WELDING (WLD)

WLD-110 Cutting Processes 2 (Credits)
This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness.
Class: 1 Lab: 3 Clinical: 0 Work: 0

WLD-112 Basic Welding Processes 2 (Credits)
This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes.
Class: 1 Lab: 3 Clinical: 0 Work: 0

WLD-115 SMAW (Stick) Plate 5 (Credits)
This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes.
Class: 2 Lab: 9 Clinical: 0 Work: 0

WLD-116 SMAW (stick) Plate/Pipe 4 (Credits)
This course is designed to enhance skills with the shielded metal arc (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon completion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, horizontal, vertical, and overhead positions.
Class: 1 Lab: 9 Clinical: 0 Work: 0
State Prerequisite(s): WLD-115

WLD-121 GMAW (MIG) FCAW/Plate 4 (Credits)
This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions.
Class: 2 Lab: 6 Clinical: 0 Work: 0

WLD-131 GTAW (TIG) Plate 4 (Credits)
This course introduces the gas tungsten arc (TIG) welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students should be able to perform GTAW fillet and groove welds with various electrodes and filler materials.
Class: 2 Lab: 6 Clinical: 0 Work: 0

WLD-132 GTAW (TIG) Plate/Pipe 3 (Credits)
This course is designed to enhance skills with the gas tungsten arc (TIG) welding process. Topics include setup, joint preparation, and electrode selection with emphasis on manipulative skills in all welding positions on plate and pipe. Upon completion, students should be able to perform GTAW welds with prescribed electrodes and filler materials on various joint geometry.
Class: 1 Lab: 6 Clinical: 0 Work: 0
State Prerequisite(s): WLD-131

WLD-141 Symbols and Specifications 3 (Credits)
This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding.
Class: 2 Lab: 2 Clinical: 0 Work: 0

WLD-151 Fabrication I 4 (Credits)
This course introduces the basic principles of fabrication. Emphasis is placed on safety, measurement, layout techniques, cutting, joining techniques, and the use of fabrication tools and equipment. Upon completion, students should be able to perform layout activities and operate various fabrication and material handling equipment.
Class: 2 Lab: 6 Clinical: 0 Work: 0
State Prerequisite(s): DFT-119

WLD-212 Inert Gas Welding 2 (Credits)
This course introduces inert gas-shielded welding methods (MIG/TIG). Topics include correct selection of consumable and non-consumable electrodes, equipment setup, safety, and welding techniques. Upon completion, students should be able to perform inert gas welding in flat, horizontal, and overhead positions.
Class: 1 Lab: 3 Clinical: 0 Work: 0

WLD-215 SMAW (stick) Pipe 4 (Credits)
This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and discontinuities. Upon completion, students should be able to perform SMAW welds to applicable codes on carbon steel pipe with prescribed electrodes in various positions.
Class: 1 Lab: 9 Clinical: 0 Work: 0
State Prerequisite(s): One: WLD-115 or WLD-116

WLD-251 Fabrication II 3 (Credits)
This course covers advanced fabrication skills. Topics include advanced layout and assembly methods with emphasis on the safe and correct use of fabrication tools and equipment. Upon completion, students should be able to fabricate projects from working drawings.
Class: 1 Lab: 6 Clinical: 0 Work: 0
State Prerequisite(s): WLD-151

WLD-261 Certification Practices 2 (Credits)
This course covers certification requirements for industrial welding processes. Topics include techniques and certification requirements for prequalified joint geometry. Upon completion, students should be able to perform welds on carbon steel plate and/or pipe according to applicable codes.
Class: 1 Lab: 3 Clinical: 0 Work: 0
State Prerequisite(s): All: WLD-115, WLD-121, and WLD-131

WLD-265 Automated Welding/Cutting 4 (Credits)
This course introduces automated welding equipment and processes. Topics include setup, programming, and operation of automated welding and cutting equipment. Upon completion, students should be able to set up, program, and operate automated welding and cutting equipment.
Class: 2 Lab: 6 Clinical: 0 Work: 0
State Prerequisite(s): All: WLD-110 and WLD-121