

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 Aerospace Engineering undergraduate program has established the following educational objectives. Within three to five years of graduation, graduates are expected to:

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

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 Texas A&M 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.

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).

The Aerospace Engineering undergraduate program is accredited by the Engineering Accreditation Commission of ABET (www.abet.org) under the commission's General Criteria and Program Criteria for Aerospace Engineering.

Faculty

Alfriend, Terry, Professor
Aerospace Engineering
PHD, Virginia Polytechnic Institute and State University, 1967

Benedict, Moble, Professor
Aerospace Engineering
PHD, University of Maryland, 2010

Benzerga, Amine A, Professor
Aerospace Engineering
PHD, Ecole Nationale Supérieure Des Mines De Paris, 2000

Bhargava, Divya, Instructional Assistant Professor
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PHD, Purdue University, 2021

Bhattacharya, Raktim, Professor
Aerospace Engineering
PHD, University of Minnesota, 2003

Bishop, Robert H, Professor
Aerospace Engineering
PHD, Rice University, 1990

Bowersox, Rodney D, Professor
Aerospace Engineering
PHD, Virginia Tech, 1992

Boyd, James G, Associate Professor
Aerospace Engineering
PHD, Texas A&M University, 1994

Chakravorty, Suman, Professor
Aerospace Engineering
PHD, University of Michigan, 2004

Chamitoff, Gregory E, Professor of the Practice
Aerospace Engineering
PHD, Massachusetts Institute of Technology, 1992

Cizmas, Paul G, Professor
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PHD, Duke University, 1995

Connolly, John F, Professor of the Practice
Aerospace Engineering
MEN, University of Colorado, 1996

Creel, James, Visiting Research Associate Professor
Aerospace Engineering
PHD, Trinity College Dublin, 2017

Cruzado Garcia, Aitor, Research Assistant Professor
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PHD, Mondragon University, 2013

Currie-Gregg, Nancy J, Professor of the Practice
Aerospace Engineering
PHD, University of Houston, 1997

DeMars, Kyle J., Professor
Aerospace Engineering
PHD, University of Texas, 2010

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PHD, Massachusetts Institute of Technology, 2015

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PHD, University of Central Florida, 1997

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PHD, Georgia Institute of Technology, 2007

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PHD, University of Houston, 1983

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PHD, Duke University, 2020

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PHD, Cornell University, 1990

Guhathakurta, Swagnik, Assistant Professor
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Hartl, Darren J, Associate Professor
Aerospace Engineering
PHD, Texas A&M University, 2009

Ifti, Hassan Saad, Assistant Professor
Aerospace Engineering
PHD, University of Oxford, 2022

Jackson, Scott, Associate Professor
Aerospace Engineering
PHD, California Institute of Technology, 2005

Jameson, Antony, Professor
Aerospace Engineering
PHD, University of Cambridge, 1963

Junkins, John L, Distinguished Professor
Aerospace Engineering
PHD, University of California at Los Angeles, 1969

Karpetis, Adonios N, Associate Professor
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PHD, Yale University, 1998

Lagoudas, Dimitris C, Professor
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PHD, Lehigh University, 1986

Le Graverend, Jean-Briac B, Associate Professor
Aerospace Engineering
PHD, Ecole Nationale de Mécanique et d'Aérotechnique, France, 2013

Leonov, Boris S, Research Assistant Professor
Aerospace Engineering
PHD, Texas A&M University, 2023

Leyva, Ivett A, Professor
Aerospace Engineering
PHD, California Institute of Technology, 1999

Majji, Manoranjan, Professor
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Miles, Richard B, Professor
Aerospace Engineering
PHD, Stanford University, 1972

Mortari, Daniele, Professor
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PHD, University La Sapienza of Rome, 1980

Naraghi, Mohammad, Professor
Aerospace Engineering
PHD, University of Illinois at Urbana Champaign, 2009

Oran, Elaine, University Distinguished Professor
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PHD, Yale University, 1972

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PHD, Virginia Polytechnic Institute & State University, 1981

Selva Valero, Daniel, Associate Professor
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PHD, Massachusetts Institute of Technology, 2012

Siddiqui, Farhan, Research Professor
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PHD, Texas A&M University, 2021

Singh, Narendra, Assistant Professor
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PHD, University of Minnesota, Twin Cities, 2020

Strganac, Thomas W, Senior Professor
Aerospace Engineering
PHD, Virginia Polytechnic Institute & State University, 1987

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

Takachi Tomita, Jesuino, Professor of the Practice
Aerospace Engineering
PHD, Instituto Tecnológico de Aeronáutica,, 2009

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

Tichenor, Nathan R, Visiting Research Associate Professor
Aerospace Engineering
PHD, Texas A&M University, 2010

Tropina, Albina, Research Professor
Aerospace Engineering
PHD, Kyiv Aviation University, 2011
PHD, V.N. Karazin Kharkiv National University, 1999

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

Valasek, John L, Professor
Aerospace Engineering
PHD, University of Kansas, 1995

Whitcomb, John D, Professor
Aerospace Engineering
PHD, Virginia Tech, 1988

Zhu, Hejian, Assistant Professor
Aerospace Engineering
PHD, Massachusetts Institute of Technology, 2023

Majors

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