

WELDING TECHNOLOGY

Programs

- Specialized Welding Certificate in Applied Science (<https://catalog.gvltec.edu/school-advanced-manufacturing-transportation-technology/welding/specialized-welding-certificate/>)
- Welding and Robotic Technology Certificate in Applied Science (<https://catalog.gvltec.edu/school-advanced-manufacturing-transportation-technology/welding/welding-certificate/>)

Courses

WLD 102 Introduction to Welding (2-1-2)

Offered Fall and Spring Semesters

This course covers the principles of welding, cutting and basic procedures for safety in using welding equipment.

WLD 103 Print Reading I (1-0-1)

Offered Fall, Spring and Summer Semesters

This is a basic course that covers the fundamentals of print reading, the meaning of lines, views dimensions, notes, specifications and structural shapes. Welding symbols and assembly drawings as used in fabrication work are all covered.

WLD 107 Welding Codes and Procedures (3-0-3)

Offered Summer Semester

Prerequisites: WLD 111, WLD 132

This course is an introduction to a variety of nationally known welding codes and welding procedure specifications (WPS).

WLD 110 Welding Safety and Health (1-0-1)

Offered Fall, Spring and Summer Semesters

This course is an introduction to safety and health hazards associated with welding and related processes.

WLD 111 Arc Welding I (1-9-4)

Offered Fall and Spring Semesters

This course covers the safety, equipment and skills used in the shielded metal arc welding process. Fillet welds are made to visual criteria in several positions.

WLD 113 Arc Welding II (1-9-4)

Offered Spring and Summer Semesters

Prerequisite: WLD 111

This course is a study of arc welding of ferrous and/or non-ferrous metals.

WLD 115 Arc Welding III (1-9-4)

Offered Fall and Spring Semesters

Prerequisite: WLD 113

This course covers techniques used in preparation for structural plate and pipe testing according to appropriate welding standards.

WLD 132 Inert Gas Welding Ferrous (1-9-4)

Offered Fall and Spring Semesters

This course covers set up and adjustment of equipment and fundamental techniques for welding ferrous metals.

WLD 135 Inert Gas Welding of Aluminum (1-9-4)

Offered Fall and Spring Semesters

Prerequisite: WLD 132

This course covers the set-up and adjustment of equipment and fundamental techniques of welding aluminum.

WLD 141 Weld Quality (2-0-2)

Offered Fall, Spring and Summer Semesters

This is an introductory course in weld quality assurance.

WLD 152 Tungsten Arc Welding (1-9-4)

Offered Fall and Spring Semesters

Prerequisite: WLD 135 (required)

This course covers gas tungsten arc welding of carbon steel filler metal and carbon steel metals with stainless steel filler metals.

WLD 160 Fabrication Welding (1-6-3)

Offered Spring and Summer Semesters

Prerequisite: WLD 103

This course covers the layout and fabrication procedures as they pertain to sheet metal and structural steel shapes. The course will also include shop safety and hand and power tools.

WLD 171 Print Reading and Sketching for Structural Welding (3-3-4)

Offered Fall Semester

Prerequisite: WLD 103

This course introduces the interpretation of basic welding drawings and implementation of sketching techniques for structural welding, including interpreting welding symbols, dimensioning, tolerancing, sectioning and mating of metal parts as performed in fabrication and welding assembly projects. Upon completion of this course, students will be able to comfortably and successfully read and interpret drawings.

WLD 204 Metallurgy (3-0-3)

Offered Fall Semester

This course covers the characteristics of ferrous and non-ferrous metals.

WLD 208 Advanced Pipe Welding (0-9-3)

Offered Fall and Spring Semesters

Prerequisite: WLD 135

This course is a study of advanced pipe welding. It also covers the process to fit and weld ferrous and non-ferrous metals.

WLD 235 Robotic Welding I (2-0-2)

Offered Fall and Summer Semesters

Co-requisite: WLD 240 (required)

This course covers basic theory and practice for robotic welding.

WLD 240 Robotic Welding and Manufacturing (2-6-4)

Offered Fall and Summer Semesters

Co-requisite: WLD 235 or AMT 205

This course covers robotic welding systems, safety, operations and applications.