

# Robotic Welding

Certificate (C381)

Technical Requirements ..... 16

**Total Credits .....16**

## Program Description

The Robotic Welding Certificate instructs students in welding cell safety devices, blueprints, and symbols. Upon successful completion of the program, students will be skilled in manual and robotic Gas Metal Arc Welding (GMAW) welding processes, welding procedures, and creating and editing robotic welding programs.

## Program Outcomes

By completing this program, students will achieve the following learning outcomes:

- Apply proper industry safety standards;
- Interpret and follow industrial welding prints;
- Identify GMAW processes and procedures;
- Demonstrate manual GMAW processes and procedures;
- Configure multiple robotic weld procedures, weld schedules, and weave schedules;
- Create welding programs and use techniques found in the industrial robotic welding industry; and
- Configure and utilize advanced welding programming options.

## Career Opportunities

This certificate prepares students for career opportunities as welders to setup automated equipment within a robotic welding cell using safety devices, user operator systems, and welding power supplies. They also maintain welding torch equipment, create and modify robotic welding programs, and change existing welding parameters. Common career titles in this field are Robotic Welding Cell Operator, Robotic Welding System Technician, Robotic Welding System Operator, Robotic Welding Setup Operator.

## Program Course Requirements

RAST 1104	Introduction to Automation.....	2 cr
RAST 2134*	Robotic ARC Welding .....	3 cr
WELD 1100	Introduction to Welding.....	2 cr
WELD 1111	Blueprint Reading I.....	2 cr
WELD 1112*	Blueprint Reading II.....	2 cr
WELD 1117	Gas Metal ARC Welding I.....	2 cr
WELD 1118*	Gas Metal ARC Welding II.....	3 cr

## GRADUATION REQUIREMENT - 16 CREDITS

\*Denotes Prerequisites

## Semester Course Requirements

Individual semester plans are determined between instructor/advisor and student to best meet the needs of the student.

## Course Prerequisites

Some courses may require appropriate test scores or completion of basic math, basic English and/or reading courses with a "C" or better. CLC utilizes a multiple measure approach for placement which may include high school MCA, SAT, ACT scores in addition to high school GPAs. For insurance purposes, internships may require that students be 18 years old.

## Graduation Requirements

In addition to the program requirements, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
2. College Technical Core GPA Requirement: cumulative GPA of credits attempted and completed towards the technical core of the diploma or degree must be at least 2.0;
3. Residency Requirement: students must complete 25% of their credits at Central Lakes College.

