

The Trajectory

A FLIGHT PATH FOR PROSPECTIVE UNDERGRADUATE STUDENTS



Photo Courtesy NASA (Jim Grossmann)



THE UNIVERSITY OF TEXAS AT AUSTIN

Aerospace Engineering
and Engineering Mechanics

What is Aerospace Engineering?

Building on the achievements of the last 100 years of aviation, the field of aerospace engineering continues to develop better, safer and more efficient options for military, commercial and civilian travel through both aircraft and spacecraft systems.



Aerospace engineers benefit from an interdisciplinary education that offers a diverse choice of career paths. Advances in aerospace engineering research have changed our lives in everything from medical improvements, such as artificial limbs and invisible braces,



es, to everyday conveniences, such as clean-burning engines, plasma displays, and shock-absorbing footwear, to improving our environment using energy obtained from the wind. The possibilities are unlimited with ideas that stretch across the universe—

in aerospace engineering, the sky is no longer the limit.

Get Connected



Aerospace Engineering
and Engineering Mechanics
<http://www.ae.utexas.edu/>



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ASE Grads @ Work

Companies that hire UT-Austin Aerospace Engineering graduates:

- Accenture • American Airlines • ASRC Corp • AT&T Entities • ATA Engineering
- Apple Inc.
- Techsystems
- Baker Hughes
- Booz Allen
- Capital One •
- Cessna Air-
- Cudd En-
- Consulting •
- Elbit Systems of America • Emergent Space Technologies, Inc. • ExxonMobil
- Facility Solutions Group • Flare Industries • Fluor • GE Aviation • Garmin •
- Globiox • Greene, Tweed & Co. • Hamilton Sundstrand • Harris Corporation •
- ILD Power • Jacobs • L2 Consulting, Inc.
- L-3 Communications • L-3 Stratix • Lee
- Company • Lincoln Electric • Lockheed
- Martin Corporation • Lufkin Industries,
- Inc. • Mantech • MDA Information Sys-
- tems • M.I.T. Lincoln Laboratory • Merlin
- Entertainments • DuNan Microstaq, Inc.
- Millenium Engineering and Integration
- NASA Jet Propulsion Laboratory • NASA Johnson Space Center • NASA
- Kennedy Space Center • National Instruments • Oceanering Space Systems
- Palantir Solutions • Phoenix Global Support • Pinnacle Asset Integrity Ser-
- vices • Pratt & Whitney • Raytheon • Rockwell Collins • SAIC • Samsung •
- Sandia
- Searce
- Airlines
- (SpaceX)
- Textron
- Trans-
- United
- alliance • United States Air Force • United States Department of Defense •
- United States Marine Corps • United States Navy • Ventech Engineers Inter-
- national • Wood Group • Wyle

“Aerospace Engineers design aircraft, spacecraft, satellites, and missiles. In addition, they test prototypes to make sure that they function according to design.”

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2012-13 Edition, Aerospace Engineers, on the Internet at <http://www.bls.gov/ooh/architecture-and-engineering/aerospace-engineers.htm> (visited July 24, 2013).

Check out more statistics and information about the Aerospace Engineering occupation online at www.bls.gov or scan this QR code:



At The University of Texas at Austin, Our graduates go on to work not only in the aerospace field, but in many others including the oil & gas industry, consulting, energy, management and more!

Student Groups



Student-built rockets!



Working with composite materials!



Supersonic Rocket!!

Longhorn Rocket Association (LRA)

- Build and launch model and amateur rockets
- Provides a hands-on opportunity in the design process of rockets
- Gather data to optimize launch altitude, range, and power

Women in Aerospace for Leadership and Development (WIALD)

- Facilitate development of leadership skills for women that will carry them through their careers as an engineer
- Attract and retain more women by making group activities fun, exciting, and ultimately helpful in achieving long-range career goals



A WIALD Group!



Getting ready to launch!



