# TECHNOLOGY SYSTEMS MANAGEMENT

## Department of Biosystems and Agricultural Engineering

### College of Agriculture and Natural Resources

**121 Fundamentals of Electricity**  
Fall, 4(3-2) P: MTH 103 or MTH 116 or (MTH 124 or concurrently) Not open to students with credit in AE071.  

**122 Alternating and Direct Current Machines**  
Spring, 3(3-3) P: TSM 121 Not open to students with credit in AE 084.  
Types and characteristics of electric motors. Connecting, reversing and servicing of AC and DC motors and drives. Stepper motors. Variable frequency drives for induction motors.

**223 Fundamentals of Automation and Controls**  
Fall, 4(3-2) P: TSM 121 Not open to students with credit in AE 083.  
On-off controllers for electric actuators. Installation according to code. Ladder-logic. Programmable logic controllers. Installation and programming. Interfacing to a computer.

**224 Digital Systems, Sensors and Measurements**  
Spring, 3(3-3) P: TSM 121 or PHY 184 Not open to students with credit in ECE 230.  

**251 Information Technology in Agricultural Systems**  
Fall, 3(2-2) Interdepartmental with Community, Agriculture, Recreation and Resource Studies. Administered by Technology Systems Management. RB: Computer science course  
Applications and trends in information systems. Evaluation and use of computer systems, peripherals, networks, presentation systems, and communication systems.

**341 Power and Machinery Systems**  
Fall, 3(2-2) P: (PHY 231 and TSM 122 and TSM 223 and TSM 224 and CEM 141) or (BE 456 and TSM 224 and CEM 141) or (LBS 171 and TSM 122 and TSM 223 and TSM 224 and LBS 172) or (BE 456 and TSM 224 and LBS 172) Principles, performance, operation, and management of agricultural machine systems and tractors.

**342 Power and Control Hydraulics**  