

College of the Redwoods



Course Information

Semester & Year: SPRING 2026

Course ID & Section #number: WT-90-E9989 Welding GMAW and GTAW

Instructor's name: Kyle Shamp

Day/Time of required meetings: Mondays: Lecture 8:30-9:35 am / Lab- 9:45-12:55pm

Location: AT-142

Course units: 2



Instructor Contact Information

Office location: AT-142 or AT-121

 hours: By Appointment

Phone number: 707-476-4595 (Welding lab office)

Email address: kyle-shamp@redwoods.edu

Other method: Using the Pronto app and contacting instructor through canvas will be discussed during class.





Required Material

- Material Fee \$65, Personal Protective Equipment (PPE): Safety glasses, gas welding gloves, arc welding gloves, #5 goggles, spark lighter, slip-joint pliers, soapstone marker, tip cleaners, tape measure, ear plugs, leather shoes, fire resistant clothing and a respirator (required for welding stainless steel). A handout is available with options on how and where to acquire PPE and textbook.
- Helmets will be provided to those who will need them, but they will be kept in the welding shop and not allowed to be taken home. Leather jackets and gloves can be checked out if needed but priority will be given to those who are new to the program as there is a limited number of items available for check out. It is expected students will strive to get their own gear during the first semester of taking classes and will not need to continually check out these items.



Catalog Description

A course in metal inert-active gas (MIG-MAG), tungsten inert gas (TIG) welding, and plasma arc cutting (PAC) theory, equipment, and processes. Students produce, analyze, test welds and cut both ferrous and nonferrous materials such as mild steel, aluminum and stainless steel. Includes coordinated lab experience. Students provide their own required safety gear and equipment (list of requirements given first class meeting). OSHA (Occupational Health Act) approved safety glasses required by second class meeting.



Course Student Learning Outcomes

- Safely weld and cut mild or low alloy steel and nonferrous material.



- Explain the arc and gas welding processes related to materials and fit ups, SMAW (Shielded Metal Arc Welding), OAW (Oxyacetylene Welding), MIG-MAG (Metal Inert/Active Gas Welding), GTAW (Gas Tungsten Arc Welding), and FCAW (Flux Core Arc Welding).



Course Calendar

Week	Date	Lecture/Lab
1	19-Jan	MARTIN LUTHER KING DAY NO SCHOOL
2	26-Jan	Safety & Instruction & GMAW/FCAW/GTAW equipment and machine set up
3	2-Feb	FCAW vs GMAW
4	9-Feb	Difference between GMAW/FCAW/GTAW
5	16-Feb	PRESIDENTS DAY NO SCHOOL
6	23-Feb	GTAW Flat welding position
7	2-Mar	GMAW and FCAW Flat welding position
8	9-Mar	MIDTERM EXAM
9	16-Mar	SPRING BREAK NO SCHOOL
10	23-Mar	GTAW pipe
11	30-Mar	Measurements
12	6-Apr	GMAW/FCAW out of welding position part 1
13	13-Apr	GMAW/FCAW out of welding position part 2
14	20-Apr	GTAW horizontal/vertical welding position
15	27-Apr	Weld Symbols/ Inspection
16	4-May	CLEAN SHOP - REVIEW FOR EXAM/TAKE PRACTICAL FINAL
17	11-May	FINAL EXAM/FINISH PRACTICAL FINAL - Wednesday 8:30 - 10:30
		THE ABOVE SCHEDULE MAY CHANGE UPON EXTENUATING CIRCUMSTANCE



Evaluation & Grading Policy

Class size - Maximum number of students per class is 20 students.

Grading Standard - Grade only, NOT a pass/no pass.

Course Requirements- Six welds from weld grade sheet, midterm, and final exam. The welds should be:

3- GTAW 2-GMAW/FCAW 1-PAC

The student is expected to read the assigned paperwork/ watch videos before coming to class. Although not a requirement, it is highly recommended that the student take notes during the lectures which may be used when taking the exams.