Working on a payload



Inspecting the plane at the runway



The plane

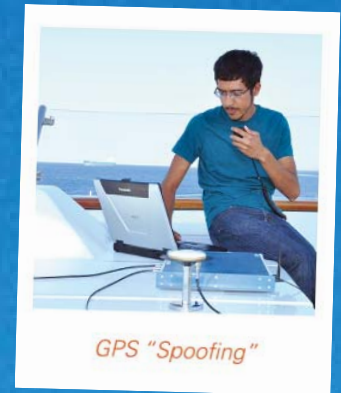
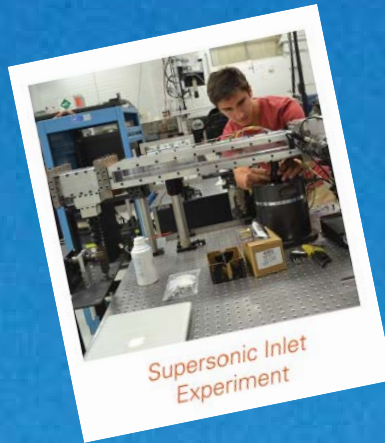
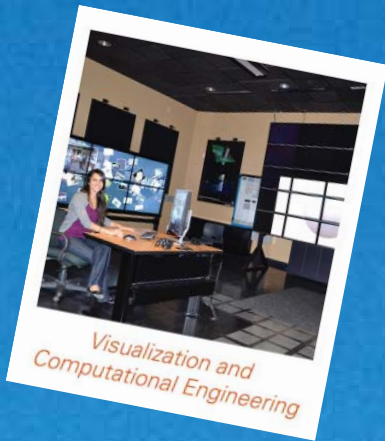


The team

Design, Build, Fly (DBF)

- Design an aircraft from scratch to accomplish challenging missions
- Build and fly the aircraft
- Opportunity to compete in an international competition and travel to Arizona or Kansas
- Gain engineering design team work experience

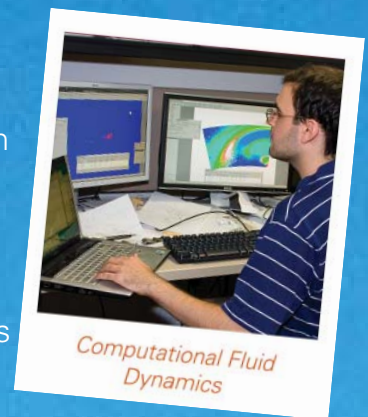
Student Research



At The University of Texas at Austin, undergraduate students are encouraged to get involved in research with faculty across campus, especially if they plan to pursue a graduate degree.

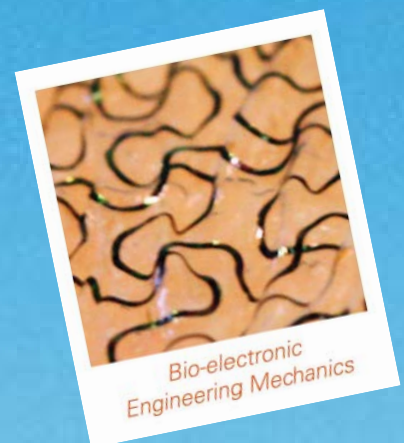
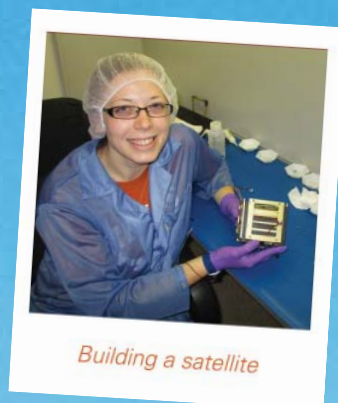


Research in the Department of Aerospace Engineering and Engineering Mechanics spans a wide variety of disciplines. Our faculty work closely with students to create, develop and apply aerospace technology to solve important global and societal problems with their cutting edge research.



