

Welding Curriculum

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Program Overview

At the center of all industrial and construction expansion are technicians skilled in the art of joining metal. The strength and durability of heavy manufactured goods depend on the skills of welders joining metals with gas-fueled torches and electric-arc processes.

PROGRAM REQUIREMENTS

A.A.S. Major in General Technology, Welding Concentration

Students in the A.A.S. program learn to weld in the four main positions: flat, vertical, horizontal and overhead on both structured steel and pipe. Students are required to meet quality standards through practical weld tests as specified by the American Welding Society and the American Society of Mechanical Engineers Codes and Requirements. These tests ensure that graduates can perform quality work before they go on the job. These skills facilitate the student's entry into the job market, and completing an associate degree can lead to job advancement.

| GENERAL EDUCATION | | CREDIT HOURS |
|------------------------------------|---|--------------|
| ENG 101 | English Composition I | 3.0 |
| | or ENG 165 Professional Con | nmunications |
| Mathematical Requirement | | 3.0 |
| | (MAT 155, 170, 171 or appr 25-26 of the Academic Catal | |
| Social/Behavioral Science Elective | | |
| | (See page 25 of the Academic | Catalog for |
| | a list of courses) | |
| Lab Scien | ce or Mathematics | 3.0 |
| | (See pages 25-26 of the Acad | emic Catalog |
| | for a list of courses) | |
| Humanities/Fine Arts | | |
| | (See page 25 of the Academic | Catalog for |
| | a list of courses) | |

REQUIRED CORE SUBJECT AREAS

| COURSE | S | CREDIT HOURS |
|---------|-------------------------|--------------|
| WLD 102 | Introduction to Welding | 2.0 |
| WLD 103 | Print Reading I | 1.0 |
| WLD 105 | Print Reading II | 1.0 |
| WLD 106 | Gas and Arc Welding | 4.0 |
| WLD 113 | Arc Welding II | 4.0 |
| WLD 115 | Arc Welding III | 4.0 |
| WLD 117 | Specialized Arc Welding | 4.0 |
| WLD 142 | Maintenance Welding | 3.0 |
| | | |

SUBTOTAL: 23.0

OTHER COURSES REQUIRED FOR GRADUATION COURSES CREDIT HOURS

| COCKSE | o . | CREDIT HOURS |
|---------|-----------------------------|--------------|
| MTT 120 | Machine Tool Print Reading. | 3.0 |
| MTT 121 | Machine Tool Theory I | 3.0 |
| MTT 122 | Machine Tool Practice I | 4.0 |
| MTT 143 | Precision Measurement | 2.0 |

SUBTOTAL: 12.0 TOTAL CREDIT HOURS: 62.0

ELECTIVES (MINIMUM OF 12 CREDIT HOURS)

Students may use credits in the Industrial Technology curricula section to develop a third technical specialty or to enhance the primary and secondary specialties.

*Students wishing to pursue an alternate secondary specialty should consult with their Academic Advisor.

D.A.S., Major in Welding

At the center of all industrial and construction expansion are technicians skilled in the art of joining metal. The strength and durability of heavy manufactured goods depend on the skills of welders joining metals with gas-fueled torches and electricarc processes.

Students in the one-year program learn to weld in the four main positions: flat, vertical, horizontal and overhead on both structured steel and pipe. Shop work gives the student practical experience in repair work on cast iron, silver brazing, soldering, stainless steel and aluminum. Before graduation, students are required to meet quality standards through practical weld tests as specified by the

American Welding Society and the American Society of Mechanical Engineers Codes and Requirements. These tests ensure that graduates can perform quality work before they go on the job. Practical experience in welding processes, together with a good foundation in blueprint reading and sketching and the weld ability and properties of metals, prepares the graduate for employment in a variety of industrial and construction settings.

This diploma provides students with a primary technical specialty. Students completing this credential can, by taking selected general education courses and a secondary technical specialty, have the opportunity to obtain an Associate in Applied Science with a major in General Technology. Students should meet with their advisor(s) to select the proper courses to meet their particular educational goals.

GENERAL EDUCATION COURSES

| COURSE | S CREDIT HOURS |
|---------|--|
| ENG 165 | Professional Communications3.0 |
| MAT 170 | Algebra, Geometry and Trigonometry I 3.0 |
| PSY 103 | Human Relations |

SUBTOTAL: 9.0

REQUIRED CORE SUBJECT AREAS

| COURSE | S CREDIT HOURS |
|---------|---------------------------------------|
| WLD 106 | Gas and Arc Welding4.0 |
| | or WLD 102 Introduction to Welding2.0 |
| | and WLD 142 Maintenance Welding3.0 |
| WLD 103 | Print Reading I1.0 |
| WLD 105 | Print Reading II |
| WLD 208 | Advanced Pipe Welding3.0 |
| WLD 212 | Destructive Testing |
| | |

SUBTOTAL: 11.0/12.0

OTHER COURSES REQUIRED FOR GRADUATION

| COURSES | CREDIT HOURS |
|------------------------------------|--------------|
| WLD 113 Arc Welding II | 4.0 |
| WLD 115 Arc Welding III | 4.0 |
| WLD 117 Specialized Arc Welding | |
| WLD 132 Inert Gas Weld Ferrous | 4.0 |
| WLD 136 Advanced Inert Gas Welding | g2.0 |
| WLD 154 Pipefitting and Welding | 4.0 |

SUBTOTAL: 22.0 TOTAL CREDIT HOURS: 42.0/43.0

Basic Welding Certificate

A wide variety of career opportunities are available to students who prepare for actual work situations through practical training in welding processes, blueprint reading and sketching. Students in this program learn to weld in the four main welding positions on plate and pipe using several welding processes. This certificate prepares the graduate for employment in a variety of industrial and construction settings.

REQUIRED COURSE INFORMATION

COURSES

CREDIT HOURS

| CICLDII | Hocks |
|---------|----------------------------|
| WLD 102 | Introduction to Welding2.0 |
| WLD 103 | Print Reading I1.0 |
| WLD 105 | Print Reading II |
| WLD 106 | Gas and Arc Welding4.0 |
| WLD 113 | Arc Welding II4.0 |
| WLD 115 | Arc Welding III4.0 |
| WLD 142 | Maintenance Welding3.0 |
| | |

SUBTOTAL: 19.0 TOTAL CREDIT HOURS: 19.0

>>> Visit www.ptc.edu/welding to learn more.