Grade:

60%	Class Assignments (Required Welds)
10%	Class Participation
5%	Quizzes
10%	Midterm
15%	Final

Grade scale:

- Student final course grade is as follows: A (100-92), A- (91.9-90), B+ (89.9-87) B (86.9-82), B- (81.9-80), C+ (79.9-77), C (76.9-70), D (69.9-60), F (59.9-0)



Exams and quizzes

- Exams and quizzes may be given in a written format and/or practical format. Written format will be multiple choice/ true or false/ fill-ins....or a combination of these given in person or through canvas. Practical format will be a small project to create in the shop and the project will be evaluated by the instructor. Students will maintain their individual weld sheet (provided by instructor). It is recommended that the student leave their weld sheet in the classroom and on the appropriate clipboard which is marked by course. It is the students' responsibility to approach the instructor with welds to be graded.

A rubric

- A rubric is currently in place to assess the required welds which typically deducts 5% for each weld flaw where a "perfect" industry standard weld would rate 100%. The five percent may be subject to decrease or increase depending on the severity of the flaw. Such flaws may be undercut, porosity, inclusion, excessive reinforcement, under-fill, cold lap, brittle, uneven weld. Weld grade related to number as follows: A+ (100), A (95), A- (90), B+ (87.5), B (85), B- (80) ...and so on.
- A second method of assessment is also used when testing American Welding Society- AWS certification of welders. A mechanical bend test is done on these welds and qualifying or passing is subject to the AWS parameters and accepted flaws.

Grade Sheet

- Each student receives a Grade Sheet (orange), which follows them throughout their study in the Welding Program. All the welding that students perform is recorded on this one sheet, and for all courses. It is the student's responsibility to bring welds to the instructor for grading. Students can follow their own welding progress daily. The written test results may be obtained by consultation with the instructor. The final grade for the course may be found on the student's WebAdvisor account after all grading is calculated.



Prerequisites / Co-requisites / Recommended Preparation

- **One** of the following should be taken as a prerequisite:
- WT-53: Basic Gas and Arc Welding



- WT-54: General Gas, Braze (emphasis) Welding and soldering
- WT-60: Welding Gas and Arc (emphasis E6013) and Gas Cutting




Educational Accessibility & Support

College of the Redwoods is committed to providing reasonable accommodations for qualified students who could benefit from additional educational support and services. You may qualify if you have a physical, mental, sensory, or intellectual condition which causes you to struggle academically, including but not limited to:

- Mental health conditions such as depression, anxiety, PTSD, or bipolar disorder
- Common ailments such as arthritis, asthma, diabetes, autoimmune disorders and diseases
- Temporary impairments such as a broken bone, recovery from significant surgery, or a pregnancy-related disability
- Neurodevelopmental disorders such as a learning disability, intellectual disability, autism, acquired brain injury, or ADHD
- Vision, hearing, or mobility conditions

Available services include extended test time, quiet testing environments, academic assistance and tutoring through the [LIGHT Center](https://www.redwoods.edu/services/sass/light.php) 

[\(https://www.redwoods.edu/services/sass/light.php\)](https://www.redwoods.edu/services/sass/light.php), counseling and advising, alternate formats of course materials (e.g. audio books or E-texts), assistive technology, learning disability assessments, approval for personal attendants, interpreters, priority registration, on-campus transportation, adaptive physical education and living skills courses, and more. If you believe you might benefit from disability- or health-related services and accommodations, please contact [Student Accessibility Support Services \(SASS\)](https://www.redwoods.edu/services/sass/index.php)  [\(https://www.redwoods.edu/services/sass/index.php\)](https://www.redwoods.edu/services/sass/index.php).

If you are unsure whether you qualify, please contact SASS for a consultation:

[SASS@redwoods.edu \(mailto:SASS@redwoods.edu\)](mailto:SASS@redwoods.edu).

