

**WELDING 15**  
 COURSE SYLLABUS  
 Basic Welding for Allied Fields

**Instructor:**

Section 7764

Julie Schneider

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Class Schedule				
Lecture	T/Th	6:00pm	7:00pm	Room S102
Lab	T/Th	7:15pm	9:15pm	Room S100

**Course Objectives:** This is a basic course for students in allied fields that utilize welding processes. Students will be introduced to welding equipment, nomenclature, safety, and the oxyacetylene, shielded metal arc, and gas metal arc welding processes. Manipulative skills will be developed in cutting and welding in the flat and in the horizontal positions.

**Student Learning Outcomes:** Students will be able to demonstrate the safe set up and operation of welding equipment using all applicable personal protective equipment and explain the basic concepts of welding. Welding students will produce quality welds utilizing various welding processes

**Text Book:** Welding – Hoffman, Dahle, Fisher. ISBN: 0-13-234977-9

**Equipment/Supplies Require:**

Classroom:

1. pen/pencil
2. notebook
3. folder for handouts.

LAB:

1. Welding helmet with #10 or #11 lens
2. Leather Gloves
3. Long sleeve cotton shirt or leather jacket
4. Welding cap
5. Wire brush and chipping hammer
6. Pliers or "channel locks"

**Weld Shop Dress Code:**

1. Safety Glasses
1. Long Cotton pants (no shorts, no cuffs)
2. Long sleeve cotton shirt (preferably button-down with no pockets)
3. Leather work shoes (no athletic shoes, no open-shoes)

Weld Shop Dress Code is mandatory for lab use. Violations of the dress code will result in suspension of lab use until violation is corrected.

**Student Conduct:** Anyone caught cheating or found to be plagiarizing material will receive the grade of **F**. Conduct at El Camino College must conform to the laws of the State of California, District policies, and campus rules and regulations. The El Camino College faculty, staff and administration are dedicated to maintaining an optimal learning environment; the standards of behavior as outlined in this policy are essential to the maintenance of a quality college environment. These standards will apply to all students on campus, other college property or while attending any college-sponsored event. Violation of such laws, policies, rules and regulations or behavior adversely affecting suitability as a student, will lead to disciplinary action. Disciplinary actions as noted in Section II may be taken against any person who engages in behavior defined as misconduct as listed. Students are responsible for all of the standards of conduct guidelines published in the current El Camino College Catalog.

**Arrive on time and bring handouts to class:** Since this is a sixteen-week course, regular attendance is especially important, as is promptness in the lecture and lab hours. If needed, it is the student's responsibility to drop this class; if a student is registered in this class at the end of the semester then a letter grade will be issued in accordance with the grading policy. A student may be dropped from the class after three consecutive absences.

**Lectures** are mandatory for lab use. Absenteeism for the lecture portion disqualifies the student's use of the lab for that class period, unless otherwise approved by the instructor.

**Assignments** are due on the posted due date. Late assignments will incur a 10% reduction of recorded grade for each class period late, unless otherwise specified by the instructor. No late assignments will be accepted after 3 class periods following the posted due date.

Reading assignments are initiated prior to class discussion of each topic to encourage class preparation and participation on each subject. Students are encouraged to bring with them any questions regarding terminology and material content. Reading Q's may be due one or more weeks following reading initiation. Completed Q's may be handed in at any time before the due date, completed Q's will not be accepted more than three class periods following the Due date, a 10% penalty will be applied to the recorded grade for each class period late. Students completing questions by the due date may correct any incorrect answers by the re-due date.

**Extra Credit** opportunities will arise.

**Quizzes** are closed book/closed notes, unless otherwise specified. They will be based on Lecture, Lab and Assignments pertaining to the posted topics, and may contain true and false, multiple-choice, fill in the blank, short answer, essay or any combination of questions thereof. Quizzes may only be made up with prior instructor consent, or upon an excused absence.

