

Shield Metal Arc Welding I

TEWT - 1210 101

Course Description

Introduction to the Shielded Metal Arc Welding process and safe practices are taught. Learn practical welding skills on carbon steel. Techniques in striking and controlling the arc, surfacing and fillet welds with single and multiple passes. Bead placement and sequence are taught. Students will experience welding in all positions with a variety of welding electrodes.

Semesters Taught: All

Course Student Learning Outcomes

- Demonstrate safe shop and process practices.
- Identify the basic elements of electricity and electrical theory.
- Perform equipment set-up and proper power source adjustment.
- Follow welding procedure specifications.
- Demonstrate Striking & controlling the arc.
- Employ welding skills on lap joints in all welding positions.
- Demonstrate welding skills on inside/outside corner joints in all welding positions.
- Identify electrode classifications and select the appropriate electrode.
- Critique welds to a quality standard.

Engagement Plan

I will respond to email within two days.

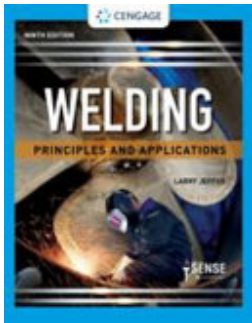
I will offer feedback on major assignments within one week.

The best way to contact me is via the Canvas Inbox, as I will prioritize this email over other modes of communication.

Keys for Success (how to succeed in the course)

Attendance and class Participation are critical to each student's success in the course.

Required Text or Materials



Title: Welding

ISBN: 9780357377659

Authors: Larry Jeffus

Publisher: Cengage Learning

Publication Date: 2020-01-17

For more information on textbook accessibility, contact Accessibility & Disability Services at ads@slcc.edu.

Welding Tools & Personal Protective Equipment

Because of their personal nature, and the necessity for welders to have these items on a job, students are required to purchase their own PPE and tools. Each welding student should obtain the following PPE & Tools prior to starting lab courses:

PPE:

1 ea. - Welding Jacket

1 ea. - Split Leg Leather Apron or Leather Chaps, or Coveralls (Must be cotton, denim, or twill material. NO SYNTHETIC MATERIALS!)

1 ea. - Safety Glasses (Clear Lenses Only)

1 Pair - Heavy Welding Gloves

1 Pair – Medium Weight Welding Gloves

1 Pair - Light Weight Welding Gloves

1 Pair - Work boots (Over the ankle. Steel toes not required.)

1 ea. - Welding Helmet (Automatic) (Lincoln, Miller, or Speedglass brands preferred for Auto-darkening) must have grinding mode and cutting mode selection. Extra cover lenses and batteries.

1 ea. - Welding Cap (The uglier the better.)

Tools:

1 ea. - Wire Brush

1 ea. - Triple Flint Spark Lighter

1 ea. - Soap Stone with Holder (Rectangular shape preferred)

1 ea. - Vise Grip Pliers (Optional – Vise Grip “C” Clamp)

1 ea. - 25’ Tape Measure (3/4” to 1” blade width is best)

1 ea. - Combination Lock (Needed if you lease a locker)

1 ea. - Welding Tip Cleaner

1 ea. - Chipping Hammer

1 ea. - Welding Pliers (Special tool for wire feed processes. (WELPERS® or generic brand from discount tool stores)

1 ea. - Calculator (TI 30X IIS or Equivalent)

1 set – Fillet Weld Gauges

1 ea. – inspection flashlight

1 ea. – 4-1/2-inch angle grinder (Example: DeWalt DWE4011)

Brief Description of Assignments/Exams

At the completion of this course, students shall have demonstrated to the instructor job entry level competencies, including:

- Demonstrate safe shop and process practices
- Identify the basic elements of electricity and electrical theory
- Perform equipment set-up and proper power source adjustment
- Follow welding procedure specifications
- Demonstrate Striking & controlling the arc
- Employ welding skills on lap joints in all welding positions
- Demonstrate welding skills on inside/outside corner joints in all welding positions
- Identify electrode classifications and select the appropriate electrode
- Critique welds to a quality standard

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	Introduce Yourself	Discussion	0
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	Module 1: Check Your Knowledge	Quiz	18

Due Date	Assignment Name	Assignment Type	Points
	Module 1: Parts of Welds Activity(duplicate of oxy?)	Quiz	0
	Module 15: Check Your Knowledge: Electrode Selection	Quiz	0
	Module 16: Check Your Knowledge: Welding Power Sources	Quiz	10
	Module 17: Check Your Knowledge: Welding Distortion Control	Quiz	10
	Module 17: Project #2	Assignment	4
	Module 2 Chapter 3 Welding Principles and Applications	Quiz	29
	Module 3: Shielded Metal Arc Welding_ Safety Quiz	Quiz	36
	Module 4: Check Your Knowledge: Electrical Theory of Arc Blow	Quiz	10
	Module 5: Chapter 4 Welding Principles and Applications	Quiz	30

Due Date	Assignment Name	Assignment Type	Points
	Module 6: Essential Variables, Check your knowledge	Quiz	19
	Module 8: Project #1	Assignment	4
	Roll Call Attendance	Assignment	100

Grading Scale

A (90-100%)

B (80-89.9%)

E (Below 79.9%)

How to Navigate to Canvas

Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

For more information, navigate to the Institutional Policies tab on the [Institutional Syllabus](#) page.

Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, visit the [Institutional Syllabus](#) page under the Tutoring and Learning Support tab. We encourage you to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out to us. We are here to support you in any way we can.

Advising and Counseling Support Services

At our institution, we are committed to supporting your academic and personal growth. That's why we offer a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, visit the [Institutional Syllabus](#) page under the Advising and Counseling Support Services tab. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

Student Academic Calendar

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

[SLCC Student Academic Calendar](#)