



ACHARYA INSTITUTE OF TECHNOLOGY

Affiliated to VTU



- Accredited, industry-aligned programs with expert faculty.
- Access to LinkedIn and high-performance laptops for seamless learning.
- In-demand certifications in EV, Cyber Security, and more for career advantage.
- Global exposure through partnerships and a diverse student body.
- Cutting-edge labs and a digital library for comprehensive resources.
- Collaborations with top corporations offering internships and projects.
- Vibrant clubs and activities focused on holistic development.
- Robust placement support with 550+ recruiting companies annually.



**B.E AERONAUTICAL
ENGINEERING**

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

About

Our aeronautical engineering program is tailored to provide students with the expertise and skills needed to thrive in the challenging and fast-paced field of aviation and aerospace technology. The program covers a wide range of topics including aircraft design, propulsion systems, aerodynamics and avionics. Additionally, students stay updated on current industry trends through our collaboration with Siemens, ensuring they are informed about the latest advancements and practices in the field.

Career Scope

Thriving Aerospace Industry: India is seeing a massive boom in the aviation sector, both in the defence as well as the civil aviation field. Opportunities are aplenty for aeronautical engineers equipped with sharp technical and analytical skills.

Government Initiatives: Several government agencies provide exciting opportunities for aeronautical engineers to work on space missions and satellite launches. Aeronautical engineering graduates also have opportunities in the realm of public policy.

Global Demand: With a strong educational background and relevant skills, aeronautical engineers from India can explore job opportunities in diverse areas such as aircraft manufacturing, research and development, aviation maintenance, and space exploration.

Eligibility

Pass in 10+2 / Higher Secondary (HS) / Pre University (PUC) / 'A' Level (with 12 years of schooling) or its equivalent with English as one of the languages. Shall have secured a minimum of 45% marks in aggregate in Physics, Mathematics and any one of the following: Chemistry, Biology, Computer Science, Electronics. AIT admits students as per prevailing rules and regulations of VTU.

Candidate must have completed 17 years by June - for the year of admission.

Duration
4 years



COURSE CONTENT

Semester 1

- Mathematics I for Aeronautical Engg. Stream
- Applied Physics for AE Stream
- Elements of Aeronautical 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 3

- Aircraft Materials & Processes
- Elements of Aeronautics
- Fluid Mechanics
- Mechanics of Materials
- Computer Aided Aircraft Drawing
- ESC/ETC/PLC
 - Introduction to Drone Technology
 - Mechanism & Machine Theory
 - Aircraft Maintenance, Repair and Overhaul
 - IOT Concepts and Algorithms
- Social Connect and Responsibility
- Ability Enhancement Course / Skill0 Enhancement Course - III
 - Development of Soft Skills for Engineers
 - Ethics, Technology and Engineering
 - Digitalization in Aeronautics
 - Coding literacy
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 2

- Mathematics - II for Aeronautical Engg. Stream
- Applied Chemistry for AE 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 4

- Aero Engineering Thermodynamics
- Aerodynamics
- Aircraft Propulsion
- Aircraft Material Testing & Processing Lab
- ESC/ETC/PLC
 - Additive Manufacturing (3D Printing)
 - Turbomachines
 - Introduction to Space Technology
 - Introduction to Combustion
- Ability Enhancement Course / Skill Enhancement Course - IV
 - Fundamentals on Spreadsheet
 - DRONE Pilot Training
 - Concept of Augmented Reality
 - Introduction to programming with MATLAB and Python
- Biology For Engineers
- Universal human values course
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga



Semester 5

- Aviation Management
- Aircraft Structures
- Unmanned Aerial Vehicles - Basics and Applications
- Energy Conversion Lab
- Professional Elective Course
- Finite Element Methods
- Rocket & Missiles
- Optimization Technique
- Industrial & Experimental Aerodynamics
- Mini Project
- Research Methodology and IPR
- Environmental Studies
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 7

- Avionics Systems
- Computational Fluid Dynamics
- Control Engineering
- Professional Elective Course
- Gas Turbine Technology
- Wind Tunnel Techniques
- Flight Testing
- AI and ML for Aerospace Applications
- Open Elective Course
- Earth and Space Science
- Air Traffic and Weather
- Basics of Rockets and Missiles
- Aviation and Internet Infrastructure
- Major Project Phase - II

Semester 6

- Aircraft Vibration Theory
- Aircraft Performance and Stability
- Professional Elective Course
- Flight Vehicle Design
- Airframe Structural Design
- Guidance & Navigation
- Heat and Mass Transfer
- Open Elective Course
- Introduction to Aerospace History
- Introduction to Helicopters
- Basics of UAV
- Introduction to Flight Simulator
- Project Phase I
- Flight Simulation Lab
- Ability Enhancement Course / Skill Development Course - V
- Probability and statistics for Aerospace Engineering
- Virtual Aircraft Simulation
- Introduction to Swarm Drone
- Multi-disciplinary Research in Aeronautical Engineering
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 8

- Professional Elective (Online Courses)
- Open Elective (Online Courses)
- Internship (Industry/Research) (14 - 20 weeks)



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 Faculties

120 Acres State-of-the-Art Campus

B Premnath Reddy
Founder Chairman
Acharya Group

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Research



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Hostels



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