SASS office locations and phone numbers

Ukiah campus

- Phone: 707-476-4280,
- Locations: Student Services building, first floor SS113

Del Norte campus

- Phone: 707-465-2353





- Location: Main building, near the Library

Klamath-Trinity campus

- 707-476-4280



Disruptive Behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process, a disruptive student may be temporarily removed from class. In addition, the student may be reported to the Chief Student Services Officer or designee. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the [2024-2025 College Catalog](https://redwoods.elumenapp.com/catalog/2024-2025/home)  (<https://redwoods.elumenapp.com/catalog/2024-2025/home>) and [CR Board and Administrative Policies](https://go.boarddocs.com/ca/redwoods/Board.nsf/Public?open&id=policies)  (<https://go.boarddocs.com/ca/redwoods/Board.nsf/Public?open&id=policies>).

CR Syllabus Block

POLICLES FOR THIS CLASS

Attendance

- The college assumes that students will attend every session of a class for which they are registered. If, however, attendance is irregular, students may be dropped from a class. Excessive absence is defined as a total of absences which equals two weeks in a 16-week semester, for a class meeting twice per week that would equate to 4 absences. For attendance purposes, the college regards a laboratory session as the equivalent of one class meeting. Veterans and financial aid recipients should remember that should they drop below the number of units required of them by the Veterans Administration or financial aid office for any reason during the semester, including being dropped from a class for excessive absences, they will lose part of the government assistance allowances and may be required to repay funds already disbursed. In any event, if an attendance problem does



develop, work with the instructor to resolve it. The purpose here is to see what we can do together to keep you in the class to help you master the course content.

Course Attendance Policy

- Attendance will be taken at the start of each class session. Students who accumulate two absences (two weeks' worth of classes) during the first 10 weeks of class may be dropped from this class by the instructor. Punctuality is essential in the workplace and is considered respectful of fellow students and instructors. Excessive tardiness can affect your score as well. Less time present means you have less time to complete tasks. Students who have experienced extenuating circumstances can complete & submit the Excused Withdrawal Petition to request an Excused Withdrawal (EW) grade instead of the current Withdrawal (W) or non-passing (D, F & NP) grades. The EW Petition is available on the Admissions and Records Forms Webpage. Supporting documentation is required. **Withdrawing** from the class is the sole responsibility of the student. Please notify and discuss withdrawing with the instructor prior to dropping the course.

Classroom/Lab Safety:

- During this class, you will be engaged in activities that are inherently dangerous and using tools/equipment that can cause great bodily injury. I take safety seriously and have established a safety policy for my classes that seeks to ensure your safety and that of your peers and instructor. Please know that I will enforce these rules without hesitation, and I will hold you accountable to the following:

General Safety Guidelines:

- You must follow all class rules regarding wearing appropriate safety gear (safety glasses, hearing protection, appropriate footwear, and attire, etc.).
- You must follow all class rules regarding the safe and appropriate use of tools and equipment.
- You must follow all instructor directives relative to safety.



Safety Guidelines Relative to Drug/Alcohol Use:

- Being under the influence of drugs or alcohol during class/lab is **STRICTLY PROHIBITED** and is a clear violation of the student code of conduct. Any student suspected of being under the influence of drugs or alcohol OR who is displaying behaviors that I deem to be



unsafe will be immediately removed from class, and I will report your removal (and the reasons behind it) to the Division Dean for further action. Additional action may include referral to the Vice President/Chief Student Services Officer.

- Please be aware that even though marijuana has been legalized in California for recreational use, it is still strictly forbidden on campus (in any form), and you are still prohibited from being under the influence while on campus.

Additional Policies

- Missed exams: may be made up for with instructor's approval.
- Quizzes will not be allowed to be made up and will be posted on Canvas
- Tardiness: Being late for class can happen to all of us. If you are late, please enter the class without disrupting lectures, other students, or instruction. Let the instructor know that you are in attendance so you can be marked in.
- Use of personal technological devices: Turn off or silence your phones during lectures and films. Loud music or radio is not allowed unless the entire class approves.

Caveat: The above schedule and procedures are subject to change in the event of extenuating circumstances and “the instructor” reserves the right to make changes.

