WELDING (WELD)

WELD 091AF Industrial Welding Fundamentals 5 Units
54 hours lecture and 108 hours lab per term. This course is designed to introduce the student to a variety of welding processes. Topics will include historical development of welding, the welding industry and its future, applied terms and definitions, methods of application, safety in the welding environment, welding positions, and joint types. Students will develop occupational proficiency using Oxyfuel Welding (OFW), Brazing (TB), Oxyfuel Cutting (OFC), Air Carbon Arc Cutting (CAC-A), and Plasma Cutting (PAC). (Degree Credit)

WELD 091BF Semi-Automatic Welding Applications 5 Units
Corequisite(s): WELD 091AF or WELD 100 F with a grade of C or better.
54 hours lecture and 108 hours lab per term. This course will cover, with in-depth study, the make-up of constant voltage power sources and semi-automatic wire feed systems. Various methods of metal transfer will be covered, such as spray, globular, short-circuiting, and pulsed spray. Applications will be applied to ferrous and non-ferrous metals of various thicknesses in all axes. Students will become occupationally proficient using Gas Metal Arc Welding (GMAW) on limited thickness material in all axis on plate, Flux Cored Arc Welding (FCAW) on intermediate and unlimited thicknesses in all axis on plate. (Degree Credit)

WELD 091CF Manual Arc Welding Fundamentals 5 Units
Corequisite(s): WELD 091BF with a grade of C or better.
54 hours lecture and 108 hours lab per term. This course covers the make-up and use of constant current power supplies as found in Shielded Metal Arc Welding (SMAW) and Gas Tungsten Arc Welding (GTAW) with alternating current, direct current and pulsed current output variations. Elements of welding design, cost estimations, process selection and related welding symbols also will be covered. Students will gain entry level skills on Shielded Metal Arc Welding (SMAW) and Gas Tungsten Arc Welding (GTAW) using ferrous and non-ferrous metals. (Degree Credit)

WELD 091DF Structural Welding Certification 5 Units
Corequisite(s): WELD 091CF with a grade of C or better.
54 hours lecture and 108 hours lab per term. This course covers the origination and applications of welding codes, welding procedure qualification, welder qualification tests, weldment evaluation and quality control, visual inspection and preparation for Los Angeles City welding examination. Students will take written and lab tests to qualify as licensed certified welders in compliance with the American Welding Society (AWS) and the Los Angeles Building Code, using Shielded Metal Arc Welding (SMAW) and Flux Core Arc Welding (FCAW) on light gauge and heavy gauge structural steel. (Degree Credit)

WELD 095 F Welding Skills Lab 0.5-2 Units
Advisory: Enrollment in any Fullerton College welding course
Open Entry/Open Exit 27-108 hours lab per term. This course offers students the opportunity to further develop their welding skills. One-half unit of credit will be given for each twenty-four hours of class participation. Open entry, variable units. (Degree Credit)

WELD 096 F Welding Inspection Technology 5 Units
72 hours lecture and 54 hours lab per term. This course will aid in preparation for the American Welding Society's (AWS) Certified Welding Inspector's (CWI) exam. Fundamentals of visual welding inspection per nationally recognized code applications will be covered. Preparation and qualification of welding procedures and welder qualifications will be discussed. Building code compliance for welding applications will be assessed. Through the usage of weld gauge measurement tools and destructive and nondestructive testing equipment, the student will gain hands-on experience in welding inspection standards. This class is strongly recommended for those entering the fields of quality assurance, inspection, supervision and engineering of welded products. (Degree Credit)

WELD 098 F Welding Fabrication Technology 2 Units
Prerequisite(s): WELD 091AF or WELD 100 F, with a grade of C or better.
18 hours lecture and 54 hours lab per term. This course will provide the student with a general understanding of the fundamental methods of welding fabrication used in industry. Fabrication case studies and philosophies will be examined and the net outcome discussed. Students will become familiar with standard mill shapes and materials, jigs and fixtures, methods of layout and fitting, preparation and qualification of welding procedures and welding sequence, cost analysis, and cutting and fastening techniques. This course is strongly recommended for those entering the fields of metal fabrication, quality assurance, inspection, supervision, and engineering of welded products. (Degree Credit)

WELD 100 F Introduction to Welding (formerly WELD 121AF) 3 Units
36 hours lecture and 54 hours lab per term. This course emphasizes welding fundamentals and safety used in modern industry. Students in no-welding vocational and transfer areas will be able to gain welding skills needed as a support craft. Process identification, terms and definitions, safety guidelines, and practical applications are included. Students will gain entry level skills with Oxy-acetylene Welding (OAW), Brazing (TB) Shielded Metal Arc Welding (SMAW) and Oxy-acetylene Cutting (OFC). (CSU) (Degree Credit)

WELD 120 F Gas Shielded Arc Welding 3 Units
Corequisite(s): WELD 100 F with a grade of C or better.
18 hours lecture and 108 hours lab per term. This course enables students, who expect welding to be an integral part of their vocation, to master necessary manipulative skills in order to obtain job proficiency. Introduction to Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW) and Plasma Arc Cutting (PAC) are covered. Students will gain entry level skills on ferrous and non-ferrous metals using Gas Metal Arc and Gas Tungsten Arc Welding. (CSU) (Degree Credit)