

**188. Group Study in Agricultural Mechanics (2)**

Agricultural mechanics in the vocational agriculture program; organization of course of study and implementation of program; demonstration and analysis of teaching techniques.

**MECHANIZED AGRICULTURE (Ag Me)**

**15. Agricultural Mechanics (3)**

Mechanical skills in field of agriculture; selection, care and use of common farm tools; projects of wood and metal in farm appliances. (2 lecture, 2 lab hours)

**17. Farm Tractors (3)**

Operation and maintenance of farm tractors; operation of farm tractor under field conditions; service, maintenance and minor repair of gas, diesel, and butane type engines of wheel and crawler type. (2 lecture, 2 lab hours; 5 hours field operation.)

**18. Agricultural Welding (3)**

Prerequisite: Ag Me 15 or permission of instructor. Metallurgy of mechanized agriculture. Arc and oxyacetylene welding, cutting and brazing process as tools of construction, maintenance and repair of the machines of modern agriculture. (2 lecture, 2 lab hours)

**25. Agricultural Drafting (3)**

May be taken concurrently with Ag Me 15. Use of drafting instruments, lettering, dimensioning, scale drawings and working drawings of projects in agricultural mechanics; elementary plan and perspective drawings of small buildings. (2 lecture, 2 lab hours)

**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)