

CENTRAL HIGH SCHOOL

Small Engines & Welding

Toni Saso

COURSE SYLLABUS

Course Description:

Grades 10, 11, 12 1 Semester

In this course, theory and hands-on experiences provide opportunities for students to develop basic knowledge and skills in agricultural mechanics and basic knowledge and skills in welding and metallurgy work. Instructional areas include the basic fundamentals of operating, maintaining, and repairing small gasoline engines, diagnosing engine malfunctions, operating agricultural equipment safely, welding, metallurgy terminology and techniques, and operating welding equipment safely. Students will receive instruction in theory as well as hands-on experience in the mechanics laboratory. Since FFA and Supervised Agricultural Experience Programs (SAEPs) are integral components of this course, students are required to maintain SAEPs, and be a member of the FFA while participating in activities of the FFA organization. Students will also be required to work outside of classroom instruction in the Central FFA Cooperative.

Prerequisite: Basic Agricultural Mechanics

Lab Fee

Course Objectives:

Upon the successful completion of this course, students will be able to:

- Know the safety procedures of welding.
- Cut and weld a 4" square metal waterproof box.
- Be able to do introductory welds on a MIG welder.
- Be able to design and cut a project with a Plasma cutter.
- Know the parts and theory of operation on a small gas engine.
- Teardown and rebuild a small gas engine according to manufacture specifications.

Required Class Materials:

Paper	Binder	Calculator (recommended)
Writing Utensil	Flash drive or storage device	

Text: None

Course Outline:

Shop Safety	Plasma Cutting
Welding Safety	Small engine theory of operation
ARC Welding	Small engine teardown & rebuild
MIG Welding	Carburetors & Ignition systems

Major Assignments:

SAE: Updated at the end of the quarter

Waterproof box: Week 3

MIG welding & Plasma cutter assignments: Week 6

Welding project: Week 9

Small engine rebuilt: Week 17

Grading:

Skyward Name	Category	Weight
CLW: Classwork	All classwork (homework, tests, quizzes, labs, projects)	75%
HW: Homework	SAE	10%
	Final Exam: Exam portion	7.5%
	Final Exam: Cooperative Work	7.5%

Class Policies & Procedures:

1. Every student must act in a safe and responsible manner because of the many laboratory and classroom situations. You must demonstrate respect for the work of others. Failure to conduct your self in a safe manner will result in immediate discipline including, but not limited to: detentions, phone call home, parent/teacher/student conference.
2. The classroom and/or shop will be picked up and clean before any student may leave the room.
3. Appropriate dress is required at all times. In addition, safety glasses and safety equipment as mandated by the lab must be worn at all times. NO EXCEPTIONS.
4. The laboratory activities are a privilege, not a right. If you can not act in a safe and responsible manner, you will be assigned book work and restricted from the activities.
5. You are expected to have with you at each class: writing utensil, class binder, note taking paper, and completed work for the day.
6. If you fall asleep during class (at the discretion of Miss Saso), you will stand the remainder of the class period.
7. Discipline for breaking the academic integrity code, student conduct responsibilities, and/or classroom expectations will be dealt with using the policy set forth by the Central High School Student Handbook.
8. As an inter-curricular club, FFA is an integral role of agriculture education. You are required to become a member of the Central FFA, and are encouraged to attend activities.
9. All assignments are due at the beginning of the period (when the tardy bell rings). If it is turned in after everyone else's assignments, IT'S LATE.
10. As per school policy, assignments may be turned in 1 day late for up to 75% credit. After that a zero will be assigned.
11. You have 2 school days to obtain and complete your assignments from an excused absence. You are responsible for obtaining missed work. I will not seek you out to give you missed work; you must check with me to see what you missed. Any work collected or assigned on the day of an unexcused absence will not be excepted.

Miscellaneous:

FFA is a requirement of enrollment in any agriculture class. Also, you have to work in the FFA agriculture department Cooperative. Students in this class are required to work 4 hours per semester. The store is open every Tuesday 3:30-5:30 pm and Saturday 8 am – 11:30 am. Please note these hours are 50% of the students final exam grade, and they are required to set their work dates in advance. More information can be found on the “What is the FFA Cooperative” hand-out.

Instructor Contact:

Email: tsaso@cusd4.org

Phone: (815) 694-2321 Ext. 2113

Email is the quickest method to get a response. If you email and do not receive response within 24 hours, feel free to call.