



2009-2010  
Career and Technical  
Programs

Advanced  
Technology Division  
(541) 463-5380

Two-Year Associate  
of Applied Science  
Degree

One-Year Certificate  
of Completion

Welding Processes  
One Year Certificate  
of Completion

# Fabrication/Welding Technology

**Purpose** To prepare the graduate for employment for entry-level and higher positions in metal fabrication industries. The graduate typically begins work in light or heavy metal fabrication as welders and/or fabricators. Training and experience can lead to careers in technical sales, supervision, estimating, quality control, inspection, specialty welding, and teaching. The fabrication/welding certificate program (the first year of the two-year degree) prepares graduates for employment as welders/fabricators. The welding processes certificate program prepares graduates for employment as welder-trainees or welders.

**Learning Outcomes** The graduate will:

- use blueprint reading skills, cost estimating, applied science of materials, and mathematics necessary to the profession.
- apply knowledge of forming, fitting, and welding processes.
- develop manufacturing plans for commercially viable metal products.
- demonstrate advanced fabrication techniques and welding processes and application including GTAW, programmable, plasma cutting, structural and pipe fitting, metallurgy, quality control procedures, and business operation.
- demonstrate and use industry safety standards.
- use appropriate library and information resources to research professional issues and support lifelong learning.
- use mathematical formulas to calculate area, volume, and weight of metal objects.

**Employment Trends** Statewide, 210 annual openings for welders/fabricators are projected in Oregon and 28 openings are projected annually in Lane County. Competitively trained workers should find reasonable employment opportunities. Those with an associate degree will have a competitive advantage in this labor market.

**Wages** Statewide average \$16 hourly, \$33,000 average annually (\$45,000 annually for fabricators). Lane County average, \$14 hourly, \$30,000 annually.

## Costs in Addition to Tuition and Registration Fees (estimates)\*

Books .....	\$ 750
Tools.....	\$ 405
Fees.....	\$ 650
Total .....	\$1,775

Differential fees are being considered for some courses in this program. See the online credit class schedule for current course fees.

\* Subject to change without notice.

**Licensing or Other Certification Exams** Exams for Welder Qualification Certification - wire drive and arc welding processes

**Prerequisites** Minimum placement score- of 68 in Reading OR completion of RD 080 OR prior college. A high school diploma or equivalent is recommended for all applicants to this program.

**Criteria Used for Admission** Normal program entry is fall term. A program orientation is held for new students for fall term (dates available in Counseling or Enrollment and Student Financial Services). Contact advisor/counselor for assistance for winter and spring term entry.

**Cooperative Education (Co-op)** Co-op offers students college credit and a grade for on-the-job work experience related to their educational and career goals. Through Co-op, students connect theory and practice, develop skills, expand career knowledge, and make contacts for the future. Work schedules and work sites vary. In certain circumstances, Co-op experience may be substituted for major course work. Contact Marv Clemons, Fabrication/Welding Co-op Coordinator, Bldg. 8, Rm. 111, (541) 463-3158.

**Program Advisor** Betty Svarverud, Bldg. 12, Rm. 203, (541) 463-5378, svarverudb@lanecc.edu

**Program Counselor** Carolyn Litty, Bldg. 12, Rm. 202, (541) 463-5236, littyc@lanecc.edu

Want to know about courses and credits? See other side.

# Fabrication/Welding Technology

## Fabrication/Welding

### Two-Year Associate of Applied Science Degree

First Year	Fall
WLD 112 Fabrication/Welding 1 <sup>*,D,G</sup> .....	12
MTH 076 Applied Geometry for Technicians <sup>*,D,G,M</sup> or higher mathematics .....	4
<b>Total Credits</b>	<b>16</b>

	Winter
WLD 113 Fabrication/Welding 2 <sup>*,D,G</sup> .....	12
CG 203 Human Relations at Work <sup>H</sup> .....	3
<b>Total Credits</b>	<b>15</b>

	Spring
WLD 114 Fabrication/Welding 3 <sup>*,D,G</sup> .....	12
PE/Health requirement <sup>D,R</sup> .....	3
<b>Total Credits</b>	<b>15</b>

