

WELDING TECHNOLOGY

WEL-20

Blueprint Reading for Welders

2.00 units
CSU

Prerequisite: None.

Description: An introductory course in the study of welding and fabrication blueprints and their interpretation of line types, symbols, abbreviations, and integral parts, the course is designed for students interested in blueprint reading for the welding and fabrication trades. 36 hours of lecture. (Letter grade only)

WEL-22

Plate and Structural Layout

2.00 units

Prerequisite: WEL-65A.

Description: This is a course designed to develop the necessary skills and structural fabrication techniques on real or simulated metal construction projects. Emphasis will be on the safe operation of fabricating equipment as applied to structural steel components. 27 hours lecture and 27 hours laboratory. (Letter grade only)

WEL-24

Pipe Fitting for the Trades

2.00 units

Prerequisite: None.

Description: Pipe fitting for the commercial and industrial pipe trades. Items used in basic pipe fitting and the methods used to fit pipe in commercial/industrial applications. Welded, threaded, and bolted connections used in the piping trades will be covered. 36 hours lecture. (Letter grade only)

WEL-26

Pipe Layout

2.00 units

Prerequisite: WEL-65A or WEL-75A and WEL-24

Description: Practical techniques of pipe layout, terminology, use of layout tools, fittings, offset tie-ins, and rolled offset tie-in of parallel pipelines. Techniques which cover layout of calculated fittings involving pipelines of unequal sizes and compound offset tie-in fittings will be covered. 27 hours lecture and 27 hours laboratory. (Letter grade only)

WEL-65A

Basic Metal Arc Weld

3.00 units
CSU

Prerequisite: None.

Description: An introductory course in basic shielded metal arc welding, shop and industrial safety, and common metal and materials used in welding. 27 hours lecture and 81 hours laboratory. (Letter grade only)

WEL-65B

Advanced Shielded Metal Arc Welding

3.00 units
CSU

Prerequisite: WEL-65A.

Description: An advanced course in shielded metal arc welding, shop and industrial safety, and common metal and materials used in the welding industry. 27 hours lecture and 81 hours laboratory. (Letter grade only)

WEL-75A

Gas Metal Arc Welding

3.00 units
CSU

Prerequisite: None.

Description: A course in Gas Metal Arc Welding (GMAW). Focusing on equipment set up, proper welding techniques, modes of transfer and the understanding of the filler wires used in the process. 27 hours lecture and 81 hours laboratory. (Letter grade only)

WEL-75B

Flux Cored Arc Welding (FCAW)

3.00 units
CSU

Prerequisite: WEL-75A.

Description: A course in Flux Cored Arc Welding (FCAW). Focusing on equipment set up, proper welding techniques, modes of transfer and the understanding of the filler wires used in the process. 27 hours lecture and 81 hours laboratory. (Letter grade only)

WEL-85A**American Welding Society/Los Angeles City Welding I****3.00 units***Prerequisite: WEL-65B or WEL-75B.*

Description: This course is designed to enhance the competency of advanced students in the various welding processes and techniques. This course will develop the student's knowledge in code related subject matter as it pertains to the scope, design, prequalification, and qualification as it relates to the American Welding Society (AWS) welding code. It is designed to prepare students to take the Los Angeles City welding written test. 27 hours lecture and 81 hours laboratory. (Letter grade only)

WEL-85B**American Welding Society/Los Angeles City Welding II****3.00 units***Prerequisite: WEL-65B or WEL-75B.*

Description: This course is designed to enhance the competency of advanced students in the various welding processes and techniques. This course will develop the student's knowledge in code related subject matter as it pertains to the fabrication, inspection, stud welding, strengthening and repairing of existing structures as it relates to the American Welding Society (AWS) welding code. It is designed to prepare students to take the Los Angeles City welding written test. 27 hours lecture and 81 hours laboratory. (Letter grade only)

WEL-95A**Introduction to Gas Tungsten Arc Welding****3.00 units**

CSU

Prerequisite: None.

Description: Introduction to the theory, practical application and joining techniques used in Gas Tungsten Arc Welding (TIG) processes. Emphasis is placed on welding and joining of plate materials 27 hours lecture and 81 hours laboratory. (Letter grade only)

WEL-95B**Advanced Gas Tungsten Arc Welding (GTAW)****3.00 units**

CSU

Prerequisite: WEL-95A.

Description: Advanced theory, practical application and joining techniques used in Gas Tungsten Arc Welding. 27 hours lecture and 81 hours laboratory. (Letter grade only)

WEL-115A**Smaw/Gmaw Pipe Welding Fundamentals****3.00 units**

CSU

Prerequisite: WEL-65A and WEL-75A.

Description: This advanced welding course is designed to utilize previously acquired welding skills and techniques on ferrous pipe in the rotated and fixed positions. Emphasis is placed on the welding of open groove pipe joints using the Shielded Metal Arc Welding (SMAW) and the Gas Metal Arc Welding (GMAW) processes. (Letter grade only)

WEL-200**Welding Work Experience****1.00 - 4.00 units***Prerequisite: None.**Advisory: Students should have paid or voluntary employment.*

Description: Work Experience is designed to coordinate the student's on-the-job training with workplace skills designed to assist the student in developing successful professional skills. Each student will establish measurable learning objectives appropriate for their job and discipline. Students may earn up to four (4) units each semester, for a maximum of 16 units of work experience total. 60 hours of volunteer work or 75 hours of paid work during the semester are required for each unit. No more than 20 hours per week, out of the 60 or 75 requirement, may be applied toward the work requirement. The course consists of an 18 hours of orientation/professional skills development and 60 hours of volunteer work experience per unit with a maximum of 240 for four units per semester OR 75 hours of paid work experience per unit, with a maximum of 300 for four units per semester. (Letter grade or Pass/No Pass option)