

DEPARTMENT OF AEROSPACE ENGINEERING

Aerospace Engineering is a complex, rapidly changing field that includes aerodynamics, structures and materials, propulsion, dynamics and control, and astrodynamics. The primary application of Aerospace Engineering is to design and develop flight vehicles, such as aircraft, missiles, spacecraft and satellites. Aerospace engineering is also important and applicable to other vehicles and systems, such as rotorcraft, submarines, automobiles, wind turbines, advanced robotics, re-entry vehicles, exotic materials and computational simulations.

The mission of the Aerospace Engineering program is

1. to provide a quality undergraduate and graduate aerospace engineering education.
2. to advance the engineering and science knowledge base through research.
3. to assist industry in technical applications and innovations.
4. to serve the aerospace engineering profession through leadership in these areas.

To achieve this mission, the educational objectives established by the Aerospace Engineering undergraduate program are to produce graduates whose expected accomplishments within three to five years of graduation

1. to have successful careers in industry, private practice, or government, or will have pursued advanced graduate studies.
2. to be skilled practitioners who apply their knowledge and skills to solve relevant engineering problems in the aerospace or a related profession.
3. to be life-long learners, keep abreast of developments in aerospace or related technologies, and to be leaders in their professional group.

To carry out these educational objectives, the goals of the program are

1. using a high quality faculty, to provide a comprehensive aerospace engineering education that provides students with the fundamental knowledge and skills necessary for the design, analysis and advancement of aircraft, spacecraft and other high technology complex systems; and
2. to prepare students for the aerospace engineering profession and related fields by developing the attributes needed, so that they can contribute successfully to society and to the engineering profession now and in the future.

The Department offers a Bachelor of Science in Aerospace Engineering with Honors degree option. This option was proposed by our students and implemented for our students. Very few programs across the country offer this type of experience within Aerospace Engineering. Students in this program are part of an honors community and are provided with the opportunity to enhance their learning experience through one-on-one research with a faculty mentor, introduction to advanced aerospace theories, and much more. The Department also offers a Fast Track program, which is tailored for high-achieving undergraduate students who wish to extend their knowledge and gain an edge by earning a Master of Engineering (ME) degree. Fast Track allows qualified students to earn up to nine hours of credit toward their Aerospace Engineering undergraduate

and graduate degrees. Consequently, through Fast Track a student can earn a ME degree in two semesters beyond their undergraduate degree.

Laboratories supplement theoretical studies in the major disciplines in the Department. Numerous wind tunnels for low-speed and supersonic aerodynamic studies, a jet engine test facility, a flight simulator, a satellite laboratory with Integrated Concurrent Engineering Capability, a robotics laboratory, and state-of-the-art materials and structures testing equipment are available, equipped with modern instrumentation. The Department and the University also provide an extensive array of computing resources.

Students are encouraged to enrich their undergraduate experience through a variety of ways in the Department, including co-op and internship positions, student competition design projects, and undergraduate research. In addition, students have the opportunity to study abroad or participate in an international exchange program.

The Bachelor of Science in Aerospace Engineering degree is accredited by the Engineering Accreditation Commission of ABET, www.abet.org. Before commencing course work in Aerospace Engineering, students must be admitted to the major or have the approval of the Department.

The Department also offers programs of study leading to the MEN, MS, and PhD degrees (see the Texas A&M University Graduate and Professional Catalog).

Faculty

Alfriend III, Kyle T, University Distinguished Professor
Aerospace Engineering
PHD, Virginia Polytechnic Institute and State University, 1967

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Aerospace Engineering
PHD, Wright State University, 2014
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PHD, University of Texas, 2010

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Aerospace Engineering
PHD, Georgia Institute of Technology, 2007

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PHD, Stanford University, 1972

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Reddy, Junuthula N, Distinguished Professor and Regents Professor
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PHD, Virginia Tech, 1987

Strouboulis, Theofanis, Professor
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PHD, University of Texas, 1986

Talreja, Ramesh R, Professor
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PHD, The Technical University of Denmark, 1974

Tichenor, Nathan R, Research Assistant Professor
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Tropina, Albina, Research Professor
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PHD, Kyiv Aviation University, 2011
PHD, V.N. Karazin Kharkiv National University, 1999

Vadali, Srinivas R, Professor
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PHD, Virginia Tech, 1983

Valasek, John L, Professor
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Whitcomb, John D, Professor
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White, Edward B, Professor
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PHD, Arizona State University, 2000

Majors

- Bachelor of Science in Aerospace Engineering (<http://catalog.tamu.edu/undergraduate/engineering/aerospace/bs/>)

Minors

- Aerospace Engineering Minor (<http://catalog.tamu.edu/undergraduate/engineering/aerospace/minor/>)