

**Department of Mechanical & Aerospace Engineering
College of Engineering**

Academics

Undergraduate Degree Programs

- **Bachelor of Science in Mechanical Engineering**
- **Bachelor of Science in Aerospace Engineering**

Graduate Degree Programs

- **Masters of Science in Mechanical Engineering**
On Campus Thesis and non-thesis options, non thesis distance education via Engineering Online
- **Masters of Science in Aerospace Engineering**
On Campus Thesis and non-thesis options, non thesis distance education via Engineering Online
- **PhD. in Mechanical Engineering**
- **PhD. In Aerospace Engineering**
- **Accelerated Bachelor's/Master's in ME or AE**

Faculty

Areas of expertise

Aerodynamics, Fluid Mechanics & Propulsion

- Biofluid mechanics
- Computational fluid dynamics & design opt.
- Experimental aerodynamics & flight research
- High-speed propulsion
- Reactive and multiphase flows
- Stability, transition and turbulence

Dynamics, Vibration and Controls

- Adaptive structures
- Control and system identification
- Machine design and dynamics
- Mechatronics and smart systems
- Vibration and acoustics
- Structural health monitoring

Structural Mechanics and Materials

- Active Materials & Auto-Adaptive Structures
- Composite Materials
- Elasticity, Plasticity and Fracture Mechanics
- Manufacturing and Automation
- MEMS
- Stochastic Mechanics

Thermal Sciences and Energy Systems

- Atomization and sprays
- Combustion and fuels
- Heat and mass transfer
- Renewable energy
- Thermal Management
- Thermodynamics

Faculty Recognition

- 5 National Science Foundation CAREER Award and 4 NSF RIA recipients
- 2 American Society of Mechanical Engineering [ASME] Fellows
- 5 American Institute of Aeronautics and Astronautics [AIAA] Fellows
- 2 Alexander Holladay Medal For Excellence recipients
- One O. Max Gardner Award recipient
- 3 Alcoa Foundation Distinguished Engineering Research Award recipients
- 2 Alcoa Foundation Engineering Research Achievement Award recipients
- 2 R. J. Reynolds Co. Award for Excellence in Teaching, Research, and Extension recipients
- 2 Alumni Distinguished Undergraduate Professor recipients
- 2 Alumni Distinguished Graduate Professor recipients
- One Alumni Association Outstanding Extension Award recipient
- 8 members in the NC State Academy of Outstanding Teachers
- Three named professors

Student Organizations

- American Society of Mechanical Engineering
- American Institute of Aeronautics & Astronautics
- American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)
- Aerial Robotics Club
- Wolfpack Motorsports Club and Society of Automotive Engineers (SAE)
- Pi Tau Sigma Honor Society (ME)
- Sigma Gamma Tau Honor Society (AE)

Highlights

**37 tenure-track faculty, 1 research faculty, 3 lecturers, 3 adjuncts, 7 assoc faculty, 11 staff
Enrollment Fall 2006**

Undergraduate: AE — 219, ME — 705
Master's: AE — 35, ME — 69
Doctoral: AE — 18, ME — 59

Degrees granted 2005-06

Baccalaureate: AE — 32, ME — 145
Master's: AE — 13, ME — 39
Doctoral: AE — 3, ME — 9