

Life After Graduation

Aerospace engineers are involved with the conception, design, development and production of vehicles for flight both in and beyond the atmosphere. They apply their knowledge of aerodynamics, propulsion, structures, dynamics, control and performance to a wide variety of problems encountered in the design of a major aerospace vehicle or system.

Auburn Engineering's contribution to the nation's space program has been cited as one of its most credible efforts, and our faculty has produced four astronauts – including T.K. Mattingly and Jim Voss, who have distinguished themselves as aerospace engineering alumni. Colleagues and fellow Auburn astronauts Cliff Williams and Jan Davis graduated in mechanical engineering.

Pulled from the Apollo 13 flight at the last minute for medical reasons, Mattingly was the command module pilot who participated in the ground crew's efforts to save his fellow astronauts from a near tragic flight. He is also known for his role in the development of the first lunar space suit and backpack.

A veteran of five space flights, Voss has logged 201 days in space, including four spacewalks totaling 22 hours and 35 minutes of extra vehicular activity time. His last role with NASA was as the Deputy for Flight Operations in the Space Station Program Mission Integration and Operations Office.



The Auburn Advantage

Auburn University has provided instruction, research and outreach to the state and nation for more than 150 years, and is among a select group of universities designated as Land, Sea, and Space Grant institutions. Auburn makes a nearly \$5 billion economic contribution to the state each year, has more than 250,000 graduates and provides 130 degree programs to more than 24,000 graduate and undergraduate students.

Contact Us

Aerospace Engineering Undergraduate Program Coordinator
Department of Aerospace Engineering
211 Davis Hall
Auburn University, AL 36849
334.844.4874
ae_advisor@eng.auburn.edu
www.eng.auburn.edu/ae

Office of Engineering Student Services
1210 Shelby Center
Auburn, AL 36849
334.844.4310
engineering@auburn.edu
www.eng.auburn.edu/ess



