Agricultural Engineering

Pre-Professional Program

Career Opportunities

Agricultural engineering is the branch of the engineering profession that applies engineering principles, techniques and technology to the needs of agriculture and land, water and air resources. Focal points are the production of food and fiber, the processing of food and fiber, and the efficient use of land, water and air resources. Agricultural engineers bring engineering to agriculture through the use of mobile mechanical power, electrical energy, structural design, waste management systems, structural environments and techniques in land and water use. There is a recent involvement in alternative energy sources for agriculture, such as solar energy; in protecting the quality of air, soil and water; in improved safety practices, lower construction costs and new materials; and in predicting and controlling the environmental impact of new techniques and practices.

The College of Agriculture and Applied Sciences, in cooperation with the College of Engineering and Natural Sciences, offers a two-year pre-professional program which is basic to a B.S. in Agricultural Engineering. After completion of freshman and sophomore years at UT Martin, students may transfer to the Department of Biosystems Engineering at UT Knoxville or another university to complete their junior and senior years and receive their degrees.

Employment Possibilities

Current employment and career opportunities for graduates in agricultural engineering are excellent. In addition, increasing U.S. and world demands for food and fiber, the greater use of complex technology in agricultural production and processing, and the concern for natural resources and environmental protection indicate there is a bright future for students interested in agricultural engineering and technology fields. Those who complete the B.S. degree in agricultural engineering may find employment with agricultural machinery and equipment companies, feed manufacturing companies, food processing, electric power suppliers and building material suppliers. There are career opportunities in farm equipment design, manufacturing and sales, building design and construction, electric power systems in agriculture, soil and water conservation engineering, material handling and processing systems and animal waste disposal systems. Graduates are also employed by agricultural colleges in research, teaching and extension, particularly those who have advanced degrees, and by federal and state agencies such as USDA, Natural Resource Conservation Service and the Department of the Interior.

Facilities

Well-equipped engineering classrooms and laboratories are located on the UT Martin Campus. In addition, numerous computer facilities are available for student use.

The University of Tennessee at Martin
Department of Agriculture, Geosciences, and Natural Resources
PRE-PROFESSIONAL PROGRAM
AGRICULTURAL ENGINEERING
(Major code 1131)

Program Description: www.utm.edu/majors

Pre-Agriculture Engineering Freshman Year - 29 hrs

Requirement

- **CHEM 121 (4 hrs)**
- **CHEM 122 (4 hrs)**
- **ENGR 101 (4 hrs)**
- **ENGR 121 (3 hrs)**
- **ENGL 111 (3 hrs)**
- **ENGL 112 (3 hrs)**
- **MATH 251 (4 hrs)**
- **MATH 252 (4 hrs)**

Pre-Agriculture Engineering Sophomore Year – 29 hrs

Requirement

- **ENGR 241 (3 hrs)**
- **MATH 320 (4 hrs)**
- **MATH 330 (3 hrs)**
- **MATH 310 (3 hrs)**
- **MBIO 251 (4 hrs)**
- **PHYS 220 (4 hrs)**
- **PHYS 221 (4 hrs)**
- **SOIL 210 (4 hrs)**

Pre-Agriculture Engineering Soc Sciences/Humanities Electives – 6 hrs

Requirement

- **Social Science/Humanities Electives, select 6 hours from Fine & Performing Arts, Foreign Language, Literature, Philosophy, Religious Studies, Anthropology, Criminal Justice, Economics, Geography, History, Political Science, Psychology, or Sociology**