

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
- Ph.D. in Mechanical Engineering
- Ph.D. 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
- Space flight mechanics
- Space system design

Structural Mechanics and Materials

- Active materials & Auto-adaptive Structures
- Composite and Advanced materials
- Elasticity, plasticity and fracture Mechanics
- Manufacturing and Automation
- MEMS
- Stochastic mechanics
- Precision engineering

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, 4 lecturers, 4 adjuncts, 6 assoc faculty, 11 staff
- Enrollment Fall 2007
Undergraduate (So-Sr): AE — 290, ME — 780
Master's: AE — 40, ME — 111
Doctoral: AE — 26, ME — 57
- Degrees granted 2006-07
Baccalaureate : AE — 49, ME — 189
Master's: AE — 14, ME — 26
Doctoral: AE — 2, ME — 14



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