

# WELDING TECHNOLOGY ATC

Welding Technology is a participating organization of the American Welding Society's SENSE (Schools Excelling through National Skill standards Education) Program. This program is designed to provide training in a sequential manner for various welding processes, starting with simple tasks and progressing through more complex assignments. Those processes include: shielded metal arc welding, gas metal arc welding, flux cored arc welding, gas tungsten arc welding, oxy-acetylene cutting, brazing and welding, and the use of plasma arc cutting equipment. Students receive practical and theoretical training in the weldability of metals and alloys, blueprint reading, mathematics, and metallurgy.

Students are trained to international standards using state-of-the-art equipment. All skills and lab assignments are performance based using standards assigned by the prevailing industrial welding codes. Safety, care, use, and adjustment of the welding lab equipment is stressed in each of the classes. Included in each 30 hour week is study in welding theory and related practical science, and applying this knowledge in the laboratory.

All graduates are given the opportunity to take the unlimited thickness, all position, welder certification test at no cost to them.

## Admission requirements

All welding students must be core math ready and needs to complete a program application. Priority application deadlines are as follows:

- Fall registration – February 1
- Spring registration – October 1

## Admission Checklist

1. Complete general LC State admission requirements
2. Submit Welding application form
3. Schedule Assessment/Interview with program faculty

The welding program has limited space, and a waitlist is utilized if the program is full. Duration on the waitlist is one semester. If students do not move into program classes after one semester on the waitlist, they need to reapply for the welding program.

- ALEKS score of 30 or higher in Math and Writing Placement Exam score of 2 or higher or qualify for MTHPT-137 and ENGL-101.

Upon completion of the Advanced Technical Certificate, the student will possess the technical skills to:

- Understand basic power sources used in the industry
- Identify and interpret welding symbols
- Demonstrate welding competency by performing and passing welding certification test
- Knowledge of basic hand and machine tools, measuring devices, and appropriate shop and tool safety
- Basic knowledge of drafting and blue print reading as it is used in welding
- Knowledge of various welding and cutting processes
- Understand properties and strengths of metals in fabrication and technology
- Develop employable skills for the arc welder and combination line welder
- Obtain a working knowledge of problems that occur as a result of heating and cooling processes
- Interpret welding code requirements and inspect welds to critique weld quality
- Ability to apply the correct method of distortion control in welded fabrications
- Demonstrate and perform the safety requirements needed for welding
- Recognize structural types and shapes and the metallurgical composition of different ferrous and non-ferrous metals and the outcome of heat treatments
- Able to optimize the performance of various welding machines and how to operate welding shop equipment

## Advanced Technical Certificate Requirements

Code	Title	Credits
<b>Program Requirement</b>		
MTHPT-137	MATH FOR TECHNOLOGY	4.00
<b>Technical Core</b>		
WLDT-150	WELDING POWER SOURCES	2.00
WLDT-151	WELDING CODES FOR CERTIFICATIONS	2.00
WLDT-152	QUALITY CONTROL FOR WELDING INSPECTION	2.00
WLDT-155	BASIC WELDING PROCESSES LAB (or WLDT-155A and WLDT-155B)	7.00

WLDTC-161	WELDING PROCESSES AND APPLICATIONS	2.00
WLDTC-162	METALLURGY	2.00
WLDTC-165	ADVANCED WELDING PROCESSES	7.00
WLDTC-250	DRAFTING AND PIPEFITTING	2.00
WLDTC-251	BLUEPRINT READING	2.00
WLDTC-252	HEAT TREATMENT	2.00
WLDTC-254	PIPE WELDING:SMAW LAB	7.00
WLDTC-261	BENCHWORK FOR WELDERS	2.00
WLDTC-262	DISTORTION CONTROL	2.00
WLDTC-264	PIPE WELDING GTAW LAB	7.00
<b>Electives</b>		
Select 12 elective credits		12.00
<b>Total Credits</b>		<b>64.00</b>