ACHARYA INSTITUTE OF TECHNOLOGY

Affiliated to VTU

NBA NATIONAL BOARD OF ACCREDITATION | NAAC A ACCREDITED

Established in 2000, **Acharya Institute of Technology (AIT)** stands as a NAAC & NBA-accredited centre of excellence, recognised by NIRF for its academic standards and innovation. Located on a vibrant 120-acre campus in Bengaluru, AIT blends industry-aligned education, advanced infrastructure, and strong corporate partnerships to shape future-ready engineers and technology leaders.



- **Industry-aligned programs** delivered by expert faculty, enriched with in-demand certifications like Ai, EV, Cyber Security, and emerging technologies.
- **Smart learning ecosystem** with LinkedIn Learning access, high-performance laptops, advanced labs, and a digital library.
- **Strong industry collaborations** enabling internships, live projects, and real-world exposure with leading corporations.
- **Global outlook** through international partnerships and a culturally diverse student community.
- **Proven placement excellence** supported by 550+ recruiting companies visiting the campus annually.

B.E MECHATRONICS ENGINEERING

Specialization in Product Life Cycle Management (PLM) powered by **SIEMENS**

About

Mechatronics engineering combines elements of mechanical engineering, electronics, computer science, and control engineering. The program prepares students for careers in designing and implementing intelligent systems and products. Our collaboration with Siemens helps students stay updated on current industry trends and are informed about the latest advancements and practices in the field.

- **Interdisciplinary core curriculum** blending mechanical, electronics, control systems, robotics, and automation for a holistic engineering foundation.
- **Hands-on lab experience** with modern equipment and practical exercises that reinforce theory with real applications in sensors, actuators, and embedded systems.
- **Industry-aligned training** including process automation and robotics, equipping students with skills relevant to manufacturing, smart systems and intelligent machines.
- **Focus on innovation and project work** where students design, test, and implement integrated mechatronic solutions addressing real engineering challenges.
- **Faculty expertise and mentorship** from experienced educators guiding students through complex system design, controls, and advanced mechatronics applications.



Career Scope

- **Automation & robotics roles –** Graduates can work as automation engineers, robotics specialists, system integrators, and controls engineers across industries like automotive, manufacturing, and smart systems.
- **Embedded systems & intelligent products –** Opportunities in designing and developing embedded applications, IoT devices, intelligent machines, and smart manufacturing solutions.
- **Tech innovation & interdisciplinary pathways –** Scope in research, product development, system design and advanced technology roles, with demand in global engineering and technology sectors.

Eligibility

10+2 with PCM/PMC/PME + English, min 45%.
Age 17+.

Duration
4 years

COURSE CONTENT

Semester 1

- Mathematics-I for Mechanical Engg Stream
- Applied Physics for ME Stream
- Elements of Mechanical Engineering
- Engineering Science Course-I
- Emerging Technology Course-I
- Programming language Course-I
- Communicative English
- Professional Writing Skills in English
- Samskrutika Kannada/ Balake Kannada
- Indian Constitution
- Innovation and Design Thinking
- Scientific Foundations of Health

Semester 2

- Mathematics-II for Mechanical Engg Stream
- Applied Chemistry for ME Stream
- Computer-Aided Engineering Drawing
- Engineering Science Course-II
- Programming Language Course-II
- Emerging Technology Course-II
- Professional Writing Skills in English
- Communicative English
- Indian Constitution
- Samskrutika Kannada/ Balake Kannada
- Scientific Foundations for Health
- Innovation and Design Thinking

Semester 3

- Mechanics of Materials
- Manufacturing Process
- Material Science and Engineering
- Basic Thermodynamics
- Introduction to Modelling and Design for Manufacturing
- ESC/ETC/PLC
  - Electric and Hybrid Vehicle Technology
  - Smart Materials & Systems
  - Internet of Things (IoT)
  - Waste handling and Management
- Social Connect and Responsibility
- Ability Enhancement Course/Skill Enhancement Course - III
  - Advanced Python Programming [0-0-2]
  - Fundamentals of Virtual Reality [0-2-0]
  - Spreadsheet for Engineers [0-0-2]
  - Tools in Scientific Computing [0-0-2]
- National Service Scheme (NSS
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 4

