



# Bharath

## INSTITUTE OF HIGHER EDUCATION AND RESEARCH

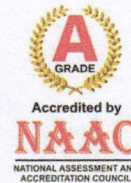
(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)

(Vide Notification No. F.9-5/2000 - U.3, Ministry of Human Resource Development, Govt. of India, dated 4<sup>th</sup> July 2002)

### BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

#### SCHOOL OF AERONAUTICAL ENGINEERING

Website : [www.bharathuniv.ac.in](http://www.bharathuniv.ac.in)



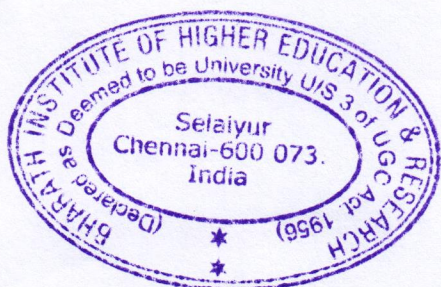
## Vision and Mission of The Institute

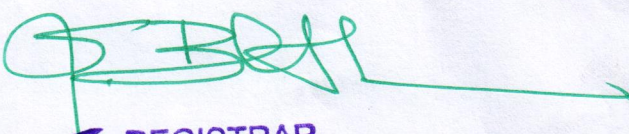
### **Vision**

“Bharath Institute of Higher Education & Research (BIHER) envisions and constantly strives to provide an excellent academic and research ambience for students and members of the faculties to inherit professional competence along with human dignity and transformation of community to keep pace with the global challenges so as to achieve holistic development.”

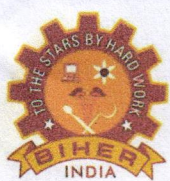
### **Mission**

- To develop as a Premier University for Teaching, Learning, Research and Innovation on par with leading global universities.
- To impart education and training to students for creating a better society with ethics and morals.
- To foster an interdisciplinary approach in education, research and innovation by supporting lifelong professional development, enriching knowledge banks through scientific research, promoting best practices and innovation, industry driven and institute oriented cooperation, globalization and international initiatives.
- To develop as a multi-dimensional institution contributing immensely to the cause of societal advancement through spread of literacy, an ambience that provides the best of international exposures, provide health care, enrich rural development and most importantly impart value based education.
- To establish benchmark standards in professional practice in the fields of innovative and emerging areas in engineering, management, medicine, dentistry, nursing, physiotherapy and allied sciences.
- To imbibe human dignity and values through personality development and social service activities.



  
**REGISTRAR**  
BHARATH INSTITUTE OF HIGHER EDUCATION & RESEARCH  
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Selaiyur, Chennai-600 073, India





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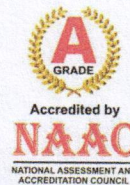
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### Vision and Mission of The School

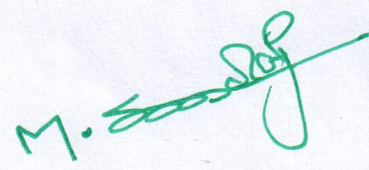
#### **Vision**

Department of Aeronautical Engineering will endeavor to accomplish worldwide recognition with a focal point of Excellence in the field of Aeronautics by providing quality Education through world class facilities, enabling graduates turning out to be Professional Experts with specific knowledge in Aeronautical & Aerospace engineering.

#### **Mission**

- To be the state of art Teaching and Learning center with excellent infrastructure and empowered Faculties in Aeronautical & Aerospace Engineering.
- To foster a culture of innovation among students in the field of Aeronautics and Aerospace with updated professional skills to enhance research potential for sponsored research and innovative projects.
- To Nurture young individuals to be knowledgeable, skilful, and ethical professionals in their pursuit of Aeronautical & Aerospace Engineering.



  
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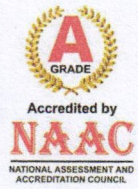
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## B.Tech- Aerospace Engineering

### Program Educational Objectives Statements (PEO)

PEO 1: Demonstrate a solid grasp of fundamental concepts in Mathematics, Science, and Engineering, essential for effectively addressing engineering challenges within the Aerospace industry.

PEO 2: Involve in process of designing, simulating, fabricating, testing, and evaluating in the field of Aerospace.

PEO 3: Obtain advanced skills to actively engage in research and development endeavors within emerging domains, while also pursuing further education opportunities.

PEO 4: Demonstrate efficient performance both as independent contributors and as valuable team members in diverse multidisciplinary projects.

PEO 5: Embrace lifelong learning and career advancement while adapting to the evolving social demands and needs.



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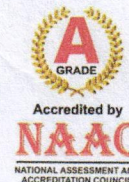
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### Program Outcomes (PO's)

**PO1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and Engg. Specialization to the solution of complex engineering problems.

**PO2: Problem analysis:** Identify, formulate, research literature, and analyze engineering problems to arrive at substantiated conclusions using first principles of mathematics, natural, and engineering sciences.

**PO3: Design/development of solutions:** Design solutions for complex engineering problems and design system components, processes to meet the specifications with consideration for the public health and safety, and the cultural, societal, and environmental considerations.

**PO4: Conduct investigations of complex problems:** Use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

**PO5: Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

**PO6: The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**PO7: Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the







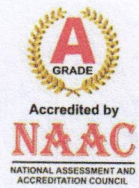
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knowledge of, and need for sustainable development.

**PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO9: Individual and teamwork:** Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.

**PO10: Communication:** Communicate effectively with the engineering community and with society at large. Be able to comprehend and write effective reports documentation. Make effective presentations and give and receive clear instructions.

**PO11: Project management and finance:** Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team. Manage projects in multidisciplinary environments.

**PO12: Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



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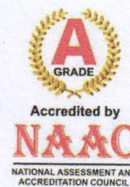
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### B.Tech- Aerospace Engineering

#### Program Specific Outcomes (PSO) - R2018

**PSO1:** Create, Select, and Apply aerospace modelling, analysis, and design, as well as team working skills in the design and integration of Spacecraft systems.

**PSO2:** Apply principles of aerodynamics, space propulsion, aerospace structures and control systems to design and analyze aircraft and spacecraft with desired performance characteristics.

#### Program Specific Outcomes (PSO) - R2020

**PSO1:** Design and analyze aerospace components/systems for aerospace industries.

**PSO2:** Acquire the concepts of spacecraft attitude dynamics for the prediction of spacecraft motion.



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