

# NC STATE UNIVERSITY

## **Mechanical & Aerospace Engineering Department Overview**

The Department of Mechanical and Aerospace Engineering at North Carolina State University (Raleigh, NC) is among the largest and most prominent in the nation. The department offers Bachelor of Science (BS), Master of Science (MS), and Doctor of Philosophy (PhD) degrees in both Mechanical Engineering (ME) and Aerospace Engineering (AE). The department also offers accelerated BS/MS degrees in both programs.

Current research specialization in MAE includes dynamic systems and controls, vibrations, biomechanics, design optimization, smart materials and structures, precision engineering, MEMS and NEMS, advanced manufacturing, aerodynamics, UAV flight research, materials, renewable energy, combustion, hypersonics, propulsion, space exploration systems, and computational fluid dynamics.

The MAE department currently boasts 45 tenure-track faculty, six non-tenure track faculty, and 15 staff. The faculty is highly recognized with seven National Science Foundation CAREER Award recipients, four NSF RIA recipients, one NASA Early Career Faculty Award recipient, five ASME Fellows, seven AIAA Fellows, 20 members in the NC State Academy of Outstanding Teachers, and five named professors.

The MAE Department has an enrollment of over 1,100 undergraduates and 400 graduate students, and has conferred over 4,000 degrees since 2000. The department is housed in Engineering Building III, a four-story, 250,000-square foot facility built in 2010. An annex houses wind tunnels, an anechoic chamber, internal combustion engine dynamometers, and additional research labs. NC State's location on Centennial Campus, combined with its proximity to the Research Triangle Park and neighboring universities, provides extensive opportunities for academic and industrial interaction and collaboration.

The mission of the MAE department is to be a flagship engineering department that benefits all people of North Carolina and the global society by making a profound impact on current and emerging science and technologies; fostering exemplary, synergistic multidisciplinary research and education programs in close partnership with industry and government; providing the environment for innovative professional and scholarly development; and graduating highly skilled, ethical engineers who will thrive in a rapidly changing world and be future leaders in technology and society.