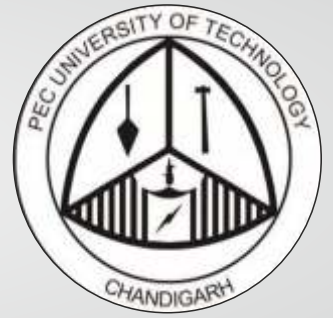




EXPLORE INNOVATION EXCEL



AEROSPACE ENGINEERING **PEC UNIVERSITY OF TECHNOLOGY**

PLACEMENT BROCHURE'16

The Department of Aerospace Engineering was established in the wake of Chinese aggression in 1962. Over the years, the department has adapted and improved with the fast pace of technology. The department has been continually changing and evolving to meet the needs of modern industry and to train its students to pursue their goals with concentrated determination. This has led former students to great heights in their endeavour no matter what responsibility they chose to assume. With rapid changes in technology, department has consistently made efforts to amalgamate information technology with conventional areas. This is quite evident from the establishment of new laboratory facilities which have contributed in supplying students with every tool they need to succeed in fast changing landscape of modern professional arena.

PROGRAMS OFFERED

B.Tech.

PhD



COURSES OFFERED



Basic Science

- Oscillations and Optics
- Numerical Analysis
- Electromagnetic Theory

Engineering Science

- Engineering Drawing
- Thermodynamics
- Introduction to Electronics
- Kinematics & Dynamics of Machines
- Technical Communication

Aerodynamics

- Elements of Aerodynamics
- Gas Dynamics
- Computational Fluid Dynamics
- Compressible and finite wing Aerodynamics
- Helicopter Dynamics
- Experimental Aerodynamics

Flight Mechanics

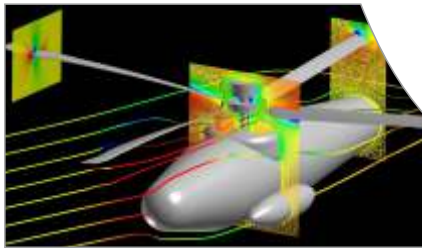
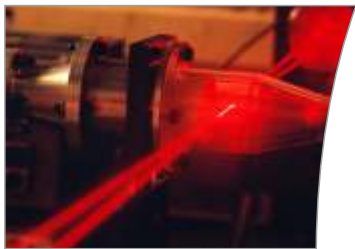
- Aircraft systems & instrumentation
- Aircraft Performance
- Aircraft Stability and control
- Airplane Design
- Space Dynamics

Propulsion

- Aircraft Propulsion
- Aero Engine Design
- Missile Technology
- Wind Turbines

Structures and Material

- Aircraft Materials & Processes
- Aircraft Structural Analysis & Design
- Vibrations and Aero elasticity
- Engineering Analysis and Design
- Aircraft Maintenance & Air worthiness



RESEARCH AREAS

Propulsion

- Propellant chemistry
- Electric propulsion for space applications
- Single Cycle Pulse Detonation Engine Testing
- Engine Design
- Cascade Aerodynamics

Aerodynamics

- Wind tunnel testing
- Modelling of turbulent flow over morphed wings
- CFD Modelling of flow through CD Nozzle
- Missile Aerodynamics
- Low & High Speed Aerodynamics

Structures

- Multidisciplinary design optimization of different types of structures
- Analysis of structural parameters of internal structures

Flight Mechanics

- UAV Design parameter estimation
- Aerodynamics Characterisation of Missiles
- Dynamic Stability of Aerostat & lighter than air vehicles

Space dynamics

- Designing of trajectory & Navigation
- Optimization of re-entry vehicles

INDUSTRIAL COLLABORATIONS

TBRL, CHANDIGARH: Setting up Research facilities in the field armament studies. The laboratory facilitates research in high explosives, detonations & shock waves by evolving data and design parameters for new armaments.

DRDO, CHANDIGARH: DRDO is in collaboration with PEC for providing internship to trainees on projects such as mass flow rate through pipe at different altitudes.

CHANDIGARH AIR FORCE | SASE | CSIO

INTERNSHIPS

INDUSTRY & RESEARCH INTERNSHIPS

IIT Bombay, Madras, Kanpur, Kharagpur, Delhi, Roorkee, Ropar | DRDO | TBRL | HAL | Air India | Sukra Helitek | IISc Bangalore | Georgia Tech, USA | Virginia Tech, USA and other universities of Germany, Canada & France

FINANCE & ANALYTICS

Uber | Amazon | JP Morgan

LABORATORIES & WORKSHOPS

AERODYNAMICS LAB

- Low Speed Subsonic Wind Tunnel • Smoke Tunnel • Low speed Blow type wind tunnel • Supersonic Open-jet Wind Tunnel

STRUCTURES LAB

This lab has the facilities to conduct the following experiments:

- To prove Maxwell Reciprocal theorem • To find shear centre of different sections • To measure strain through strain gauges • Analysis of Complete Tension Field Beam

AIRFRAME & INSTRUMENTS LAB

Following are the major equipment available in this lab:

- Instrumentation panel • Demo Model for Aircraft control systems • Demonstrative landing gear • Hot wire anemometer

WORKSHOPS

In department workshop following equipment are available to carry capstone projects and other classroom projects:

- Lathe Machine
- Electric Furnace
- Spot welding equipment
- Nibbling Machine
- Air compressor
- Drilling, polishing, bending machines

AIRCRAFT PROPULSION LAB

There are the real engines installed for the study purpose.

- Pulse Detonation Engine with Data Acquisition system
- Continuous Combustion Unit
- Various Aero Engines: DART engine, Avon engine, Griffon engine, Gypsy Major engine, Goblin engine, MIG engine with after-burner, Radial engine, Mi-8 Helicopter engine

