

WELDING (WELD)

WELD 111 BASIC OXYACETYLENE WELDING	3 Credit Hours
Principles of oxyacetylene welding, cutting, and brazing. Nomenclature of the equipment, assembly, care, and safety. (3 lecture)	
WELD 121 BASIC SHIELDED METAL ARC(SMAW)	3 Credit Hours
Safety and nomenclature of the Shielded Metal Arc Welding (SMAW) welding process. Hands-on welding utilizing E6010 and E7018 electrodes on pad of beads, lap joints, tee joints, and butt joints in all positions. (2 lecture, 1 lab)	
WELD 131 BASIC GAS TUNGSTEN ARC (GTAW)	3 Credit Hours
An introduction to the gas tungsten arc welding (GTAW) process. Equipment set-up and safety and hands-on welding of beads, lap joints, tee joints, and butt joints. (2 lecture, 1 lab)	
WELD 132 ADV GAS TUNGSTEN ARC (GTAW)	3 Credit Hours
Bevel plate welding using the gas tungsten arc process according to the AWS code. (2 lecture, 1 lab)	
Prerequisite(s): WELD 131	
WELD 133 BASIC FLUX CORE ARC WELD(FCAW)	3 Credit Hours
Introduction to the flux core arc welding process. Equipment set-up, safety and hands-on welding of lap joints, tee joints and butt joints. (2 lecture, 1 lab)	
WELD 134 BASIC GAS METAL ARC WELD(GMAW)	3 Credit Hours
Introduction to the gas metal arc welding (GMAW) process. Equipment set-up, safety and hands-on welding on pad of beads, lap joints, tee joints, and butt joints. (2 lecture, 1 lab)	
WELD 135 ADV GAS METAL ARC WELD (GMAW)	3 Credit Hours
Bevel plate welding in all positions with the gas metal arc welding process according to the AWS code. (2 lecture, 1 lab)	
Prerequisite(s): WELD 134	
WELD 136 ADV FLUX CORE ARC WELD (FCAW)	3 Credit Hours
Bevel plate welding in all positions with the flux core arc welding process according to the AWS Code. (2 lecture, 1 lab)	
Prerequisite(s): WELD 133	
WELD 160 WELDING BLUEPRINT READING	2 Credit Hours
Fundamentals of blueprint reading geared towards teaching students to decipher blueprints found in industrial settings. (2 lecture)	
WELD 171 WELDING THEORY	1 Credit Hour
Theory of all ARC welding processes; equipment function and their use. Methods and procedures application. (1 lecture)	
WELD 221 ADV SHIELDED METAL ARC (SMAW)	3 Credit Hours
Bevel plate welding using the shielded metal arc process according to the AWS Code. (2 lecture, 1 lab)	
Prerequisite(s): WELD 121	
WELD 260 WELDING CAPSTONE	2 Credit Hours
This capstone course requires students to demonstrate the skills and knowledge acquired throughout the program. Successful completion of the identified external industry standard assessment(s) is required to graduate. This course is to be taken by Welding students in the semester before graduation. (2 lab)	
WELD 261 STEEL FABRICATION	3 Credit Hours
Job estimation, interpreting layouts from simple sketches or prints. Examines and uses the mathematics of layout and fit-up situations which arise in weld fabrication. This course also serves as the Welding Certificate capstone course. Students must successfully complete this course to graduate with the Welding Certificate. (3 lecture)	
WELD 279 WELDING INSPECTION	2 Credit Hours
Teaches the student about inspection and prepares the student to take the American Welding Society (AWS) welding inspection exam with the API 1104 Code book. (2 lecture)	
WELD 281 METALLURGY	3 Credit Hours
Properties of ferrous and non-ferrous metals; physical metallurgy of ferrous metals; producing iron and steel; surface treatment; alloys of special steel; classification of steels. (3 lecture)	
WELD 291 FABRICATION SHOP	3 Credit Hours
This course is designed to introduce the student into a work environment depicting the actual day-to-day operations of a fabrication shop. The student will incorporate the skills and knowledge previously acquired in order to gain experience required for workforce success. (2 lecture, 1 lab)	
WELD 293 COOPERATIVE WORK EXPERIENCE	1-8 Credit Hours
WELD 297 SPECIAL TOPICS	1-4 Credit Hours
(1-4 lecture)	
WELD 299 INDEPENDENT STUDY	1-6 Credit Hours
(1-6 lecture)	

2 WELDING (WELD)

WELD 393 COOPERATIVE WORK EXPERIENCE

1-8 Credit Hours