

WT 54 Gas Braze and Soldering

Course Information

Semester & Year: SPRING 2025

Course ID and Section number: WT-54-E7726

Instructor's name:

Day and time of required meetings:

- Monday: Lecture 8:30am – 9:35am room AT132
- Monday: Lab 9:45am – 12:55pm room AT142 (welding shop)

Course units: 2

Instructor Contact Information

Office location: AT142A or AT121

Office hours: By appointment

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

Email address: kyle-shamp@redwoods.edu (best way to contact instructor)

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

Catalog Description

An introduction to and practice in oxyacetylene welding (OAW), oxyacetylene braze welding (OABW), soldering (AF-Air Fuel), and repair welding theory, equipment, and processes. Students will produce, analyze and test welds to accepted industry standards. No prior experience in welding is needed. Includes coordinated lab experience.

Note: Students provide their own required safety gear and equipment (list of requirements given first class meeting). OSHA (Occupational Safety Health Act) approved safety glasses required by second class meeting.

Course Student Learning Outcomes

- Safely weld mild steel with OABW (Oxyacetylene Braze Welding) and OAW (Oxyacetylene Welding) processes, and solder copper pipe.
- Explain the gas welding processes.

Prerequisites/corequisites/ recommended preparation

None required

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](#), counseling and advising, alternate formats of course materials (e.g., audio books, braille, 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 \(SASS\)](#). If you are unsure whether you qualify, please contact Student Accessibility Support Services (SASS) for a consultation: sass@redwoods.edu.

SASS office locations and phone numbers

Eureka campus

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

Del Norte campus

- Phone: 707-465-2353
- Location: main building, near the Library

Klamath-Trinity campus

- Phone: 707-476-4280

Student Support Services

Good information and clear communication about your needs will help you be successful. Please let your instructor know about any specific challenges or technology limitations that might affect your participation in class. College of the Redwoods wants every student to be successful.

The following online resources are available to support your success as a student:

[CR Online Learning Support](#)

Tech support, laptop loans, guides to using Canvas, installing Office 365 for free, and more.

[Library Articles & Databases](#)

Find the best library databases for your research.

[Online Tutoring Resources](#)

Participate in tutoring over Zoom.

To learn more about the resources available to you, click on a title bar below, or click the down arrow to expand them all.

Klamath-Trinity students can contact the CR Klamath-Trinity Office for specific information about student support services at 530-625-4821.

Community College Student Health and Wellness

National Suicide Prevention Lifeline

If you are in distress or are with someone at risk right now, call or text the National Suicide Prevention Lifeline.

Call the National Suicide Prevention Lifeline
1-800-273-TALK (8255)

Text the National Suicide Prevention Lifeline
741-741

Timely Care

When you're not feeling well physically or distressed mentally, Timely Care can offer the help you're looking for in just a few quick taps. Students can schedule an appointment anytime via phone, video, and chat. [Log in or set up an account with Timely Care.](#)

Mental Health Counseling

Students should text, email, or fax Shawna Bell directly for scheduling and/or services.

- Text: 707-496-2856
- Email: shawnabmft@gmail.com
- Fax and voicemail: 707-237-2318

Wellness Central

Resources, tools, and trainings regarding health, mental health, wellness, basic needs and more designed for California community college students, faculty and staff are available on the California Community Colleges [Wellness Central](#).

Counseling

[Counseling and Advising](#) can assist students in need of academic advising and professional counseling services. Call, email or stop by one of our offices to make an appointment!

