



Parul[®]
University

AEROSPACE ENGINEERING

POST GRADUATE PROGRAM



AEROSPACE ENGINEERING

The M.Tech in Aerospace Engineering at Parul University, started in 2025, is a comprehensive postgraduate program that offers advanced training in core aerospace disciplines such as aerodynamics, propulsion, flight mechanics, and aerospace structures. The program also emphasizes emerging fields like computational fluid dynamics and unmanned aerial systems (UAS), preparing students for modern challenges in aerospace technology. The curriculum balances theoretical knowledge with practical experience through well-equipped labs, including wind tunnels, propulsion testing setups, and UAV flight testing facilities.

Parul University's strong industry connections provide students with valuable opportunities for internships, projects, and exposure to real-world aerospace applications. The experienced faculty guide students in research and development, covering areas from subsonic to hypersonic flows and satellite dynamics. This prepares graduates to excel in aerospace research, design, manufacturing, and defense sectors.

Career opportunities after completing the program are vast, with graduates finding roles in government organizations like ISRO, DRDO, and HAL, as well as private aerospace companies such as Boeing, Airbus, and GE Aviation. The M.Tech Aerospace Engineering program at Parul University is designed to develop skilled aerospace professionals ready to contribute to India's expanding aerospace industry and emerging technologies.

M.Tech in Aerospace Engineering:

Semester 1

Professional Core Courses

Aerospace Structures

Flight Dynamics and Performance

Aerodynamics

Professional Elective Courses

Theory of Elasticity

Aviation Fuels & Propellant

Aerospace Materials and Manufacturing Process

Engineering Optimization

Space Dynamics and Orbital Mechanics

Engineering Mathematics

Humanities and Social Science, including Management Courses

Research Methodology & IPR

Mandatory Courses

English for Research Paper Writing

Disaster Management

Sanskrit for Technical Knowledge

Value Education

Semester 2

Professional Core Courses

Aerospace Propulsion

UAS

Space Technology

Professional Elective Courses

Finite Element Method

Computational Fluid Dynamics

Hypersonic Aerodynamics

Fatigue and Fracture Mechanics

Conceptual Design of Aerospace Vehicle

Turbomachinery

Multidisciplinary Open Professional Electives Courses

Augmented Reality and Virtual Reality

Cyber Physical Systems

Social Networking

Business Analytics

Industrial Safety

Operations Research

IOT and Smart Cities

Mandatory Courses

Indian Cyber Law and Ethics

Pedagogy Studies

Stress Management by Yoga

Personality Development through Life

Enlightenment Skills

Vocational Training / Professional Experience/Courses

Computational Science in Engineering

Artificial Intelligence (AI)

Industrial Training

Semester 3

Dissertation Phase-I

Semester 4

Dissertation Phase-II