**Basis for Evaluation:**

- Assignments – 15%
- Lab Competencies – 55%
- Quizzes – 20%
- Final Examination – 10%

**Course Outline:**

<b><u>Week#</u></b>	<b><u>Subject</u></b>
1 -1	Introduction to Welding 15, Welding and Lab Safety <b>Safety Quiz:</b> Mandatory for use of Lab <u>Assignments:</u> In class: Meet n Greet Sheet Reading: <b>Chapters 1 and 2</b> , Answer: <b>Multiple Choice</b> Q's p.34, <b>Fill in the Blank</b> Q's p. 35 <b>Due: 1 -2</b> Lab: Orientation
1 -2	Introduction to Welding and SMAW Equipment <b>Due: Ch 1&amp;2, Multiple Choice Q's p.34, Fill in the Blank Q's p. 35</b> <u>Reading Assignment:</u> <b>Chapter 3</b> , pp 38-71, Answer: Questions pp 72,73 <b>Due: (2 -4)</b> Lab: SMAW - Setup and operation - Striking an arc, Running beads
2 -3	Introduction to Welding, Cont. – Weld Parts and Basic Joints Lab: Joint introduction
2 -4	Polarity and SMAW Electrodes <b>Due: Chapter 3</b> , p38-71, Answer: <b>Questions</b> pp <b>72,73</b>
3 -5	SMAW in Application Lab: Oxy-Fuel Demo
3 -6	SMAW, Chapter 3 Review <b>Re-Due: Chapter 3</b> , p38-71, Answer: <b>Questions</b> pp <b>72,73</b> <u>Reading Assignment:</u> <b>Chapter 8</b> , pp 266 – 308, Answer: <b>Q's pp 309-310 Due: 5 -10</b>
4 -7	<b>Quiz #1: Welding Safety, SMAW, Chapters 1,2 and 3</b>
4 -8	Oxy-Fuel Safety and Equipment Lab: Line-cutting
5 -9	Oxy Fuel Cutting
5 -10	Oxy-Fuel Cutting cont., Other Cutting Processes <b>Due: Chapter 8</b> , pp 266 – 308, Answer: <b>Q's pgs 309, 310</b>
6 -11	Plasma Cutting Lab: Plasma Demo
6 -12	Cutting Processes Review <b>Re-Due: Chapter 8</b> , pp 266 – 308, Answer: Q's pp 309-310 <u>Reading Assignment:</u> <b>Chapter 4</b> pp 74-130, Answer <b>Q's pgs 131, 132 Due: 8 -16</b>

- 7 -13           **Quiz #2: Cutting Processes, Chapter 8**
- 7 -14           Introduction to GMAW and Equipment  
Lab: GMAW Demo
- 8 -15           GMAW Electrodes
- 8 -16           GMAW Cont.  
**Due: Chapter 4** pp 74-130, Answer **Q's pgs 131, 132**  
Reading Assignment: **Chapter 5** pp 133-163, Answer **Q's, pg's 163, 164** **Due: 9 -18**
- 9 -17           Introduction to FCAW  
Lab: FCAW Demo
- 9 -18           FCAW Cont.  
**Due: Chapter 5** pp 133-163, Answer **Q's, pg's 163, 164**
- 10 -19          GMAW & FCAW Review
- 10 -20          **Quiz #3: GMAW, FCAW, Chapters 4 & 5**  
**Re-Due: Chapter 4** pp 74-130, Answer **Q's pgs 131, 132**  
**Re-Due: Chapter 5** pp 133-163, Answer **Q's, pg's 163, 164**  
Reading Assignment: **Chapter 9, Metals and Welding Metallurgy**, pp 312-357, Answer  
**Multiple choice Q's 1-15 p 357, 358** **Due: 11 -22**
- 11 -21          Introduction to Metals and Metallurgy
- 11 -22          Metals and Metallurgy Cont.  
**Due: Chapter 9, Multiple choice Q's 1-15 p 357, 358**  
Reading Assignment: **Chapter 11, Weld Symbols** pp 404-425, Answer **Q's pgs 426, 427,**  
**Due: 12 -24**
- 12 -23          Weld Symbols
- 12 -24          Weld Symbols Cont.  
**Due: Chapter 11, Weld Symbols** pp 404-425, Answer **Q's pgs 426, 427**  
Reading Assignment: **Chapters 12, 13, 14** pp 428 - 522
- 13 -25          Welding Codes and Testing
- 13 -26          Welding Design
- 14 -27          Welding Cost
- 14 -28          Thanksgiving Holiday, no class Thursday
- 15               Review
- 16               Final Examination week

American Disability Act: El Camino College is committed to providing educational accommodations for students with disabilities upon the timely request by students to the instructor. Students with disabilities that would like to request an academic accommodation are responsible for identifying themselves to the instructor and to the Special Resources Center.

Syllabus/Schedule subject to change.