Counseling and Advising office locations and contact info

Eureka campus

- Phone: 707-476-4150
- Location: Student Services Building, first floor
- Email: counseling@redwood.edu
- Hours: Monday through Friday, 9am to 4pm. Summer hours may vary

Del Norte campus

- Phone: 707-476-2300
- Location: Main Building, next to the library
- Hours: Summer hours may vary

Klamath-Trinity campus

- Phone: 530-625-4821
- Email: KT-staff@redwoods.edu
- Hours: Summer hours may vary

Basic Needs Center

[Basic Needs Center](#) provides for the health and safety of students by providing access to healthy food, financial resources, and referrals to safe and secure housing. [Submit a request for services and information.](#)

Basic Needs Center contact info

- Phone: 707-476-4153
- Email: the-grove@redwoods.edu

Learning Resource Center

The Learning Resource Center includes the following resources for students:

Library Services

[Introduction - Library Services for Students - LibGuides at College of the Redwoods](#) promotes information literacy and provides organized information resources.

Multicultural and Equity Center (MCE)

The [Multicultural and Equity Center](#) is a dynamic and inclusive place that supports all students in their academic and personal journeys at the college. We do this by creating community, home away from home, and a safe place for cultural expression, cross-cultural learning, access to college and dignity resources, and social justice work opportunities. The MEC is committed to retention and student success by offering activities related to leadership development, student connectedness and student equity. We are a student-centered program that fosters respect for all people.

Academic Support Center

The [Academic Support Center](#) offers tutoring and test proctoring for CR students.

Student Tech Help

Technical [Support](#) provides students with assistance around a variety of tech problems.

Extended Opportunity Programs and Services (EOPS)

[EOPS/CARE](#) (EOPS) provides services to eligible income disadvantaged students including: textbook awards, grants, career academic and personal counseling, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!

TRiO Student Success Program

The TRiO Student Support Services Program provides eligible students with a variety of services including academic advising, career assessments, assistance with transfer, and peer mentoring. Students can apply for the program with the [Eureka TRiO office](#) or the [Del Norte TRiO office](#).

Veterans Resource Center

The [Veterans Resource Center](#) supports and facilitates academic success for Active Duty Military, Veterans and Dependents attending CR through relational advising, mentorship, transitional assistance, and coordination of military and Veteran-specific resources.

CalWORKS

California Work Opportunity & Responsibility to Kids ([CalWorks](#)) provides supportive services to student parents with children under the age of 18, who are receiving cash assistance (TANF benefits), to become self-sufficient. Services include: transportation assistance, basic student supplies, tutoring, priority registration, laptop and calculator loans, career, academic, and personal counseling, and more!

Recommended Materials

Textbook title: Welding Fundamentals

Edition: 6th Edition

Author: William Bowditch, Kevin Bowditch and Mark Bowditch

ISBN: 978-1-64564-693-8

Required Materials

- Material Fee \$49, 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.

POLICIES 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.

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:

2-OAW 3-OABW 1-AAW (Solder)

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.

Canvas Information

- Canvas is an interactive website that allows you to download and view information. See below for Canvas log in.

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.

Spring 2025 Dates

| Date | To Remember |
|------------|---|
| January 17 | Last day to register for classes (day before the first class meeting) |
| January 18 | Classes begin |
| January 20 | Martin Luther King’s Birthday (All Campuses Closed) |
| January 24 | Last Day to add a class |
| January 31 | Last Day to Drop & Receive a Refund |
| February 2 | Last Day to Drop w/out a “W” |

| Date | To Remember |
|---------------|---|
| February 3 | Census Date (20% of class) |
| February 14 | Lincoln's Birthday (All Campuses Closed) |
| February 17 | President's Day (All Campuses Closed) |
| March 6 | Last Day to Petition to Graduate & Petition for Certificate |
| March 17 - 22 | Spring Break (No Classes) |
| March 28 | Last Day for Student/Faculty Withdrawal |
| March 31 | Cesar Chavez Day (All Campuses Closed) |
| May 10 - 16 | Final Examinations |
| May 16 | Last Day to File P/NP Option |
| May 16 | Semester Ends |
| May 23 | Grades Due |
| May 26 | Memorial Day (All Campuses Closed) |
| May 30 | Grades Available for Transcript Release |

Academic dishonesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct ([AP 5500](#)) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the [2024-2025 College Catalog](#) and [CR Board and Administrative Policies](#).

