

**AgM 111. Rural Electrification (2)**

Prerequisite: junior standing. Fundamentals of alternating current, wiring practices, circuit layouts and problems, motor and branch circuit protection; safe use of electricity; wiring of farmstead.

**AgM 111L. Rural Electrification Laboratory (1)**

Laboratory experiments to accompany AgM 111. (3 lab hours)

**AgM 115A-B. Farm Machinery (2-2)**

Prerequisite: AgM 15. (A) Study and operation of tillage tools, interaction of the soil and tool; cotton, grain, and specialized harvesting machinery and equipment. (B) Orchard and field spraying equipment, field and row crop planters, cultivating tools, and haying machinery. (1 lecture, 3 lab hours)

**AgM 121. Advanced Agricultural Welding (2)**

Prerequisite: AgM 18A-B. Arc and gas welding processes in construction and repair of farm equipment; inert arc welding; radiograph and shape burning; aluminum and stainless steels; welding tests and design of welded structures. (1 lecture, 3 lab hours)

**AgM 151A-B. Farm Power (2-2)**

Prerequisite: AgM 15. (A) Principles of the internal combustion engine; adjusting, servicing, and minor repairs practical in farming operations. (B) Overhauling and repairing of gasoline and diesel farm tractors and engines; field servicing and repairing of auxiliary power plants on farm machinery. (1 lecture, 3 lab hours)

**AgM 158. Unit Operations I (3) (See V 158A)****AgM 159. Pumps and Motors (3)**

Prerequisite: AgM 15, Ag 146. Operation and study of centrifugal and deep well turbines; testing of pumps and motors under operating conditions to determine efficiency; installation, protective devices, maintenance and proper selection of single and three-phase motors used on the farm. (2 lecture, 3 lab hours)

**AgM 190. Independent Study (1-3; max see reference)**

See *Regulations and Procedures—Independent Study*.