Within the department, there are six research areas designed to be cross-disciplinary:

- Aerothermodynamics and Fluid Mechanics
- Computational Mechanics
- Guidance and Control
- Orbital Mechanics
- Solids, Structures and Materials
- Structural Dynamics



Aerospace Abroad



Increasingly, companies actively recruit students with cross-cultural experience to join their teams. In today's global marketplace you will likely be working in another country or with someone from another country.

By studying abroad, you prove to potential employers you have the ability to step outside your comfort zone and succeed, you are adaptable, patient and can assume a leadership role with ease.

And, of course, you get to travel. When you study abroad, you are not just taking pictures of the top tourist destinations. You are living in a community, getting to know the culture of your host country. Living and learning in another country is a once-in-a-lifetime opportunity. Don't let this opportunity pass you by.

Highlights:

- Taught in English
- UT-Austin Tuition and Fees
- Exact UT-Austin Credits
- Many Scholarships Available

Maymester Programs:

- M E 210 in Vienna, Austria or Freiberg, Germany
- Technical Elective in Delft, The Netherlands

Summer Programs:

- ASE 376K and Technical Elective in Toulouse, France
- ASE 333T in Santander, Spain
- Technical Elective in Ankara, Turkey

Semester Programs:

- Toulouse, France
- Paris, France
- Delft, The Netherlands
- Stockholm, Sweden
- Sheffield, England
- Melbourne, Australia
- Perth, Australia
- Sydney, Australia

