

**AGRICULTURAL            AE  
ENGINEERING**

**Department of Biosystems  
and Agricultural Engineering  
College of Agriculture  
and Natural Resources**

**150    Metal Fabrication Technology**

Fall. 2(1-2) SA: ATM 150

Physical principles and safety techniques for electric and gas welding. Soldering, brazing, cutting, tool use, machine shop equipment use, and hot and cold metalworking.

**252    Gasoline and Diesel Engine Technology**

Fall. 3(2-2) SA: ATM 252

Operating principles of gasoline and diesel engines and their systems. Operation and maintenance requirements.

**261    Principles of Animal Environments**

Spring. 2(1-2) Interdepartmental with Animal Science. Administered by Agricultural Engineering. SA: AE 061, ATM 261

Animal environment requirements. Heat and moisture production rates. Psychrometrics of air and building materials. Heat loss and ventilation systems. Offered first ten weeks of semester.

**290    Independent Study**

Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Approval of department; application required.

Supervised individual student study in electrical technology or agricultural technology.

**490    Independent Study**

Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 5 credits in all enrollments for this course. R: Open only to students in the College of Agriculture and Natural Resources. Approval of department; application required.

Supervised individual student research and study in agricultural engineering.

**491    Special Topics in Agricultural Engineering**

Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to students in the College of Agriculture and Natural Resources. Approval of department.

Special topics in agricultural engineering.