AI Use Class Policy

Generative AI tools, such as ChatGPT and Google's Bard, are likely to be widely used in the workplace moving forward. It's important for you to understand how to use them ethically and effectively. For that reason, in this class, you will sometimes be invited to use such a tool in the completion of an assignment. In this class, using generative AI tools is not cheating if the outputs are screened by you for accuracy, bias, appropriateness, and fidelity to your perspective.

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](#) and [CR Board and Administrative Policies](#).

Inclusive Language in the Classroom

College of the Redwoods aspires to create a learning environment in which all people feel comfortable in contributing their perspectives to classroom discussions. It therefore encourages instructors and students to use language that is inclusive and respectful.

Canvas Information

- Log into Canvas at [My CR Portal](#)
- For help logging in to Canvas and general tech help, visit [Canvas Support Home](#)
- Once you're logged in to Canvas, you click on the Help icon on the left menu
- Canvas online orientation workshop: [Canvas Student Orientation Course](#)

Setting Your Preferred Name and Pronouns in Canvas

Students have the ability to display personal pronouns and an alternate first name in Canvas. Students may change their pronouns on their own in Canvas (Account :: Settings :: Edit Settings). To request a change to your preferred list name, contact [Admissions and Records](#). Your Preferred Name will only be listed in Canvas; this does not change your legal name in our records. See the [Student Information Update form-2022.pdf](#).

Emergency Procedures / Everbridge

College of the Redwoods has implemented an emergency alert system called Everbridge. In the event of an emergency on campus you will receive an alert through your personal email and/or phones. Registration is not necessary in order to receive emergency alerts. Check to make sure your contact information is up-to-date by logging into [WebAdvisor](#) and selecting 'Students' then 'Academic Profile' then 'Current Information Update.'

Please contact Public Safety at 707-476-4112 or campus-safety@redwoods.edu if you have any questions. For more information visit [Campus Safety](#). Please review the [EurekaEmergencyMap_S24.pdf](#) for campus evacuation sites, including the closet site to this classroom (posted by the exit of each room).

In an emergency that requires an evacuation of the building anywhere in the District:

- Be aware of all marked exits from your area and building
- Once outside, move to the nearest evacuation point outside your building
- Keep streets and walkways clear for emergency vehicles and personnel

Do not leave campus, unless it has been deemed safe by the campus authorities.

To learn more about campus-specific Emergency Procedures, click on a title bar below, or click the down arrow to expand them all.

Del Norte Campus Emergency Procedures

Please review the [Crescent City campus emergency map](#) for campus evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information, visit [Campus Safety](#).

Klamath-Trinity Campus Emergency Procedures

Please review the responsibilities of, and procedures used by, the College of the Redwoods, Klamath Trinity Instructional Site (KTIS) to communicate to faculty, staff, students and the general public during an emergency. It is the responsibility of College of the Redwoods, Klamath-Trinity Instructional Site (KTIS) to protect life and property from the effects of emergency situations within its own jurisdiction. In the event of an emergency, communication shall be the responsibility of the district employees on scene:

1. Dial 911, to notify local agency support such as law enforcement or fire services.
2. If safe to do so, notify key administrators, departments, and personnel.
3. If safe to do so, personnel shall relay threat information, warnings, to ensure the school community is notified.
4. Contact 530-625-4821 to notify of situation.
5. Contact Hoopa Tribal Education Administration office 530-625-4413
6. Notify Public Safety 707-476-4111.

In the event of an emergency, the responsible district employee on the scene will:

1. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet.
2. Lock all doors and turn off lights if in lockdown due to an active shooter or similar emergency.
3. Close all window curtains.
4. Get all inside to safe location Kitchen area is best internal location.
5. If a police officer or higher official arrives, they will assume command.
6. Wait until notice of all is clear before unlocking doors.
7. If safe to do so, move to the nearest evacuation point outside building (Pooky's Park), directly behind the Hoopa Tribal Education Building.
8. Do not leave site, unless it has been deemed safe by the person in command.

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.