

**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 115. Farm Machinery (2)**

Prerequisite: AgM 15. Study and operation of tillage tools, interaction of the soil and tool; cotton, grain, and specialized harvesting machinery and equipment. (1 lecture, 3 lab hours)

**AgM 116. Farm Machinery (2)**

Prerequisite: AgM 15. A study of farm machinery used in spring and summer operations. 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 158A-B. Unit Operations I and II (3-3) (Former V 158A-B)**

Prerequisite: permission of instructor. Basic principles of plant operations in the food industry. Application of chemistry and physics to transformation of energy, heat transfer, flow of fluids, evaporation, heat exchange equipment, distillation, and drying. (2 lecture, 3 lab hours)

**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*.