AUBURN UNIVERSITY

SAMUEL GINN
COLLEGE OF ENGINEERING

www.auburn.edu

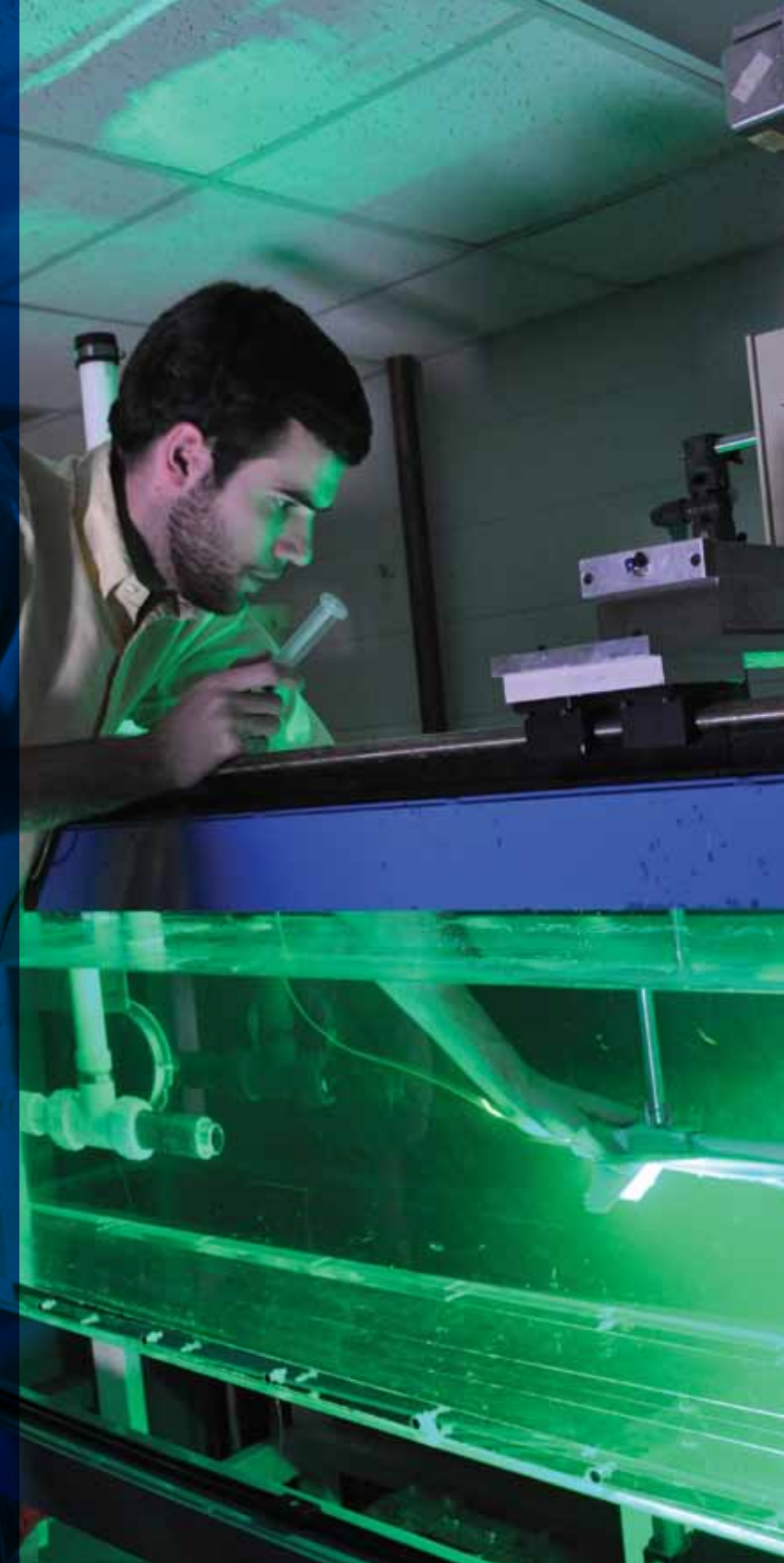
ENB1006AE1

Auburn University is an equal opportunity educational institution/employer.

Aerospace
ENGINEERING



AUBURN
UNIVERSITY



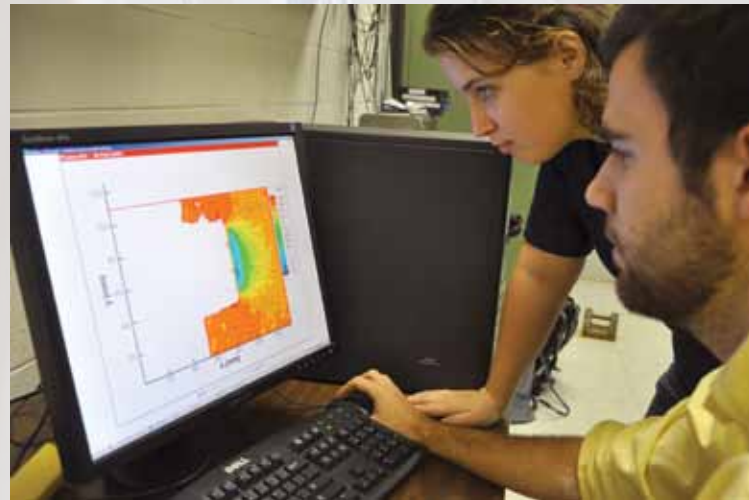
Welcome to the Department of Aerospace Engineering

The Department of Aerospace Engineering, one of nine departments in the Samuel Ginn College of Engineering at Auburn University, was established in 1942. Its origins lie with a decision by the Wright brothers in 1910 to establish a winter flying school near Montgomery. That fall, local newspapers announced instruction in "aeronautic construction and the principles of aviation" at Alabama Polytechnic Institute, as Auburn was then known. Since that time, Auburn aerospace engineers have been closely connected to many of history's greatest flights and the flying machines that carried them.

Undergraduate Curriculum

Bachelor of Aerospace Engineering

The department offers a modern aerospace engineering program administered by faculty with extensive experience in teaching, research and industry. The first two years of the program are devoted to developing a solid foundation in mathematics, physics, chemistry and basic engineering sciences. In the third year, fundamental concepts are applied to the study of practical problems in aerodynamics, flight dynamics, aerospace structures and materials.



Fourth year students undertake a comprehensive design sequence involving the preliminary design of an aerospace vehicle or major vehicle component. They may also choose an emphasis in aeronautical or astronautical systems. The Auburn aerospace engineering curriculum provides students with a broad understanding of fundamental scientific and technological principles and helps them to discover the ability to use these principles in developing solutions to everyday aerospace engineering problems.

Research and Laboratories

The department conducts research in areas such as:

- ▶ Composite materials and adaptive aerostructures
- ▶ Experimental aerodynamics and computational fluid dynamics
- ▶ Non-intrusive flow diagnostics and vortex dynamics
- ▶ Numerical structural analysis and experimental mechanics
- ▶ Manned and unmanned aircraft flight dynamics and control
- ▶ Spacecraft guidance and control
- ▶ Missile design using genetic algorithms
- ▶ Spacecraft orbit determination and remote sensing
- ▶ Solid, liquid and hybrid propulsion systems

Our instructional and research facilities provide hands-on experience for a practical and comprehensive education in aerospace engineering. Facilities employed in our instructional program include:

- ▶ Two large subsonic wind tunnels
- ▶ Two supersonic tunnels for Mach numbers 1.5 to 3.5
- ▶ Thirty-foot water tunnel for open surface and closed surface experiment modes
- ▶ Composite materials laboratory for construction of components



Extracurricular Opportunities

Auburn Engineering students can participate in a wide variety of educational activities beyond the classroom, gaining experience with teamwork and project management. This includes the SAE Aero Design team, the Flying Tigers, whose members conceive, design, fabricate and test a radio-controlled, unmanned aerial vehicle that has the ability to take off and land at full cargo capacity.

Aerospace engineering students are encouraged to participate in campus organizations such as:

- ▶ Sigma Gamma Tau national aerospace engineering honor society
- ▶ American Institute of Aeronautics and Astronautics

For more information, visit www.eng.auburn.edu/organizations

Scholarships

The College of Engineering and the Department of Aerospace Engineering provide numerous scholarship opportunities to students at every stage of their academic career. The deadline for departmental scholarship applications is Jan. 15.



For information about these offerings, visit us on the Web at www.eng.auburn.edu/scholarships