

WELDING (WELD)

WELD 110 Shielded Metal Arc Welding 4 Credits

Study and skill development of safe practices, welding theory, and principles of Shielded Metal Arc Welding (SMAW) equipment and process. SMAW fillet welds in all positions on plate.

Terms Typically Offered: Fall, Spring.

Fees: Yes.

WELD 111 Shielded Metal Arc Welding 2 4 Credits

Study and skill development of safe practices, welding theory, and principles of Shielded Metal Arc Welding equipment and process. SMAW groove welds in all positions on plate. Pipe welding and stainless steel plate tests may be included.

Prerequisites: WELD 110.

Fees: Yes.

WELD 114 Oxy-Fuel Welding & Brazing 2 Credits

Study and skill development of safe practices, welding theory, and principles of Oxy-Fuel equipment and process. Oxy-Fuel groove and fillet welding and braze welding will be included.

Fees: Yes.

WELD 117 Oxy-Fuel and Plasma Arc Cutting 2 Credits

Study and skill development of safe practices, theory, and principles of cutting equipment used in fabrication. Oxy-Acetylene Cutting (OAC), Plasma Arc Cutting (PAC), and other cutting processes applied to sheet metal, plate, piping, and other materials. Other uses of power tools and hand tools to be included.

Terms Typically Offered: Fall, Spring.

Fees: Yes.

WELD 133 Fabrication & Blueprints for Welders 4 Credits

Study and skill development of metal fabrication methods. Measuring tools and techniques, welding shop mathematics, blueprint reading, welding symbols, sheet metal and steel plate fabrication project layout methods applied. Structural and pipe connection layout methods are introduced.

Terms Typically Offered: Fall, Spring.

Fees: Yes.

WELD 151 Introduction to Welding 3 Credits

Introduction to welding. Safe practices, theory, principles, and use of welding and cutting equipment. Oxy/Fuel, Plasma Arc Cutting, Shielded Metal Arc Welding, Gas Metal Arc Welding, Flux Cored Arc Welding with sheet metal and carbon steel plate in most positions. Gas Tungsten Arc Welding may be included.

Terms Typically Offered: Fall, Spring.

Fees: Yes.

WELD 195 Independent Study 1-4 Credits

Course may be taken multiple times up to maximum of 6 credit hours.

WELD 196 Topics: 1-3 Credits

Course may be taken multiple times up to maximum of 15 credit hours.

WELD 201 Gas Metal Arc Welding 4 Credits

Study and skill development of safe practices, welding theory, and principles of Gas Metal Arc Welding (GMAW) equipment and process. GMAW fillet and groove welds with short circuit transfer and axial spray transfer will be included. GMAW pulse, aluminum, and stainless steel may be included.

Terms Typically Offered: Fall, Spring.

Fees: Yes.

WELD 203 Flux Cored Arc Welding 4 Credits

Study and skill development of safe practices, welding theory, and principles of Flux Cored Arc Welding equipment and process. FCAW fillet and groove welds with self-shielded and gas-shielded processes will be covered.

Fees: Yes.

WELD 230 Gas Tungsten Arc Welding 4 Credits

Study and skill development of Gas Tungsten Arc Welding (GTAW/TIG). Lecture and laboratory. Safe practices, theory, principles and use of GTAW equipment. GTAW with sheet metal and carbon steel plate in most positions. Also, GTAW stainless steel and aluminum sheet metal in most positions. A.W.S. testing.

Fees: Yes.

WELD 240 Pipe Welding 4 Credits

Study and skill development of safe practices, welding theory, and principles of pipe welding using SMAW, GMAW, FCAW, and GTAW processes. AWS, API, and ASME weld procedures will be examined.

Prerequisites: WELD 111, WELD 203, and WELD 230.

Terms Typically Offered: Fall.

Fees: Yes.

WELD 261 Testing and Inspection 3 Credits

Advanced classroom course on testing and weld inspection. Destructive and non-destructive weld testing methods applied. AWS bridge and structural codes, API cross country pipe welding codes, ASME pressure vessel and pressure piping codes. (On demand)

WELD 270 Practical Applications 3 Credits

Exploration of a welding project course. Classroom discussions and directions with laboratory objectives. This class gives welding students the opportunity to apply techniques and knowledge gained from previous welding courses. With the guidance and advice of the instructor, students will fabricate a welding project of their choice.

Fees: Yes.

WELD 275 Automation 4 Credits

Study and skill development of safe practices, welding theory, and principles of robotic welding and CNC plasma cutting equipment and processes. Basic programming, setup, and systems integration will be included. Other automation equipment and processes may be included.

Prerequisites: WELD 117 and WELD 201.

Fees: Yes.

WELD 295 Independent Study 1-4 Credits

Course may be taken multiple times up to maximum of 6 credit hours.

WELD 296 Topics: 1-3 Credits

Course may be taken multiple times up to maximum of 15 credit hours.

WELD 299 Internship 1-14 Credits

Course may be taken multiple times up to maximum of 6 credit hours.