**SCHOOL OF AEROSPACE AND MECHANICAL ENGINEERING**

FOR MORE INFORMATION: [WWW.OU.EDU/COE/AME](http://www.ou.edu/coe/ame)

AEROSPACE ENGINEERS design, develop and test aircraft machines ranging from airplanes (aeronautical engineers) to spacecraft (astronautical engineers). They also develop new technologies in the areas of aviation, defense systems and space exploration. Aerospace engineers can expect to work in government agencies such as NASA, or private industry.

MECHANICAL ENGINEERS work in virtually every technological field. Mechanical engineers research, develop, design, manufacture, and test tools, engines, machines and other mechanical devices. Mechanical engineering is one of the broadest engineering disciplines and can extend across many interdependent specialties. Pre-medicine is also an option under Mechanical Engineering.

**SCHOOL OF CHEMICAL, BIOLOGICAL AND MATERIALS ENGINEERING**

FOR MORE INFORMATION: [WWW.OU.EDU/COE/CBME](http://www.ou.edu/coe/cbme)

CHEMICAL ENGINEERS can prepare for a variety of careers including research and development; process engineering; project engineering; environmental concerns; materials development, improvement and characterization; bioengineering; and sales and marketing. At OU, chemical engineers have additional, more specialized options in pre-medicine and bio-technology.

**SCHOOL OF COMPUTER SCIENCE**

FOR MORE INFORMATION: [WWW.OU.EDU/COE/CS](http://www.ou.edu/coe/cs)

COMPUTER SCIENCE MAJORS take core computer science courses as well as advanced electives in areas such as computer graphics, intelligent robot systems, data networks and data base management. Computer scientists are hired by industries that provide software/hardware systems or services as well as virtually every other industry sector.

**SCHOOL OF INDUSTRIAL & SYSTEMS ENGINEERING**

FOR MORE INFORMATION: [WWW.OU.EDU/COE/ISE](http://www.ou.edu/coe/ise)

INDUSTRIAL ENGINEERS design systems and processes for all types of businesses, and determine the most effective ways of integrating diverse sets of activities in organizations involving people, materials, facilities, finances, equipment, energy and information. Undergraduate Industrial Engineering majors at OU can choose a more specialized option in Information Technology or Pre-medicine.

**ENGINEERING PHYSICS PROGRAM**

FOR MORE INFORMATION [WWW.OU.EDU/COE/EPHYSICS](http://www.ou.edu/coe/epysics)

ENGINEERING PHYSICS MAJORS are the link between the pure scientist and the engineer, understanding both the theory of science and relating it to practical engineering problems. Engineering physicists are well-prepared for work of a more theoretical nature, as well as graduate school and research.

College of engineering advising office  [http://www.ou.edu/content/coe/wssc/advising/staff.html](http://www.ou.edu/content/coe/wssc/advising/staff.html)
Flowcharts  [http://www.ou.edu/content/coe/academics/degreeplans_flowcharts.html](http://www.ou.edu/content/coe/academics/degreeplans_flowcharts.html)
CHOOSING AN ENGINEERING MAJOR

SCHOOL OF CIVIL ENGINEERING AND ENVIRONMENTAL SCIENCE
For more information: www.ou.edu/coe/cees

ARCHITECTURAL ENGINEERS are responsible for making buildings work properly in the real world, including the structural design responsibilities that insure that buildings can effectively resist loads such as gravity and wind. In addition to making sure that buildings can stand up against such natural forces, they are also responsible for the design and installation of the environmental systems that buildings require, including heating, air-conditioning, and electrical power systems. Many are employed in government service, but some practice in the private sector for engineering consulting firms.

CIVIL ENGINEERS are responsible for the design and construction of buildings, highways, bridges, mass transit systems, dams and locks, and municipal water and sewage treatment systems. Areas of emphasis include environmental, geotechnical and structural engineering. The program at OU offers a bachelor of science degree in civil engineering.

ENVIRONMENTAL ENGINEERS typically design water and wastewater treatment facilities, solid and hazardous waste facilities, pollution abatement and remediation systems, and environmental monitoring networks.

ENVIRONMENTAL SCIENCE allows students to pursue one of four degree tracks: chemistry, biology, math/physical science, and policy. Recent graduates have been employed by state and federal environmental agencies as well as private industry and consulting firms.

SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING
For more information: www.ou.edu/coe/ece

ELECTRICAL ENGINEERS work with electrical systems, solid state lasers, communication systems based on digitally coded signals, and electrical power research in the areas of oil, gas and electricity. Both Electrical Engineering and Computer Engineering programs are components of multidisciplinary approaches to aerospace intelligent systems, bio-engineering, business and math.

COMPUTER ENGINEERING bridges the gap between hardware design and software design technologies. Specific applications include signal processing, coding techniques, complex intelligent systems for control and instrumentation and image processing, and a wide range of digital systems.

NEWBOURNE SCHOOL OF PETROLEUM & GEOLOGICAL ENGINEERING
For more information: www.ou.edu/mcee
TEL: 325-3821
*This program is located in the College of Earth and Energy

PETROLEUM ENGINEERS are all about energy, primarily energy produced by oil and natural gas. Petroleum engineers are engaged in exploration, consulting, extraction, research and education and are also executives, CEO’s, professors and entrepreneurs. Petroleum engineering is an international industry providing unique opportunities for the “adventurous” engineer.

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