



Syllabus for WT-64 Welding (emphasis cored wire), Surfacing, Lancing, and Automated Cutting

Course Information

Semester & Year: Fall 2023

Course ID & Section #: WT-64-E5665

Instructor's name: Ian Cossar

Day/Time of required meetings:

- Tuesday: Lecture 4:35 PM - 5:35 PM Room AT142
- Tuesday: Lab 5:40 PM – 10:05 PM Room AT142
- Thursday: Lab 4:35 PM – 10:05 PM Room AT142

Course units: 4

Instructor Contact Information

Office location: AT142A

Office hours: By Appointment

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

Email address: Ian-Cossar@redwoods.edu (Best way to contact instructor)

Catalog Description

A course in hard surfacing, FCAW (Flux Core Arc Welding), automated torch and plasma cutting, oxygen lance piercing. Students will produce and analyze welds and cuts on mild and alloy steels. Coordinated lab experience is included, and no prior experience in welding is needed.

Course Student Learning Outcomes *(from course outline of record)*

1. Safely weld and/or cut mild steel with oxyacetylene gas, electric arc welding (emphasis innershield or cored wire) and plasma
2. Explain the arc and gas welding processes, related to FCAW, SMAW, OAW, plasma and automated cutting.

Prerequisites/co-requisites/ 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, bipolar disorder, and ADHD
- 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

- A learning disability (e.g., dyslexia, reading comprehension), intellectual disability, autism, or acquired brain injury
- Vision, hearing, or mobility challenges

Available services include extended test time, quiet testing environments, tutoring, counseling and advising, alternate formats of materials (e.g., audio books, E-texts), assistive technology, on-campus transportation, and more. If you believe you might benefit from disability- or health-related services and accommodations, please contact [Disability Services and Programs for Students \(DSPS\)](#). If you are unsure whether you qualify, please contact DSPS for a consultation: dsps@redwoods.edu.

- Eureka: 707-476-4280, Student Services Building, 1st floor
- Del Norte: 707-465-2324, Main Building, near the library
- Klamath-Trinity: 707-476-4280

Recommended Materials

Textbook title: Welding Principles and Practices

Edition: 5th Edition

Author: Edward R. Bohnart

ISBN: 978-0-07-337386-7

Other requirement: Material Fee \$49, Personal Protective Equipment: 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. A handout is available with options on how and where to acquire PPE and textbook.

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 in order to help you master the course content.

Course Attendance Policy

- Attendance will be taken at the start of each class session. Students who accumulate 4 absences 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 the course of this class you will be engaged in activities that are inherently dangerous and you will be using tools/equipment that can cause great bodily injury. I take safety very seriously and have established a safety policy for my classes that seeks to ensure your safety as well as the safety 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:

1-OAW 1-SMAW 3-FCAW 1-CNC pattern cut

The student is expected to read the assigned chapters 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/cuts)
10%	Class Participation
15%	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 will be multiple choice/ true or false/ fill-ins....or a combination of these. They may be on Canvas or in person. If in person, a Scranton answer card and #2 pencils will be required. 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 with instructor approval.
- 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.

Student Support

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.

Fall 2023 Dates

- **August 18th: Last day to register for classes (day before the first class meeting)**
- **August 19th: Classes begin**
- **August 25th: Last day to add a class**
- **September 1st: Last day to drop without a “W” and receive a refund**
- **September 4th: Labor Day Holiday (All Campuses Closed)**
- **September 5th: Census Date (20% of class)**
- **October 26th: Last day to petition to graduate**
- **October 27th: Last day for student initiated withdrawal (62.5% of class)**
- **October 27th: Last day for faculty initiated withdrawal (62.5% of class)**
- **November 11th: Veterans Day (All Campuses Closed)**
- **November 20th-25th: Thanksgiving break (no classes)**
- **November 22nd-24th: No Classes, all campuses closed**
- **December 9th-15th: Final Examinations**
- **December 15th: Last day to file for P/NP option**
- **December 15th: Semester Ends**
- **December 22nd: Grades due**
- **January 5th: Grades available**

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 [College Catalog](#) and on the [College of the Redwoods website](#).

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. 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 [College Catalog](#) and on the [College of the Redwoods website](#).

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.

Setting Your Preferred Name in Canvas

Students have the ability to have an alternate first name and pronouns to appear in Canvas. Contact [Admissions & Records](#) to request a change to your preferred first name and pronoun. 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](#).

