81. Farm Structures and Equipment (3)

Prerequisite: Ag Me 15. Construction and repair of farm structures and equipment; farm carpentry and construction principles; engineering principles, codes; farmstead layouts and basic requirements of farm structures. (2 lecture, 2 lab hours)

91. Farm Surveying (3)

Prerequisite: sophomore standing or permission of instructor. Use of the steel tape, level, transit and compass; field problems in chaining distances, laying out building lines, profile leveling for irrigation ditches and drains, land leveling, and measuring land areas. (2 lecture, 2 lab hours)

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.

111L. Rural Electrification Laboratory (1)

Laboratory experiments to accompany Ag Me 111. (3 lab hours)

115. Farm Machinery (3)

Prerequisite: Ag Me 15. Study and operation of tillage tools, interaction of the soil and tool; cotton, grain, and specialized harvesting machinery and equipment. (2 lecture, 3 lab hours)

116. Farm Machinery (3)

Prerequisite: Ag Me 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. (2 lecture, 3 lab hours)

121. Advanced Agricultural Welding (3)

Prerequisite: Ag Me 18. 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. (2 lecture, 3 lab hours)

131. Agricultural Fluid Power (2)

Prerequisite: junior standing or permission of instructor. Theory and practice in the operation, service, adjustment, and function of the component parts of fluid power systems. Design application of systems to farm machines. (1 lecture, 3 lab hours)

151A-B. Farm Power (3-3)

Prerequisite: Ag Me 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. (2 lecture, 3 lab hours)

153. Small Engines (3)

Prerequisite: junior or senior standing or permission of instructor. Theory of operation, maintenance and repair of small gasoline internal combustion engines, both 2-cycle and 4-cycle. (2 lecture, 3 lab hours)

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)