AEROSPACE ENGINEERING

ABOUT US

- 10 Faculty Members
- AE has a total of 361 undergraduate students enrolled with 73 classified as seniors.
- Graduate Enrollment: 31 Masters, 17 PhD’s
- Five-year average for research funding: $1.3 million
- Winning individuals and teams of undergraduate and graduate student in AIAA competitions
  - http://www.eng.auburn.edu/programs/aero

OUR RESEARCH INTERESTS

- Design, Analysis and Optimization of Aerospace Systems
- Unmanned Aerial Systems
- Optical Diagnostics of Flow Fields
  - Turbulent boundary layers
  - Aero-optics, Aero-acoustics
- Computational Fluid Dynamics
- Structures and Structural Dynamics (FEM)
- Vortex Dominated Flows
- Orbital Mechanics and Flight Dynamics
  - Filtering, Guidance, Stability, Control, 6+ DoF Simulation

OUR UNIQUE CAPABILITIES

- Design, Prototyping, and Analysis of Novel Unmanned and Manned Aircraft Concepts
- High-speed laser diagnostics (1,000,000+ fps), 3-D Imaging and Lightfield Imaging
- Optimization-Based Aerospace Vehicle Design and Analysis
- Computation of Complex Flow Fields (e.g., helicopter landing on ship) Using Algorithms Incorporating Galerkin Methods
- Advanced Filtering Methods for Orbital Mechanics
- Structural Dynamics Modeling: Missile on Target Impacts, Wheels Rolling on Soil; Stage Separation Dynamics

OUR VISION

- “We will be nationally and internationally recognized as providing exceptional instruction, unique fundamental and applied research results, and exceptional service in the field of Aerospace Engineering.”
  - We now provide continuously improving comprehensive undergraduate education, with rigorous coverage of the key sub-disciplines which comprise aeronautics and astronautics.
  - We have been increasing our emphasis on graduate education and research to achieve envisioned recognition for cutting edge contributions in the field of Aerospace Engineering.