

## Certificate of Achievement: Welding Technology

Welding Technology is a career technical education program designed to prepare students for a variety of entry-level positions in today's welding and fabrication related industries. Course offerings range from very basic welding fundamentals to the most technically advanced. Students gain skillfulness in safety procedures, applied theory, metal fabrication, and related welding processes. Emphasis is placed on individual instruction. Instructors are AWS Certified Welding Inspectors/Educators. Welding curriculum is aligned with the American Welding Society SENSE Entry Welder Program. Students can earn welder certifications in accordance with the American Welding Society (AWS), The Los Angeles Department of Building and Safety (LADBS), and The American Society of Mechanical Engineers (ASME). Upon successful completion of the program, students are prepared to enter into the following career opportunities: welder, welding inspector, welding technician/fitter, pipe fitter/welder, and metal fabricator.

### Degree and Certificate Student Learning Outcome:

Students will be able to demonstrate proficiency in industry recognized principles and practices as they apply to today's welding and metal fabrication industries.

### Program Requirements:

Units Required: 34

Complete fifteen units from two of the course blocks below

Units:

|           |                                            |     |
|-----------|--------------------------------------------|-----|
| WELD-100A | Introduction to Metal Fabrication          | 2.5 |
| WELD-100B | Intermediate Metal Fabrication             | 2.5 |
| WELD-100C | Advanced Metal Fabrication                 | 2.5 |
| WELD-101A | Introduction to Shielded Metal Arc Welding | 2.5 |
| WELD-101B | Intermediate Shielded Metal Arc Welding    | 2.5 |
| WELD-101C | Advanced Shielded Metal Arc Welding        | 2.5 |
| WELD-111A | Introduction to Semiautomatic Welding      | 2.5 |
| WELD-111B | Intermediate Semiautomatic Welding         | 2.5 |
| WELD-111C | Advanced Semiautomatic Welding             | 2.5 |
| WELD-112A | Introduction to Gas Tungsten Arc Welding   | 2.5 |
| WELD-112B | Intermediate Gas Tungsten Arc Welding      | 2.5 |
| WELD-112C | Advanced Gas Tungsten Arc Welding          | 2.5 |
| WELD-114A | Introduction to Robotic Welding Automation | 2.5 |
| WELD-114B | Intermediate Robotic Welding Automation    | 2.5 |
| WELD-114C | Advanced Robotic Welding Automation        | 2.5 |

OR

Complete fifteen units from the following:

|           |                              |     |
|-----------|------------------------------|-----|
| WELD-113A | Introduction to Pipe Welding | 4.0 |
| WELD-113B | Pipe Layout and Fabrication  | 3.0 |
| WELD-113C | Intermediate Pipe Welding    | 4.0 |
| WELD-113D | Advanced Pipe Welding        | 4.0 |

Plus the following required electives:

|            |                                              |     |
|------------|----------------------------------------------|-----|
| WELD-130   | Welding Metallurgy                           | 3.0 |
| WELD-131   | Non-Destructive Testing                      | 3.0 |
| WELD-132   | Print Reading for Welders and Fabricators    | 3.0 |
| WELD-133   | Welding Inspection                           | 3.0 |
| MFGT-090   | Measurements and Computations                | 3.0 |
| ENGL-104   | Technical Reading and Writing                | 3.0 |
| OR         |                                              |     |
| ENGL-204   | Technical Report Writing                     | 3.0 |
| WE-186WELD | Work Experience Education Welding Technology | 1.0 |