



AGRICULTURE DIVISION

AGRICULTURE TECHNOLOGY AND IRRIGATION



ABOUT THIS AREA OF STUDY

Agriculture Technology is the study of agriculture equipment maintenance and repair, basic equipment construction and fabrication, including layout, finish and welding of metal agriculture structures. Students will acquire skills in uses of tools and equipment necessary for modern farming operations.

PROGRAM OUTCOMES

- Define and demonstrate basic fabrication and SMAW welding skills.
- Demonstrate and list basic engine operations, both for small and large agriculture equipment.
- Explain and demonstrate basic equipment operation and maintenance for both small and large agriculture equipment.
- List and demonstrate safe work habits.
- Operate and maintain agriculture irrigation systems.

CAREER OPPORTUNITIES

- AG Equipment Mechanic
- AG Heavy Equipment Technician
- AG Mechanics and Welding
- Business Owner and Farm Repair
- Equipment Manufacturing
- Farm Shop Mechanic & Foreman
- General Agriculture
- Irrigation Auditor
- Irrigation Technician
- Sales & Service of AG Equipment

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DEGREES AND CERTIFICATES OFFERED

Associate of Science in Agriculture Technology – 60 Units
Certificate of Achievement in Agriculture Technology – 18 Units
Skill Certificate in Agricultural Power Equipment Technician- 11 Units
Skill Certificate in Irrigation Management- 16-17 Units
Skill Certificate in Irrigation Construction and Installation-15-16 Units

SOME CLASSES OFFERED UNDER THIS SUBJECT

AGTC 103

Farm Power

Farm power deals with the theory, operation, adjustment and maintenance of the farm tractor and its mechanical systems. The systems include power train, steering and hydraulic mechanisms. Cooling, electrical, fuel, clutch, equipment application and safety will be included.

AGTC 106

Agriculture Welding

A study of the fundamental principles theories and concepts of welding used in agriculture construction, fabrication and repair. All positions, joint types, hard surfacing, cutting, brazing, SMAW, GMAW, and OFW will be studied.

AGTC 210

Ag Project Construction

This course is designed to give students an understanding of the mechanics and technology of fabrication. This class will study the characteristics, types and costs of construction materials for their use in agriculture and in agriculture and industrial equipment fabrication.

AGTC 219

Irrigation System Design

Irrigation system design fundamentals covering micro, sprinkler, surface, and sub-surface applications. Topics include on-farm systems, piping, and discharge as well as system efficiency and cost. AutoCAD and other common design software will be introduced and utilized.

AGTC 220

Irrigation Wells and Pumps

This course is designed to give students an understanding of management and evaluation of irrigation wells pumps and their drive systems. Emphasis is placed on system hydraulics, pump curves and selection, efficient operation, management, energy conservation, setup, maintenance and repair.

REQUIREMENTS

Please see the online Catalog for specific requirements in this area:

<http://catalog.cos.edu/areas-study/>