

Dayananda Sagar University
School of Engineering
Devarakaggalahalli, Harohalli Kanakapura Road, Bangalore South District, Karnataka 562112
Department of Aerospace Engineering

B.Tech in Aerospace Engineering

Program Overview

Aerospace Engineering is a thrilling and high-impact discipline that merges science, technology, and innovation to design and develop aircraft, spacecraft, and defense systems. Established in 2018, the Department of Aerospace Engineering at our university has grown rapidly, nurturing students into top-tier engineers who contribute to national and international aerospace organizations. With a vibrant academic culture, the department promotes independent research, hands-on learning, and collaboration with reputed aerospace firms such as Dassault Systèmes. Our aim is to empower students with the knowledge and skills to excel in the evolving aerospace industry.

Curriculum Highlights

The B.Tech Aerospace program offers a robust curriculum that covers both foundational and advanced subjects. Core areas include:

- Aerodynamics
- Propulsion systems
- Aerospace structures and materials
- Flight mechanics
- Avionics and control systems

To complement technical depth, the program integrates emerging fields such as:

- Artificial Intelligence & Machine Learning (AI & ML) for aerospace applications
- Drone technology development and simulation
- Computational tools for design and analysis (e.g., Dassault 3DEXPERIENCE software)

Students have the flexibility to choose interdisciplinary electives from fields like Electronics, Computer Science, and Mechanical Engineering from their fifth semester onwards. Clubs and workshops provide platforms for practical engagement, especially in areas like drone fabrication and flight control simulation.

Industry Integration & Skill Building

Our department believes in equipping students with more than just theoretical knowledge. Located in Bengaluru—India's aerospace hub—we maintain active collaboration with organizations like HAL, NAL, DRDO, ADE, and private leaders such as Rolls-Royce and GE. This ensures that our students are trained not only for academic excellence but also for real-world relevance.

We offer:

- Dassault-certified software training

- Industry-specific skill development modules
- Capstone mini-projects and live case studies
- Soft skills and placement preparation programs starting from the first year

Bridging Industry and Academia

To bridge the gap between industry expectations and academic learning, the department has forged strong ties with leading aerospace companies for guest lectures, joint projects, internships, and curriculum inputs. Students benefit from direct exposure to real-world challenges, current trends, and future innovations through seminars, industry visits, and expert-led workshops. This integration ensures our graduates are industry-ready and equipped to solve tomorrow's engineering problems today.

Career Progression

We take pride in seeing our students graduate with the knowledge, confidence, and skills to thrive. Whether they pursue careers in core aerospace companies, become entrepreneurs, or opt for higher studies in India or abroad, our graduates leave with a strong foundation and a clear career path. The Training & Placement Cell supports this journey with customized modules in:

- Communication and soft skills
- Interview and corporate readiness
- Technical problem-solving
- Company-specific preparation

Student Projects

Innovation is a core pillar of our learning model. Students actively engage in over 70 projects spanning diverse aerospace applications. They are encouraged to form teams, select thrust areas, and are guided by faculty mentors through every phase—from ideation to presentation. Notable project themes include:

- UAV prototypes for disaster response
- Lightweight aircraft flight control systems
- Retractable landing gear for fighter aircraft
- Shape optimization in aerospace structures
- Low-energy lunar transfer simulations inspired by GRAIL mission

Why Choose Us?

- Curriculum aligned with industry 4.0 and future aerospace needs
- Access to advanced labs and simulation platforms
- Opportunities to publish, patent, and participate in global competitions
- Mentorship from experienced faculty and industry professionals
- Location advantage: right in the heart of India's aerospace ecosystem

This program is designed for curious minds passionate about space, flight, and advanced technologies. It's not just a degree—it's a launchpad to a limitless sky.