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 undergraduate catalog at **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
$61,000. Design Engineer; Project Engineer; Project Manager; Site Inspector; Site Engineer; Threshold Inspector; Estimator; Scheduler.

Related Student Organizations at UCF
American Society of Mechancial 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
mae.ucf.edu

University of Central Florida

Located in Orlando, Florida, UCF is one of the nation's largest universities with more than 66,000 students from all 50 states and 152 countries. UCF's 13 colleges offer 212 degree programs. Students find community and camaraderie in more than 600 registered student organizations. To learn more, visit **www.ucf.edu/admissions**.

College of Engineering and Computer Science

With 10,000+ students, the college is among the nation's top producers of engineers and computer scientists. Students receive rigorous instruction, enhanced with real-world hands-on experiences, to graduate with solid technical skills in 11 majors offered: aerospace engineering; civil engineering; computer engineering; computer science; construction engineering; electrical engineering; environmental engineering; industrial engineering; information technology; mechanical engineering; and optics and photonics.

During their academic career, students benefit from unique and innovative leadership and diversity-based support programs, such as the UCF Engineering Leadership & Innovation Institute (eli[2]) (**eli2.cecs.ucf.edu**), and renowned STEM retention programs described in detail at **stem.ucf.edu/stem-programs-at-ucf**.

UCF Rankings

- Nation's #1 workforce supplier to the aerospace and defense industry (*Aviation Week*, 2015, 2016)
- Ranks 11th among U.S. public universities for number of National Merit Scholars (289).
- *Kiplinger*, *Forbes* and The Princeton Review rank a UCF education among the nation's best values.
- Ranks #1 in nation, #13 in world among 13,000 regional teams, 2017 Association of Computing Machinery's International Collegiate Programming Competition.
- Home to three-time national champions: UCF Collegiate Cyber Defense Competition Team – 2014, 2015, 2016.
- U.S. Southeast Programming Team Champions – 2012, 2013, 2014, 2015, 2016.
- Ranks #5 out of 225 U.S. universities for number of patents granted, and #22 for success in research that leads to new technologies, products and companies (*2017 Milken Institute report*).
- Top choice of high school seniors in Florida and in the 12 states of the U.S. Southeast region (*2016 Cappex College Considerations Report*)

UNIVERSITY OF CENTRAL FLORIDA
has been designated as a
National Center of Academic Excellence
in Cyber Defense Education

College of Engineering and Computer Science
UNIVERSITY OF CENTRAL FLORIDA