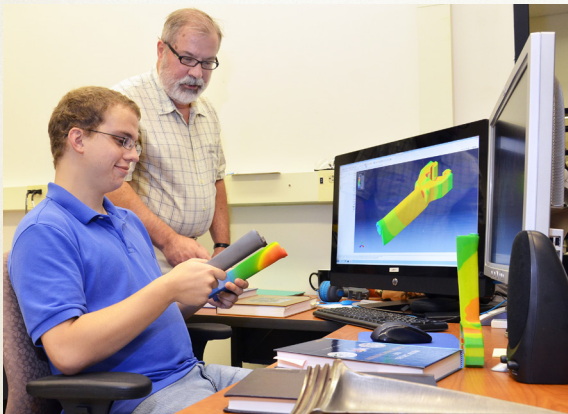


# MECHANICAL ENGINEERING AND ENGINEERING SCIENCE



## WHAT IS MECHANICAL ENGINEERING?

If it moves, it's mechanical. And if it's mechanical, the faculty, students and graduates of UNC Charlotte's Mechanical Engineering and Engineering Science Department are involved. Mechanical engineering industries include motorsports, bioengineering, manufacturing, aerospace, power generation and automotive. Career paths for mechanical engineers lead in many directions including design, construction, research, education and management. The national average starting salary for mechanical engineering bachelor's degree graduates is \$56,000 a year.

### Mechanical engineers can be:

- Design engineers
- Manufacturing engineers
- Race engineers
- Technical project leaders
- Test engineers
- Application engineers
- Product development engineers

### UNC Charlotte Mechanical Engineering students learn:

- CAD
- Dynamics
- Thermodynamics
- Fluids and Heat Transfer
- Materials Science
- Instrumentation and Sensors
- Machine Design

## BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING (BSME)

Our plan of study is driven by our design sequence, which begins in the freshman year with team-based projects in Introduction to Engineering. Second-year students begin using the machine shop as they build air-powered engines. As juniors, students focus on electromechanical systems and begin using rapid prototyping technology to build robots. The culmination of the design sequence is senior design, in which students take on a variety of more complex design/build projects, including multidisciplinary projects sponsored by the college's industrial partners. Our students benefit from solid theoretical instruction and numerous opportunities for hands-on, real-world applications.

### Concentrations

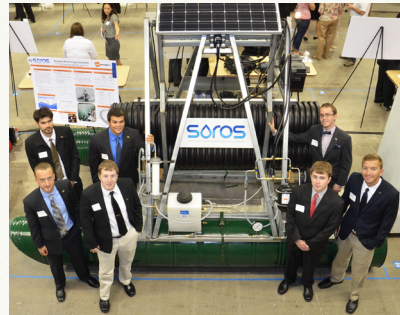
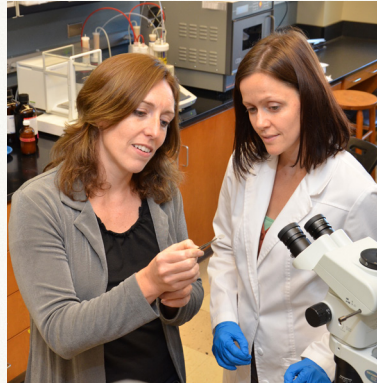
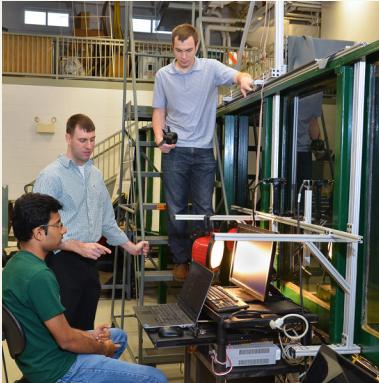
BSME students may choose to complete a concentration in:

- Motorsports Engineering
- Energy Engineering
- Biomedical Engineering

Concentrations provide opportunities for students to focus their studies in a set of courses related to their interests. Each concentration requires a one-hour introductory course, 12 credit hours of technical electives approved for the concentration, and a senior design project in that area. A total of 127 credit hours is required to complete the BSME with a concentration.

### Early Entry

Exceptional and motivated undergraduate students may apply for early entry into the Master of Science in Mechanical Engineering degree program. Students select two three-credit hour graduate courses to fulfill half of their BSME technical elective requirement. Students may complete up to 15 credit hours at the graduate level as they complete their BSME degree.



## FACULTY

MEES is home to more than 35 faculty who are leaders in teaching and research. Many of our faculty are internationally recognized for their contributions in the fields of:

- precision engineering
- motorsports engineering
- bioengineering
- metrology
- computational methods
- mechanics
- materials

## FACILITIES

• Built to embody the Lee College of Engineering's philosophy of a hands-on, design-based educational experience, Duke Centennial Hall provides students with the ideal environment to develop the essential skills needed for successful engineering careers. The 107,000-square-foot building includes smart classrooms, laboratories and equipment, a machine shop and computer labs.

• The Motorsports Research facility and Kulwicki Laboratory offer students and faculty industry-standard motorsports and automotive engineering equipment and laboratories, including an engine dynamometer and water tunnel.

## MORE INFORMATION

MECHANICAL ENGINEERING AND  
ENGINEERING SCIENCE

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