Canvas Information

Canvas Information

If using Canvas, include navigation instructions, tech support information, what Canvas is used for, and your expectation for how regularly students should check Canvas for your class.

Log into Canvas at [My CR Portal](#)

For help logging in to Canvas, visit [My CR Portal](#).

For help with Canvas once you're logged in, click on the Help icon on the left menu.

For tech help, email its@redwoods.edu or call 707-476-4160

Canvas online orientation workshop: [Canvas Student Orientation Course \(instructure.com\)](#)

Community College Student Health and Wellness

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 [Health & Wellness website](#).

[Wellness Central](#) is a free online health and wellness resource that is available 24/7 in your space at your pace.

Students seeking to request a counseling appointment for academic advising or general counseling can email counseling@redwoods.edu.

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 <https://webadvisor.redwoods.edu> and selecting 'Students' then 'Academic Profile' then 'Current Information Update.'

Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions. For more information see the [Redwoods Public Safety Page](#).

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.

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, see the [Redwoods Public Safety Page](#).

Eureka Campus Emergency Procedures

Please review the [campus emergency map](#) for evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information on Public Safety go to the [CR Police Department- Public Safety](#) It is the responsibility of College of the Redwoods to protect life and property from the effects of emergencies within its own jurisdiction.

In the event of an emergency:

1. Evaluate the impact the emergency has on your activity/operation and take appropriate action.
2. Dial 911, to notify local agency support such as law enforcement or fire services.
3. Notify Public Safety 707-476-4111 and inform them of the situation, with as much relevant information as possible.
4. Public Safety shall relay threat information, warnings, and alerts through the Everbridge emergency alert system, Public address system, and when possible, updates on the college website, to ensure the school community is notified.
5. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet, (evacuation to a safe zone, shelter in place, lockdown, assist others if possible, cooperate with First Responders, etc.).
6. If safe to do so, notify key administrators, departments, and personnel.
7. Do not leave campus, unless it is necessary to preserve life and/or has been deemed safe by the person in command.

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.

1. In the event of an emergency, communication shall be the responsibility of the district employees on scene.
 - a. Dial 911, to notify local agency support such as law enforcement or fire services.
 - b. If safe to do so, notify key administrators, departments, and personnel.
 - c. If safe to do so, personnel shall relay threat information, warnings, to ensure the school community is notified.
 - d. Contact 530-625-4821 to notify of situation.
 - e. Contact Hoopa Tribal Education Administration office 530-625-4413
 - f. Notify Public Safety 707-476-4111.
2. In the event of an emergency, the responsible district employee on scene will:
 - a. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet.
 - b. Lock all doors and turn off lights if in lockdown due to an active shooter or similar emergency.
 - c. Close all window curtains.
 - d. Get all inside to safe location Kitchen area is best internal location.
 - e. If a police officer or higher official arrives, they will assume command.
 - f. Wait until notice of all is clear before unlocking doors.
 - g. If safe to do so, move to the nearest evacuation point outside building (Pooky's Park), directly behind the Hoopa Tribal Education Building.
 - h. Do not leave site, unless it has been deemed safe by the person in command. Student Support Services (required for online classes)

Student Support Services

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

- [CR-Online](#) (Comprehensive information for online students)
- [Library Articles & Databases](#)
- [Canvas help and tutorials](#)
- [Online Student Handbook](#)
- [Online Tutoring Resources](#)

[Counseling](#) offers assistance to students in need of professional counseling services such as crisis counseling.

Learning Resource Center includes the following resources for students

- [Library Services](#) to promote information literacy and provide organized information resources.
- [Multicultural & Diversity Center](#)
- [Academic Support Center](#) – offers tutoring and test proctoring for CR students.
- [Student Tech Help](#) – provides students with assistance around a variety of tech problems.

Special programs are also available for eligible students include

- [Extended Opportunity Programs & Services \(EOPS\)](#) provides services to eligible income disadvantaged students including: textbook award, career academic and personal counseling, school supplies, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!
- The TRiO Student Success Program provides eligible students with a variety of services including trips to 4-year universities, career assessments, and peer mentoring. Students can apply for the program in [Eureka](#) or in [Del Norte](#)
- The [Veteran's 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](#) – assists student parents with children under the age of 18, who are receiving cash assistance (TANF), to become self-sufficient.
- Klamath-Trinity students can contact the CR KT Office for specific information about student support services at 530-625-4821