

## **AG MECHANICS PATHWAY COURSES**

### **5511 Intermediate Ag Mechanics (CTE Concentrator Course)**

Length of Course: Year

Basic Agricultural Mechanics is an introductory course that explores a wide variety of mechanical processes. Students will use scientific and mathematical applications through relevant mechanical topics. In addition, students will complete numerous lab-based and project-based activities that will give students the opportunity to develop an understanding of the scientific process and increase hand-eye coordination and motor skills. Areas of study in this course include careers in agriculture mechanics, mechanical safety and hazards, hand and power tools. Topic clusters in this course include electricity, small engines, welding and metal work, wood work, wood construction, and mechanical technology. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration, and reinforcement of academic concepts and is a requirement for exhibiting a livestock project during the year. Students will be encouraged to have a project and record book and to participate in FFA activities.

### **5512 Advanced Ag Mechanics (CTE Completer Course)**

Length of Course: Year

Articulated with Butte College WLD 20 - Beginning Welding

In this course students will perform welds in positions other than flat and horizontal. The content will enhance the ability of the students to perform welds out of position. The course includes welding safety, shielded metal arc welding (SMAW), gas metal arc welding (GMAW), plasma arc cutting (PAC), air carbon arc cutting and gouging (CAC-A) welding and cutting processes. These welds will be performed in the flat, horizontal, vertical, and overhead positions. It will also include base metal, shielded metal arc welding electrodes, joint fit-up and alignment, groove welds with backing, and open V-groove welds. All welds will meet the American Welding Society (AWS) qualification standards. Students will be encouraged to have a project, to keep a record book and to participate in FFA activities. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration, and reinforcement of academic concepts and is a requirement for exhibiting a livestock project during the year. Students will be encouraged to have a project and record book and to participate in FFA activities.