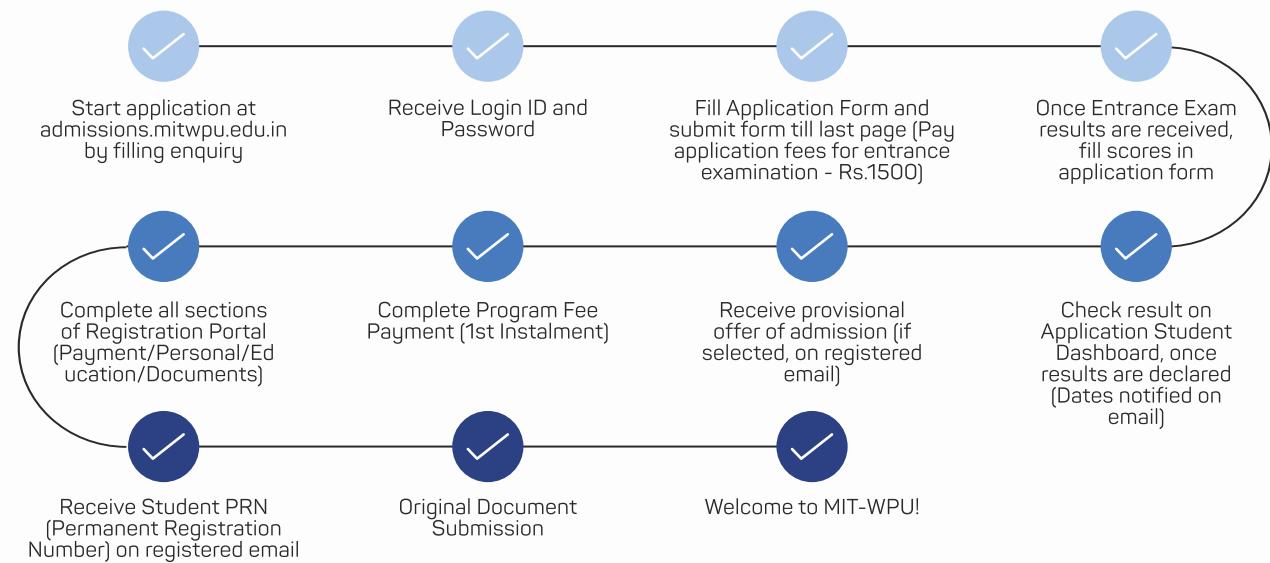
I have witnessed an enormous growth in myself, not just in academics, but in every aspect of my life while studying in a positive, lively, and peaceful environment at MIT-WPU. Innovative projects, excellent infrastructure and great facilities for design and testing have been the highlights of my hands-on learning. These projects made me understand the application of the knowledge I was acquiring. Moreover, I loved the Peace Studies module which has contributed greatly in the development of my personality.

Aniruddha Atique, Batch 2017-2021

'A transformation from a shy boy to the confident prize winner representing the university at a national level is what I have experienced at MIT-WPU. The faculty members supported me at all fronts to convert my theoretical ideas into a practical project and fuelled me with lifelong abilities and courage to face the competitive world. I loved how every aspect was connected with hands-on projects and assignments which enhanced my understanding of the subject. I am sure this will help me as I enter the job market.'

Janak Kulkarni, Batch 2017-2021

# Admission Process



Dr. Vishwanath Karad  
**MIT WORLD PEACE  
UNIVERSITY | PUNE**  
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