Engineering and Computer Science Majors

**Mechanical Engineering**

**About**
Mechanical engineering applies the principles of engineering, physics, and materials science for the design, analysis, manufacturing and maintenance of mechanical systems. Involving the design, production, and operation of machinery, the field requires an understanding of core concepts including mechanics, kinematics, thermodynamics, materials science, structural analysis and electricity. Mechanical engineers use these core principles with tools like computer-aided design (CAD) software to design and analyze manufacturing plants, industrial equipment and machinery, cars, aircraft, robotics, weapons, medical devices, and much more.

UCF's program prepares students to apply principles of engineering, basic science and mathematics (including multivariate calculus and differential equations) to model, analyze, design and realize physical systems, components or processes; and to work professionally in either thermal or mechanical systems while requiring topics in each area.

**Coursework Includes**
- Solid Mechanics
- Structure and Properties of Materials
- Thermal Dynamics and Heat Transfer
- Vibrations and Controls
- Fluid Dynamics
- Modeling Methods

See program requirements in the UCF catalog at [http://catalog.ucf.edu](http://catalog.ucf.edu)

**Where Mechanical Engineering Graduates Work**
- Siemens
- General Motors
- NASA
- Walt Disney World
- The Boeing Company
- Lockheed Martin

**Typical Starting Salary / Possible Job Titles**
$60,000. Design Engineer; Project Engineer; Project Manager; Site Inspector; Site Engineer; Threshold Inspector; Estimator; Scheduler.

**Related Student Organizations at UCF**
American Society of Mechanical Engineers
Society of Automotive Engineers
American Society Heating, Refrigeration and Air Conditioning Engineers

**Related Minors**
Bioengineering; Business; Computer Science; Engineering Leadership;
Mathematics; Materials Science and Engineering; Physics; Robotics

**Contact**
Department of Mechanical and Aerospace Engineering
407-823-2416
http://mae.ucf.edu
University of Central Florida
UCF's 13 colleges provide education and opportunities to 64,000 students from all 50 states and 152 countries. Located in Orlando, Florida, UCF is one of the nation's largest universities with 212 degree programs from which to choose. Students find community and camaraderie in more than 600 registered student organizations. See the UCF Viewbook at www.ucf.edu/admissions to learn more.

College of Engineering and Computer Science
With nearly 10,000 students, the college is among the nation’s top producers of engineers and computer scientists. Students receive rigorous instruction and graduate with solid technical skills.

During their academic career, students benefit from unique and innovative leadership and diversity-based support programs, such as the UCF Engineering Leadership & Innovation Institute (www.eli2.cecs.ucf.edu), and renowned STEM retention and mentoring programs described at www.stem.ucf.edu/stem-programs-at-ucf.

These programs are among the many reasons why the University of Central Florida was recognized along with Harvard, MIT, Stanford and Duke as one of the nation’s most innovative universities in U.S. News & World Report Best Colleges 2016 guide.

UCF Rankings
- Nation's #1 workforce supplier to the aerospace and defense industry (Aviation Week, 2015, 2016)
- Ranked #3 in nation, #28 in world, 2016 Association of Computing Machinery's International Collegiate Programming Competition.
- Ranked #1 among all state universities in Florida for performance measures that include graduation rates and graduates' employment and wages (Florida Board of Governors 2016)
- No. 1 choice of high school seniors in Florida and in the 12 states of the U.S. Southeast region (2016 Cappex College Considerations Report)