

WELDING IV TECHNOLOGY

Prerequisite: Welding III with C average or better

Course Description:

The Welding IV Technology class is the advanced types of welding procedures. The student will have hands on experience using different welding processes such as Shielded Metal Arc, Oxy-Acetylene, Gas Metal Arc Welding (MIG), Gas Tungsten Arc Welding (TIG), FCAW (Flux Core), and Plasma Arc. This class is project based and the student will have to build 5 or more projects per semester. The student will practice the certification test and have the ability to become AWS certified welder. Good shop procedures and proper safety practices will be emphasized throughout the course.

Course Objectives:

The student will be able to:

- each
1. Identify tools and machines used in the welding industry, list safety rules for machine, and operate each efficiently.
 2. Develop skills in the area of Shielded Metal Arc, Oxy-Acetylene Gas Metal Arc Welding (MIG), Gas Tungsten Arc Welding (TIG), FCAW (Flux Core), and Plasma Arc.
 3. Select the correct electrode for arc welding according to its tensile strength, flux coating, position, it is to be used and other factors.
 4. Identify different metals used in welding industry by shape and composition
 - 5.. Understand the basic metallurgy and used it to prevent distortion.
 6. Identify welding symbols, read welding blueprints and make detailed drawing for their projects.
 7. **Develop** good work habits - such as proper shop procedures, tool maintenance and good clean-up practices.
 8. **Certified** AWS welder at the cost to the student.
 9. Revise Job Resume.

Learning Activities:

A variety of activities will be used during the class. There will be lectures given, reading and research assignments and videos shown and lab time in the welding shop. Students will have to build a 5 more projects per semester. Student will have to take the AWS certification test at cost of the student.

Materials Required:

1. A pencil, pen and notebook should be in the classroom at all times.
2. Eye protection worn at all times while in the lab.
3. 100% cotton coveralls should be worn at all times.
4. Leather boots
5. Welding Gloves
6. Bare handled pliers
7. Locks
8. Hat
9. All items can be purchased locally.

All personal property must be marked with your name and class period.

Grade Criteria and Grading Procedure:

Grades will be determined by a percentage of the total points possible. These points will be compiled from quizzes, tests, work sheets, student's weekly evaluations, notebooks, lab work and final tests.

Grading Scale:

- 90-100% A
- 80-89% B
- 70-79% C
- 60-69% D
- 0-59% F

Quizzes and Test are weighted at 10% of the overall grade.

Worksheets and Notebooks are weighted 10% of the overall grade.

Weekly Evaluations are weighted 40% of the overall grade.

Coupons and Lab Work are weighted 40% of the overall grade.

CLASSROOM EXPECTATIONS

1. Be Responsible
 - a. Be in the classroom when the bell rings
 - b. Have all materials ready to go
 - c. Keep a binder of notes, handouts, and work returned for the entire year
 - d. Be prepared to not use your electronic device unless directed by me

2. Be Involved
 - a. You will get so much more out of class if you participate
 - b. Do your work
 - c. TRY!
 - d. Ask questions if you need help
 - e. Do not use your electronic device unless directed by me
 - f. YOU ARE RESPONSIBLE FOR GETTING MATERIALS AND HOMEWORK WHEN YOU ARE ABSENT!!!

3. Be Respectful
 - a. No profanity or disrespectful language
 - b. You do not have the right to interfere in your classmates' education
 - c. Please wait your turn to talk
 - d. Maintain personal space
 - e. Do not use your electronic device unless directed by me
 - f. Communicate with me if you are having a conflict someone in the class, including me

4. Be a Graduate
 - a. Take pride in your work
 - b. Set a goal and go for it
 - c. Pass this class
 - d. Utilize all supports that are provided by our school or community
 - e. Do not use your electronic device unless directed by me
 - f. Get involved in extra-curricular activities

If you cannot meet classroom expectations or follow directions, you will first receive a warning. If you continue to make poor choices, a written referral will be sent to your

principal. I want every student to reach their maximum potential in my class and will not tolerate poor behavior that infringes on other people's right to learn.

Homework Policy:

Some lab work may require more time than the class time will allow. Students may work in the welding shop before or after school or any other convenient time with instructor's permission.

CONTACT INFORMATION

Cindy Galbavy
Room 300 Welding Shop
cgalbavy@helenaschools.org
406-324-2180
<http://hhs.helenaschools.org>

This is where you will find the most information.



*Syllabus is subject to change.

Please return bottom portion of this paper with your contact information.

Student name: _____

Parent(s)/Guardian Name: _____

I look forward to working with your son/daughter and would like to communicate with you throughout the year. Please provide the best way to get in contact with you, whether it is your work phone, cell phone, or e-mail.

Best way to contact me is: _____

HHS Welding 2, 3, & 4 Year-at-a-Glance

	Unit 1 General Shop Safety	Unit 2 Base Metal Preparation	Unit 3 SMAW Equipment and Setup	Unit 4 SMAW OH and Cert Plates	Unit 5 GMAW Process, Equipment and Filler	Unit 6 Welding Symbols	Unit 7 GTAW Steel and Aluminum	Unit 8 Cutting Processes
Unit Length	1 Week On-going	1 Week On going	1 Week On-going	2 weeks On-going	2 Weeks On-going	3 Weeks and on going	4 Weeks On-going	3 Weeks On-going
Formative Assessment	Unit 1 Formative Assessment	Unit 2 Formative Assessment	Unit 3 Formative Assessment	Unit 4 Formative Assessment	Unit 5 Formative Assessment	Unit 6 Formative Assessment	Unit 7 Formative Assessment	Unit 8 Formative Assessment
Unit Assessments	Unit 1 Unit Assessment	Unit 2 Unit Assessment	Unit 3 Unit Assessment	Unit 4 Unit Assessment	Unit 5 Unit Assessment	Unit 6 Unit Assessment	Unit 7 Unit Assessment	Unit 8 Unit Assessment
Supporting Documents (Examples: Rubrics, Work Samples, Anchor Papers, etc.)	Unit 1 Supporting Documents	Unit 2 Supporting Documents	Unit 3 Supporting Documents	Unit 4 Supporting Documents	Unit 5 Supporting Documents	Unit 6 Supporting Documents	Unit 7 Supporting Documents	Unit 8 Supporting Documents
	Unit 9 Art Projects	Unit 10 Career Search and Resumes	Unit 11 Employability Skills	Unit 12 Unit Title	Unit 13 Unit Title	Unit 14 Unit Title	Unit 15 Unit Title	Unit 16 Unit Title
Unit Length	10 weeks	3 days	3-5 days					
Formative Assessment	Unit 9 Formative Assessment	Unit 10 Formative Assessment	Unit 11 Formative Assessment	Unit 12 Formative Assessment	Unit 13 Formative Assessment	Unit 14 Formative Assessment	Unit 15 Formative Assessment	Unit 16 Formative Assessment
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