AGRICULTURAL ENGINEERING

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

101  Electrical Wiring Maintenance for Residential and Agricultural Facilities
Fall, Spring, Summer. 2(2-0) R: Not open to students in the Electrical Technology Major. Not open to students with credit in AE 072. Introduction to electrical circuit maintenance, safety issues, and installation practices for residential and agricultural facilities.

102  Electrical Lighting for Residential and Agricultural Facilities
Fall, Spring, Summer. 2(2-0) Not open to students with credit in AE 085. Introduction to electrical lighting sources, efficacies, productivity enhancement, and basic lighting design practices for residential and agricultural facilities.

131  Agricultural Water Resource Management
Spring. 3(3-0) R: (CSS 210) or similar basic soil science course R: Open to students in the Institute of Agricultural Technology. A basic knowledge, skills and tools course on water resources use and protection in agricultural production. Field trip required.

143  Application of Precision Agriculture Technologies
Spring. 3(3-0) R: Open to students in the Institute of Agricultural Technology. Practical application of the use of the tools of precision farming with a focus on widely adopted guidance, monitoring and global positioning systems. Field trip required.

151  Fabrication Technology
Fall, Spring. 2(1-2) SA: AE 150 Introduction to principles and practices for shop fabrication including assembly options, fabrication nomenclature, drawing interpretation, 3D printing, tool and equipment use, welding and safety practices.

153  Engine and Equipment Technology

172  Electrical Wiring I
Fall. 4(3-2) R: Open to students in the Institute of Agricultural Technology. SA: AE 072 National Electrical Code requirements for residential, light commercial and agricultural branch circuits and services. Safe use of hand tools.

173  Electrical Occupations
Spring. 1(1-0) R: Open to students in the Institute of Agricultural Technology. SA: AE 073 Electrical wiring trade, job openings, preparation of a resume, interviewing for a job, preparing reports. Offered first ten weeks of semester.

182  Electrical Wiring II
Spring. 2(1-3) RB: AE 172 R: Open to students in the Institute of Agricultural Technology. SA: AE 082 Installation of electrical circuits for residential, light commercial and agricultural installations. Offered first ten weeks of semester.

185  Electrical Applications

192  Electrical Wiring III
Fall. 4(2-4) RB: AE 182 R: Open to students in the Institute of Agricultural Technology. SA: AE 092 Commercial agricultural and industrial wiring, planning and installation, including transformers, polyphase systems, conductor sizing and explosion-proof wiring.

194  Electrical Systems Planning
Fall. 4(4-0) R: Open to students in the Institute of Agricultural Technology. SA: AE 094 Basic electrical calculations and wiring layout. Circuit requirements, outlet location, branch circuits and services sizing, blueprint reading and cost estimation.

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.

452  Watershed Concepts
Fall, Spring, Summer. 3(3-0) Interdepartmental with Crop and Soil Sciences and Forestry and Fisheries and Wildlife. Administered by Agricultural Engineering. RB: Organic chemistry SA: ESA 452, RD 452, CSUS 452 Watershed hydrology and management. The hydrologic cycle, water quality, aquatic ecosystems, and social systems. Laws and institutions for managing water resources.

841  Building and Implementing Watershed Management Plans
Fall, Spring, Summer. 3(3-0) RB: AE 452 SA: ACR 841, CSUS 841, RD 881 Developing and implementing watershed management plans. Problem definition, data collection, public consultation, and program evaluation.

AE—Agricultural Engineering