

**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 (3)**

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. (2 lecture, 3 lab hours)

**140. Agricultural Processing Technology I (3) (Former Ag Me 158A)**

Prerequisite: junior or senior standing or permission of instructor. Principles of plant operations in the food and fiber industries. Basic theory of heat transfer, fluid mechanics, refrigeration, dehydration, cleaning and sorting, cost analysis, and plant layout. (2 lecture, 3 lab hours)

**141. Agricultural Processing Technology II (3) (Former Ag Me 158B)**

Prerequisite: junior or senior standing or permission of instructor. Processing techniques including heat exchange equipment, distillation, process condition, pumps in food industry, fluid flow measurement. (2 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)

**159. Pumps and Motors (3)**

Prerequisite: Ag Me 15, Plant 50. 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)

**DAIRY INDUSTRY (D Ind)****23. Dairy Foods and Man (3)**

The history and geography, processes and processing of dairy products; their description, composition, and nutritive values; current role of the dairy industry and dairy foods.

**103. Manufacturing Dairy Products (3)**

Prerequisite: junior standing or permission of instructor. Making common varieties of cheese, mix making and freezing desserts, churning butter, and culturing dairy products. (1 lecture, 6 lab hours)

**113. Manufactured Dairy Products (3)**

Chemistry, physics, and mathematics applicable to the production of butter, concentrated products, cheese, and ice cream.

**133. Dairy Plant Management (3)**

Principles, practices, and problems in management of modern dairy plants.

**143. Market Milk Products (3)**

Market milk production, marketing, processing and distribution; common laboratory practices and processing methods. (2 lecture, 3 lab hours)

**153. Dairy Inspection (3)**

Application of the California Agricultural and the United States Public Health Codes to the inspection of dairies, dairy plants, and dairy products.