Salt Lake Technical College
SALT LAKE COMMUNITY COLLEGE

TEWT 1510 – GAS TUNGSTEN ARC WELDING (GTAW)

COURSE DESCRIPTION:
Students will learn practical welding skills using the Gas Tungsten Arc Welding process on carbon steel. Safe practices and theory are taught. Students in this course will perform set up and operation of welding equipment amperage, and gas settings. Students will explore the advantages and disadvantages of the process.

COURSE PREREQUISITES: TEWT 1420 with a C or better

CREDIT HOURS: 2

REQUIRED TEXT:
Welding Principles and Applications, 9th Edition, by Larry Jeffus
Cengage Learning, Inc.
ISBN: 2019920402

LEARNING OUTCOMES:
At the completion of this course, students shall have demonstrated to the instructor job entry level competency with the Gas Tungsten Arc Welding process on ferrous metals in the following activities:

- Demonstrate safe shop and process practices
- Perform equipment set-up and proper power source adjustment
- Demonstrate welding skills on inside/outside corner joints, lap joints and butt joints in all appropriate welding positions
- Follow welding procedure specifications
- Critique welds to a quality standard

REQUIRED ASSESSMENTS:
- 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 2020 Structural Welding Code – Steel, page 219, 8.9 Visual Inspection and page 239 table 8.1)	

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%**

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

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 officers. It is the student’s responsibility to contact their advisor and instructor when they are absent.

Students missing two weeks will be dropped from the course/program. The School of Applied Technology 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 reading be completed outside of the classroom hours. This allows for more time to be spent with lab projects and activities in developing competency-related skills.

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.

INSTRUCTORS' RESPONSIBILTIES:
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 impact the student and program.