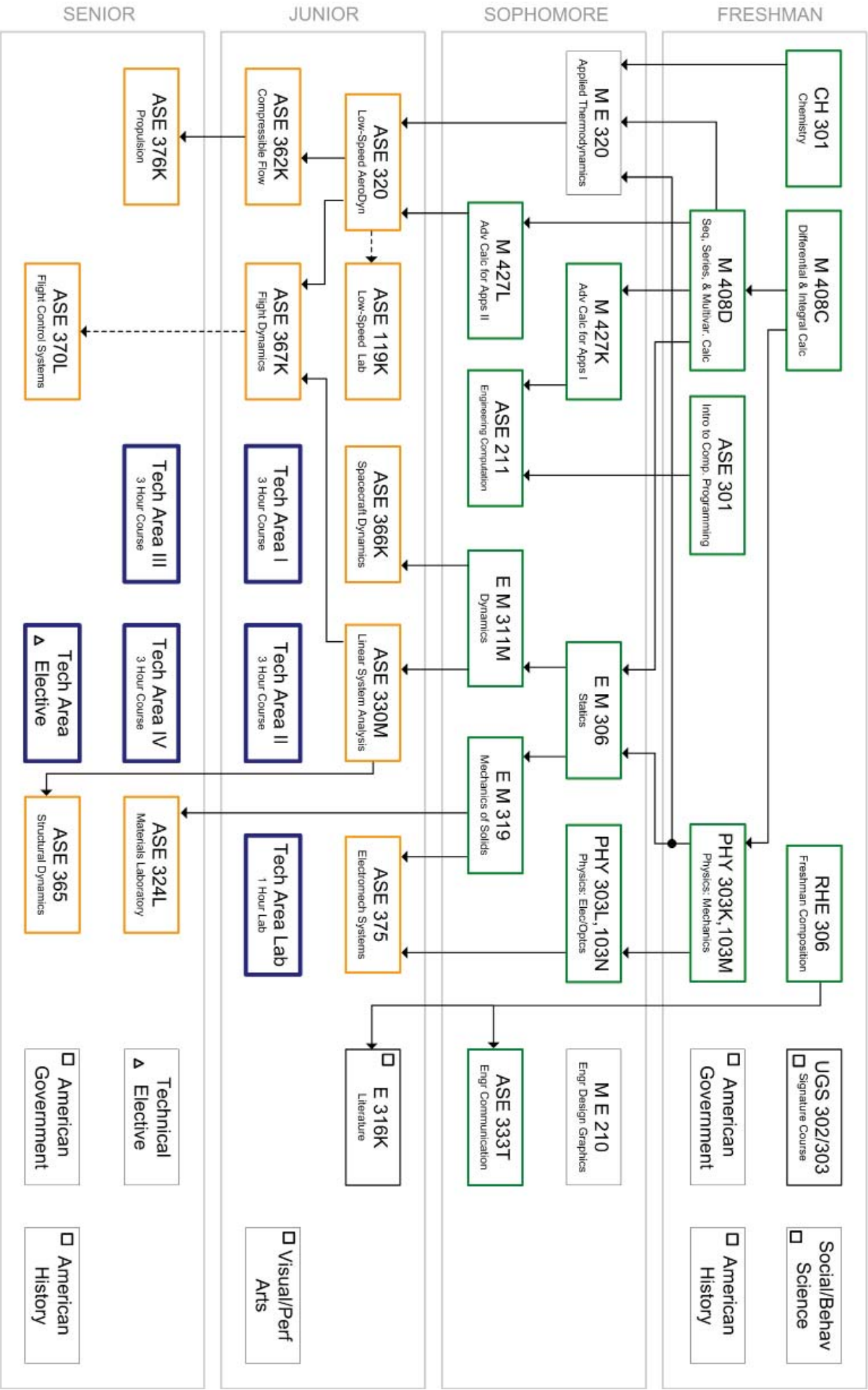


Credit-by-Exam

Placement Exam	Minimum Score*	UT Course*	ASE Degree Applicability
AP: Art History IB: Art History	5 4	ARH 302	Visual and Performing Arts requirement
AP: Chemistry IB: Chemistry (HL)	4 6	CH 301, 302	CH 301 counts, but CH 302 will not be used toward the ASE degree
AP: Economics (Micro) AP: Economics (Macro) IB: Economics	4 4 4	ECO 304K ECO 304L ECO 304K, 304L	Social Science requirement
AP: English (Language) SAT: Verbal Section ACT: Writing	3 600 26	RHE 306	Freshman Composition
AP: English (Literature) IB: English Language	4 4	E 316K	Literature
AP: Human Geography IB: Geography	3 4	GRG 305	Social Science requirement
AP: Government		GOV 310L	Student must take the UT Austin test on Texas Government to receive credit for one of two government requirements
AP: History (United States)	4	HIS 315K, 315L	Both American History requirements
IB: Latin	4	C C 302	Visual and Performing Arts requirement
AP: Mathematics (AB) AP: Mathematics (BC) IB: Mathematics (HL)	5 3-4 5	M 408C	First of two-semester Calculus sequence
AP: Mathematics (BC)	5	M 408K, 408L	First and second of three-semester Calculus sequence
AP: Music Theory	4	MUS 306M	Visual and Performing Arts requirement
IB: Music (HL)	4	MUS 303M	Visual and Performing Arts requirement
AP: Physics C: Mechanics	3	PHY 303K, 103M	First Physics (Mechanics)
AP: Physics C: Elec/Mag	3	PHY 303L, 103N	Second Physics (Elec/Optics)
AP: Psychology IB: Psychology	4 4	PSY 301	Social Science requirement
IB: Social and Cultural Anthropology	4	ANT 302	Social Science requirement
IB: Theatre Arts	4	T D 301	Visual and Performing Arts requirement

2014-2016 AEROSPACE ENGINEERING CURRICULUM

PREREQUISITE FLOW CHART



- Required Prerequisite** →
- Credit or Registration Required** - - - - - →
- Basic Sequence Course
- Major Sequence Course
- C- or better required in ALL coursework**
- except Core Curriculum Requirements**
- Core Curriculum Requirement: find approved classes in Catalog
- Δ Check Prerequisite in Catalog