CONSTRUCTION WELDING – ASSOCIATE IN SCIENCE DEGREE, CERTIFICATE OF ACHIEVEMENT

Top Code:

0956.50
The curriculum prepares students to seek employment in the welding/metal working trades as welders, welder's helpers, cutting torch operators, or apprentice fitters. The focus of instruction and practical welding experience is on the Shielded Metal Arc Welding (SMAW), semi-automatic Flux Cored Arc Welding (FCAW) and oxy-acetylene welding, brazing and cutting processes. These processes are used in the construction and manufacturing industries. Welding practice prepares the student for the Structural Steel Groove and Light Gauge Structural Certifications. Certification is now considered a mandatory requirement for successful employment in the construction and manufacturing industries.

Metal fabrication skills including blueprint reading, shop math, metal fit-up and production welding techniques. Instruction includes structural steel welding codes and welding theory. Students are required to purchase welding materials and protective clothing.

A Certificate of Achievement is awarded upon completion of all required courses with a grade of C or better.

Program Outcomes

- Perform shielded metal arc (SMAW), flux cored arc welding (FCAW) and oxy-acetylene welding and cutting.
- Select appropriate equipment and processes for metal/welding operations and demonstrate safe set-up and operations of welding equipment.
- Evaluate welds to industry standards and prepare inspections reports including welding defects and solutions.
- Fabricate a part from a blueprint including the layout, assembly, cutting of material guided by welding symbols.
- Prepare to successfully pass the practical and written L.A. City Structural Steel Certification exam for shielded metal arc (SMAW) and flux cored arc welding (FCAW).

Requirements for the Certificate of Achievement

Code	Title	Units
Semester I		
WELD 200A	INTRODUCTION TO STRUCTURAL WELDING	6
TECH 107A	TECHNICAL CALCULATIONS	3
Semester II		
WELD 200B	CONSTRUCTION TRADE WELDING	6
DT 008A	INTRODUCTION TO DIGITAL DESIGN AND FABRICATION	3
Total Units		**18**

Recommended Electives

Code	Title	Units
BIT 010	BASIC COMPUTER KEYBOARDING	1
DT 017	BUILDING DESIGN & CONSTRUCTION TECHNICAL GRAPHICS	3
DT 118	3-DIMENSIONAL BUILDING DESIGN & REPRESENTATION	3
KINA 032A	BEGINNING FITNESS ACTIVITIES	1
WELD 044A	INTRODUCTION TO GAS WELDING	1
WELD 044B	INTRODUCTION TO ELECTRIC ARC WELDING	1
WELD 044C	ADVANCED ARC WELDING, FCAW & SMAW	1
WELD 145	INTRODUCTION TO TIG WELDING	1
WELD 150D	TUNGSTEN INERT GAS (TIG) WELDING	5

Visit the Program Mapper (https://pasadena-city.programmapper.ws/academics/interest-clusters/35afad1b-8598-4ecf-a320-0ed4834a7df8/programs/6f05b6cf-aadf-5cfb-f722-8edf56e7b56a/) for a suggested sequence of courses.

General Education Requirements for the Associate in Science Degree

- General Information (https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/)
- PCC Local Gen Ed (https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#pcclocaltext)
- CSU Breadth (https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#csubreadthtext)
- IGETC (https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#igetctext)