



TEWT 1100 – INTRODUCTION TO WELDING & SAFETY

COURSE DESCRIPTION:

Students are provided with a general introduction to the art, science, & technology of welding. General industrial and safety practices are taught. Students will learn important job seeking skills and practices to obtain equitable employment. Basic computer skills will be taught so students will be able to navigate online learning opportunities.

COURSE PREREQUISITES: SLTC entry; good eyesight, lift 50 lbs.

CREDIT HOURS: 1

REQUIRED TEXT: None

LEARNING OUTCOMES:

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

Outcome 1 - Describe career path possibilities in the welding industry.

- Identify careers associated with welding
- Explain the job outlook of the profession

Outcome 2 - Describe common types of welding processes and tools.

- Define basic welding process term
- Identify shielded metal arc welding
- Identify oxyacetylene welding
- Identify gas metal arc welding
- Identify flux cored arc welding
- Identify gas tungsten arc welding
- Identify submerged arc welding
- Describe various types of welding tools

Outcome 3 - Explain welding lab policies and safe industrial practices

- Explain general industrial welding safety.
- Describe protective clothing for welding
- Explain how to use eye safety personal protective equipment (PPE), and how to prevent and respond to eye injuries
- Explain how to prevent and respond to physical injuries using ergonomic safety procedures and PPE
- Explain how to use hearing safety personal protective equipment (PPE), and how to prevent and respond to hearing injuries
- Explain lab policies

Outcome 4 - Select the correct classification of extinguisher for a given fire emergency.

- Identify different classifications of fire extinguishers
- Describe how to correctly operate various fire extinguishers

Outcome 5 - Job Seeking Skills

- Identify pertinent information for an impressive resume'
- Write an up-to-date personal resume'
- Identify positive interview traits
- Identify employment soft skills desired by employers
- Create an E-Portfolio which includes reflective growth within the program.

Outcome 6 - Basic Computer Concepts

- Perform basic computer operations and functions
- Navigate through various computer systems that will be utilized throughout the welding program.

REQUIRED ASSESSMENTS:

- Pass a Welding Safety Exam with 100% accuracy
- Objectives must be passed at an 80% in order to demonstrate competency mastery

Score	Criteria
4	Welds are desirable and competed ahead of time schedule
3	Welds are desirable
2	Welds are acceptable
1	Welds do not meet AWS minimum standards. You cannot move pass this course until welds have exceeded this level.
Note on Performance Criteria: All welds are a pass or fail and are expected to meet American Welding Society (AWS) D.1.1 weld profile and standards (See AWS d.1.1 2015 Structural Welding Code – Steel, page 214 figures 5.4 and page 239 table 6.1)	

- A 93% and above
- A- 90% – 92.9%
- B+ 87% – 89.9%
- B 83% – 86.9%
- B- 80% – 82.9%
- C+ 77% – 79.9%
- C 73% – 78.9%
- E Below 72.9%

Attendance and Participation	10%
Canvas Assignments	30%
Lab Assignments	60%
Total	100%

ATTENDANCE:

It is expected that students attend class regularly and on time to ensure they make satisfactory progress toward course/program completion. Attendance is tracked and reported as required to sponsoring agencies and Financial Aid when applicable. It is the student's responsibility to contact their instructor when they are absent. Contact the academic advisor if missing a week or more.

Students missing two weeks will be automatically dropped from the course/program. The Salt Lake Technical College at SLCC has a **no make-up policy.**

TARDINESS:

Students are expected to be on time for class. If more than 15 minutes late for class, you are considered late, and your time will be reduced on the attendance form. Tardiness will affect your attendance and training progress.

MEANINGFUL CONTACT:

Students are required to have two-way meaningful contact with an instructor at least once per week. Meaningful contact should consist of classroom instruction or discussion about how the student is progressing.

Two-way meaningful contact can be:

- Face-to-face in the classroom
- Online contact
- Telephone contact between student and instructor

STUDY:

We suggest that the majority of the theoretical studies be completed outside of the classroom hours. This allows time to be used more efficiently pertaining to skills competencies.

STUDENT RESPONSIBILITIES:

It is your responsibility to complete all the materials as outlined in the learning modules. It is also your responsibility to ask for help when material is unclear and needs further clarification. Please maintain lab tools and equipment and clean **ALL** your workstations at the completion of your lab class. Please approach the instructor with any situation or conditions that might interfere or affect your progress and success.

Mobile phones may be used in the classroom but must be on silent or vibrate mode. If you receive a call, please leave the classroom briefly. Making telephone calls and/or texting during class should be restricted for urgent or emergency purposes only.

INSTRUCTOR'S RESPONSIBILITIES:

The instructor(s) will, to the best of their ability, ensure that you have the materials, equipment, and items required for completing the learning modules. It is also the responsibility of the instructor to assist you in the learning process and to accomplish the goals of the program. The instructor will also monitor and help to ensure satisfactory process. The instructor will also address any issues that affect the student and program.

MATERIALS: Welding Tools & Personal Protective Equipment (PPE)

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 at least one each of the following PPE & Tools prior to starting lab courses.

PPE:

- Safety Glasses (Clear Lenses Only)
- Heavy Welding Gloves
- Light Weight MIG Welding Gloves
- Clear Face Shield

- Welding Helmet (Passive or Automatic) (Lincoln, Miller, or Speedglass brands preferred for Auto-darkening)
- Welding Cap
- Welding Jacket
- Split Leg Leather Apron or Leather Chaps, or Coveralls (Must be cotton, denim or twill material. (NO SYNTHETICS!))
- Work boots (Over the ankle. Steel toes not required.)

Tools:

- Vise Grip Pliers (Optional – Vise Grip “C” Clamp)
- Soap Stone with Holder (Rectangular shape preferred)
- Wire Brush
- Chipping Hammer
- Welding Pliers (Special tool for wire feed processes. (WELPERS® or generic brand like Harbor Freight)

RELATED COURSE BOOKS:

- Welding principles and applications 9th edition
Cengage., Larry Jeffus, ISBN 0-357-37765-6
- Welding Print Reading, 8th Ed., Walker & Polanin
Goodheart-Wilcox Pub., ISBN 978-1-60525-911-6
- Practical Problems in Mathematics for Welders, 6th Edition,
Robert Chasan, Delmar Cengage Learning, ISBN-13: 978-1-4180-4229-5

LOCAL WELDING EQUIPMENT SUPPLIERS:

The following companies sell welder’s tools and supplies. Some will give a student discount price