- Applied Thermodynamics
- Machining Science & Metrology
- Fluid Mechanics
- Mechanical Measurements and Metrology lab
- ESC/ETC/PLC
  - Non Traditional Machining
  - Environmental Studies
  - Micro Electro Mechanical Systems
  - Robotics and Automation
- Ability Enhancement Course/Skill Enhancement Course- IV
  - Introduction to AI & ML
  - Digital Marketing
  - Introduction to Data Analytics
  - Programming in C++
- Biology For Engineers
- Universal human values course
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga



Semester 5

- Industrial Management & Entrepreneurshipa
- Turbo machines
- Theory of Machines
- CNC Programming and 3-D Printing lab
- Professional Elective - I
  - Mechatronics
  - Automation in manufacturing
  - Supply chain management & Introduction to SAP
  - Energy Engineering
- Mini Project
- Research Methodology and IPR
- Environmental Studies
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 7

- Finite Element Methods
- Hydraulics and Pneumatics
- Control Engineering
- Professional Elective-III
  - Additive manufacturing
  - Product Design and Management
  - IC Engines
  - Cryogenics
- Open Elective- II
  - Non Traditional machining
  - Hydraulics and Pneumatics
  - Operations Research
  - Non-Conventional Energy Resources
- Major Project Phase-II

FEE STRUCTURE

Refer offer letter for the actuals.

Inclusions : Tuition Fee, University Registration, Eligibility Fee, Miscellaneous Fee, Laboratory Fee, Library Fee and Sports Fee.

Exclusions : Uniform & Stationery.
Examination Fee as prescribed by the University / Board.

The Program Includes OBT, AMCAT/CoCubes, Soft Skills Training, Domain-Specific Training, Long Term Domain Training and LinkedIn Learning. Students are also provided with a Complimentary Laptop and Global Immersion Program.

Semester 6

- Heat Transfer
- Machine Design
- Professional Elective - II
  - Total Quality Management
  - Refrigeration and Air Conditioning
  - MEMS and Microsystem Technology
  - Design for Manufacturing and Assembly
- Open Elective -I
  - Project Management
  - Renewable Energy Power plants
  - Mechatronics
  - Modern Mobility
- Major Project Phase - I
- L Design lab
- Ability Enhancement Course/Skill Development Course V
  - Basics of Matlab
  - Fundamental of Virtual Reality ARP Development
  - Simulation and Analysis using Ansys workbench [0-0-2]
  - Introduction Augmented Reality
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 8

- Professional Elective -IV (Online Courses)
  - Quality Design & Control (Available in NPTEL)
  - Machinery Fault Diagnosis and Signal Processing (Available in NPTEL)
  - Modelling & Analytics for Supply Chain Management (Available in NPTEL)
  - Strategies for Sustainable Design (Available in NPTEL)
- Open Elective - III (Online Courses)
  - Fundamentals of Automotive systems (Available in NPTEL)
  - Product Design and Manufacturing (Available in NPTEL)
  - Computer Integrated Manufacturing (Available in NPTEL)
  - Business Planning & Project Management (Available in Swayam Portal)

ENRICHMENT PROGRAM CONTENT

PLM by SIEMENS

- **2nd Sem** : CAD Fundamental Processes
- **3rd Sem** : Teamcenter User + NX Integration/ PLM Fundamentals (Concepts) + Teamcenter Active Workspace usage
- **4th Sem** : Teamcenter Administration + Data Model Customization (Working with Admin Application)
- **5th Sem** : Teamcenter Customization
- **6th Sem** : Teamcenter Active Workspace Customization

Acharya Legacy

Founded in 1990, Acharya aims to revolutionize education. With over 12,000 students and 100+ academic programs annually, it stands among the global education elite. Located in India's technical hub, Bangalore, Acharya prioritizes innovation and knowledge. The institution fosters experiential and collaborative learning, shaping well-rounded individuals, evident in its diverse student population from 75+ countries.

11 Institutions

15 Research Centers

100+ Programmes

75+ Nationalities

12000+ Students

1000+ Eminent Faculty

120 Acres State-of-the-Art Campus



B Premnath Reddy
Founder Chairman
Acharya Group

Acharya Offerings - click on each to know more... »

Academic Studio



Collaboration



Center of Excellence



Clubs



Digital Library



Laboratories



Research



Sports



Hostels



Habba



PROGRAMS OFFERED

Follow on Social Media



Acharya Dr. S. Radhakrishnan Road,
Acharya P.O, Soladevanahalli,
Bangalore-560107,
Karnataka, India

www.acharya.ac.in

Domestic Admissions

admissions@acharya.ac.in

+91 74066 44449

+91 97317 97677

International Admissions

international@acharya.ac.in

+91 97317 79233