

WLD Welding Technology

WLD 110 Welding I (1-4) 3 crs.

Covers fundamentals of oxyacetylene welding theory and practices and beginning electric welding. Includes arc welding and gas welding, brazing and cutting in the horizontal position.

WLD 210 Welding II (1-4) 3 crs.

Covers advanced welding theory and practice in arc welding. Provides experience in MIG and TIG (Heliarc) techniques. Includes an introduction to strength of weld testing.

Prerequisite: WLD 110 with a grade of C or better, or consent of instructor.

WLD 211 Welding III (2-4) 4 crs.

Covers advanced welding theory and extensive practice in major arc welding process. Provides experience in advanced GMAW (gas metal arc welding), FCAW (flux cored arc welding), GTAW (gas tungsten arc welding) and other arc welding techniques. Plasma arc and air carbon arc cutting will be included.

Prerequisite: WLD 210 with a grade of C or better, or consent of program coordinator.

WLD 212 Welding IV (2-4) 4 crs.

Covers advanced out-of-position and multi-pass arc welding including GMAW (gas metal arc welding), SMAW (shielded metal arc welding) and GTAW (gas tungsten arc welding). Emphasizes working from blueprints and development of welding skills necessary to pass welder qualification tests. Students must pass guided bend tests to become "certified welders" in accordance with the AWS (American Welding Society) D1.1 Structural Welding Code.

Prerequisite: WLD 211 with a grade of C or better, or consent of program coordinator.

WLD 225 Advanced Blueprint Reading (1-2) 2 crs.

Teaches the student to become proficient in reading more complex welding blueprints. The student will learn the symbols specific to welding blueprints. Emphasizes developing the ability to transfer the two-dimensional print to the actual three-dimensional object.

Prerequisite: MFT 134 and WLD 210 with grades of C or better.

WLD 240 Cutting Processes (1-4) 3 crs.

Allows the student an opportunity to gain proficiency in all major industrial arc, oxy-fuel, and mechanical cutting processes—manual, semi-automatic and automatic. Processes include Plasma Arc, Air Carbon Arc, Shielded Metal Arc, Exothermic, and Oxy-Fuel cutting; optical tracers; and CNC controls.

Prerequisite: WLD 210 with a grade of C or better.

WLD 245 Welding Fabrication I (2-4) 4 crs.

Provides hands-on experience constructing welding projects employing arc, oxy-acetylene, gas metal arc (mig), gas tungsten arc (tig), or a combination of these welding processes using a welding blueprint as a guide.

Prerequisite: WLD 211 and WLD 240 with grades of C or better.

WLD 246 Pre-Pipe Welding (2-4) 4 crs.

Covers advanced skills in shielded metal arc welding using the E6010 and E7018 electrodes on mild steel plate up to 3/8" thickness in all positions.

Prerequisite: WLD 210 with a grade of C or better.

WLD 248 Basic Pipe Welding (2-4) 4 crs.

Covers techniques of basic pipe fitting, use of 90's, T's, flanges, valves, take offs, use of pipe blueprints, sketches, templates, and uphill welding techniques on pipe. Perform SMAW pipe welding with E6010 and E7018 electrodes in all positions.

Prerequisite: WLD 210 and WLD 246 with grades of C or better.

WLD 249 Applied Welding Theory (1-4) 3 crs.

Provides both lab and classroom experience to cover the basic theory of all major welding processes. Covers shielded metal arc welding, gas tungsten arc welding, flux core arc welding, submerged arc welding, plasma arc welding and oxyacetylene welding.

Prerequisite: WLD 210 with a grade of C or better.

WLD 250 Welding Fabrication II (2-4) 4 crs.

Prepares the student to construct welding projects employing arc, oxyacetylene, gas metal arc (MIG), gas tungsten arc (TIG), or any combination of these welding processes using a welding blueprint as a guide. Covers advanced fabrication techniques including rolling, forming and bending.

Prerequisite: WLD 211 and WLD 245 with grades of C or better.

WLD 253 Welding Power Sources (1-4) 3 crs.

Familiarizes the student with the difference between types of welding power sources. The student will learn through lab experiences the proper set-up and fine-tuning techniques which will result in a quality weld. Covers selection, use, troubleshooting and maintenance of major welding equipment.

Prerequisite: WLD 210 with a grade of C or better.

WLD 260 Arc Welder Qualification (1-6) 4 crs.

Helps the student attain arc (SMAW) welder qualification (certification) as required by many employers. This certification will meet the requirements of the AWS (American Welding Society) D1.1 Structural Welding Code. Upon successful completion of the certification exam, the student will be given a copy of their test results (Welding Procedure Qualification.)

Prerequisite: WLD 210 with a grade of C or better.

WLD 261 Mig Welder Qualification (1-6) 4 crs.

Helps the student attain mig (GMAW) welder qualification (certification) as required by many employers. This certification will meet the requirements of the AWS (American Welding Society) D1.1 Structural Welding Code. Upon successful completion of the certification exam, the student will be given a copy of their test results (Welding Procedure Qualification.)

Prerequisite: WLD 210 with a grade of C or better.

WLD 285 Topics in Welding Technology (1-0 to 3-6) 1-6 crs.

Examines selected problems or topics in welding technology. The specific course content and instructional methodology will vary each semester offered depending on the material presented. A syllabus containing specific topic information will be available in the division office with pre-registration materials each time the course is offered. This course may be repeated to a maximum of 6 credit hours.

Prerequisite: Consent of instructor.