About us

Established in 1964, Aerospace Engineering department is a premier teaching and research centre today. The department is engaged in engineering science instruction, in-flight laboratory work, aerodynamic testing, and indigenous design and fabrication of advanced facilities and instruments. The department specializes in aerodynamics, flight mechanics, propulsion, and aerospace structures. It has a unique flight laboratory with four powered aircrafts, four gliders and a 1000 m runway. All other academic institutions in the country make use of this facility.

For more information on the department please visit;
http://www.iitk.ac.in/aero/
Aerospace Engineering Course Structure

B.Tech
- Admissions through JEE.
- 4 yrs. Programme.
- Basic Engineering + Humanities & social science + Departmental Courses + interdisciplinary courses

B.Tech/ M.Tech (Dual)
- Admissions through JEE.
- 5 yrs. Programme.
- Basic Engineering + Humanities & social science + Departmental Courses + interdisciplinary courses
- M.Tech thesis 1.5 yrs.

M.Tech
- Admissions through GATE.
- 2 yrs. Programme.
- 8 Specialized Electives + Laboratory & Research work

Ph.D.
- Admissions through GATE.
- 5 yrs. Programme.
- 4 Specialized electives + Intensive Research Work
Research & Teaching laboratories

- High Speed and Low Speed Aerodynamics Lab
- Propulsion Lab
- Combustion Lab
- Flame Dynamics Lab
- Structures Lab
- Flight Lab
- Aero-modelling Lab
- Computational Fluid Dynamics Lab
- Structural Analysis Lab
- Unsteady Aerodynamics Lab
- Design Lab
- Autonomous Helicopter Lab
- Micro Air Vehicle Lab
- High Performance Computing Lab
Research Areas

**Aerodynamics**
- Subsonic, Transonic, Supersonic and Hypersonic flow
- Turbulent and transitional flows
- Computational Fluid Dynamics (CFD)

**Flight Mechanics**
- Conventional flight mechanics and control & guidance
- Space Dynamics
- Aircraft design development & fabrication of scaled models

**Propulsion**
- Combustion, spray combustion & liquid atomization
- Turbo machinery, electric propulsion and thrust vectoring
- Flow diagnostic and internal flow control

**Aerospace Structures**
- Structural Dynamics, Fracture Mechanics & Aeroelasticity
- Structural optimization and smart structures
- Composite Structures
- Finite Element

**Interdisciplinary**
- Bio fluid mechanics
- Industrial noise control
- Wind energy
Technologies Developed

- Recuperative Vortex LPG Burner, IPA No: 3197/DEL/2005 (D P Mishra)
- Low emission energy efficient gas burner, IPA No: 2347/DEL/2009 (D P Mishra)
- Two-fluid Atomizer, IPA NO: 1551/DEL/2013 (D. P. Mishra & Manisha B P)
- Estimation of inertia tensor and center of gravity of a vehicle on a three axis platform,
- A Twin- Fluid Internally Mixed Swirl Atomizer (A. Kushari, M. S. Rawat)
Sponsored Projects
Past Recruiters

AIAA
AIRBUS
Boeing
ANSYS FLUENT
Ashok Leyland
ATKINS
Bosch
BMW
Deloitte
Daimler
EADS
Eaton
FIAT GROUP
GE
Genpact
IBM
ITC
Tata
LT
Mitsubishi
Renault
Nissan
Safran
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