Second Year	Fall
WLD 215 Fabrication/Welding 4 <sup>*,D,G</sup> .....	12
MFG 197 Manufacturing Technology <sup>*,G</sup> .....	3
Choice of:.....	3
Arts/Letters requirement <sup>R</sup>	
Social Science requirement <sup>R</sup>	
<b>Total Credits</b>	<b>18</b>

	Winter
WLD 216 Fabrication/Welding 5 <sup>*,D,G</sup> .....	12
WR 115W Introduction to College Writing: Workplace Emphasis <sup>D,W</sup> or higher writing.....	3
Science or Computer Science course <sup>R</sup> .....	3
<b>Total Credits</b>	<b>18</b>

	Spring
WLD 217 Fabrication/Welding 6 <sup>*,D,G</sup> .....	12
Arts and Letters requirement <sup>R</sup> .....	3
Welding elective <sup>D,G</sup> .....	3
<b>Total Credits</b>	<b>18</b>

## Fabrication Welding

### One-Year Certificate of Completion

	Fall
WLD 112 Fabrication/Welding 1 <sup>*,D,G</sup> .....	12
MTH 076 Applied Geometry for Technicians <sup>*,D,G,M</sup> or higher mathematics .....	4
<b>Total Credits</b>	<b>16</b>

	Winter
WLD 113 Fabrication/Welding 2 <sup>*,D,G</sup> .....	12
WR 115W Introduction to College Writing: Workplace Emphasis <sup>W</sup> or higher writing.....	3
<b>Total Credits</b>	<b>15</b>

	Spring
WLD 114 Fabrication/Welding 3 <sup>*,D,G</sup> .....	12
CG 203 Human Relations at Work <sup>H</sup> .....	3
<b>Total Credits</b>	<b>15</b>

## Welding Processes

### One-Year Certificate of Completion

	Fall
MTH 076 Applied Geometry for Technicians <sup>*,D,G,M</sup> or higher mathematics .....	4
WLD 121 Shielded Metal Arc Welding 1 <sup>*,D,G</sup> .....	4
WLD 143 Wire Drive Welding 1 <sup>*,D,G</sup> .....	4
<b>Total Credits</b>	<b>12</b>

	Winter
CG 203 Human Relations at Work <sup>H</sup> .....	3
WLD 122 Shielded Metal Arc Welding 2 <sup>*,D,G</sup> .....	4
WLD 154 Wire Drive Welding 2 <sup>*,D,G</sup> .....	4
<b>Total Credits</b>	<b>11</b>

	Spring
WLD 159 Wire Drive Welding 3 <sup>*,D,G</sup> .....	4
WLD 160 Wire Drive Welding 4 <sup>*,D,G</sup> .....	4
WR 115W Introduction to College Writing: Workplace Emphasis W or higher writing.....	3
<b>Total Credits</b>	<b>11</b>

	Fall
WLD 111 Blueprint Reading for Welders <sup>*,D,G</sup> .....	3
WLD 165 Industrial Welding Practices <sup>*,D,G</sup> .....	3
WLD 242 Gas Tungsten Arc Welding 1 <sup>*,D,G</sup> .....	3
<b>Total Credits</b>	<b>9</b>

	Winter
WLD 256 Gas Tungsten Arc Welding 2 <sup>*,D,G</sup> .....	3
WLD 257 Gas Tungsten Arc Welding 3 <sup>*,D,G</sup> .....	3
<b>Total Credits</b>	<b>6</b>

### Welding Elective Courses:

ENGR 280W Co-op Ed: Welding	3 credits
WLD 123 Fabrication/Welding of Metal Art and Crafts *	3 credits
WLD 139 Welding Lab * [Available only as pass/no pass]	1-3 credits
WLD 140 Welder Qualification (Certification): Wire Drive *	3 credits
WLD 141 Welder Qualification (Certification): SMAW *	3 credits
WLD 142 Pipe Welding Lab: Carbon Steel *	3 credits

#### Standard footnotes:

- \* Prerequisite required
- A Meets Arts/Letters requirement
- B Must be passed with grade of "B-" or better to use as a prerequisite
- D Degree or certificate requirement; must be passed with grade of "C-" or better
- G Must be taken for a grade, not P/NP; major requirement

- H Meets Human Relations/Social Science requirement
- M Meets Mathematics requirement
- P Meets PE/Health requirement
- R Required for AAS degree
- S Meets Science/Math/Computer Science requirement
- W Meets Written Communications or English Composition requirement