

## **PROGRAM PLANNING GUIDE**

### **WELDING TECHNOLOGY Associate of Technical Arts Degree Certificate of Completion**

**PROGRAM DESCRIPTION:** The Welding Technology Program is designed to introduce students in all phases of welding and cutting including Oxy-Acetylene, Arc, Gas Tungsten Arc Welding, Dual Shield, Metallic Inert Gas Welding, plasma and oxy-acetylene cutting processes, both manual and automatic feed. Emphasis will be placed throughout the program on the proper setup, safety and use of shop equipment. Lab experience on practical projects such as trailers, tanks, bumpers, home projects and art work will be emphasized, using all types of materials such as cast iron, steel and aluminum.

**PROGRAM OUTCOMES:** South Puget Sound Community College believes that all students need to develop a broad range of abilities that will not only make them more effective in their professional pursuits but will enhance their capacity to relate well to others in their daily lives. Therefore students who complete ATA degrees will be able to:

- Demonstrate the following skills standards specific to Welding Technology:
  - Be able to operate safely a variety of hand and power tools used in metal fabrication; brake, shear, drills, ironworker rolls and power saws.
  - Be able to identify and know characteristics of a variety of metals used in the fabrication industry.
  - Be familiar with the different welding processes: SMAW, GMAW, FCAW and GTAW.
  - Be familiar with the different filler metals for all welding processes and their numbering systems.
  - Be familiar with all thermal metal cutting processes; oxy-acetylene, plasma arc and heating treating.
  - Be able to lay out projects using a minimum of materials and fabrication time.
  - Be able to interpret blueprints and drawings including all weld symbols and specifications.
- Gather information about, understand and explain clearly to others, concepts relevant to successful performance in the field of Welding Technology.
- Think logically and critically and apply these thinking skills to the field of Welding Technology.
- Communicate effectively in oral, written and graphic form.
- Apply fundamental quantitative and computation skills.
- Understand themselves and others as they interact in a global environment.
- Demonstrate skills in dealing with differences and managing interpersonal relationships.
- Understand fundamental ethical issues and their related responsibilities and liabilities.

### **PROGRAM INFORMATION/CONTACTS:**

#### **Admission:**

Applications for admission and financial aid are available in Building 25, Office of Enrollment Services, or call (360) 596-5241. Students are accepted into the Welding Technology Program every quarter.

#### **Length of Program:**

Full-time students typically complete this program in six quarters for a degree, if basic skills are complete. The beginning certificate can be completed in two quarters leading to the intermediate certificate for an additional two quarters. Completing the advanced certificate will take the student to the fifth quarter.

#### **Costs:**

Tuition is subject to change by the State Legislature. Detailed tuition information is available in the quarterly class schedule. Tuition and fees do not include the cost of textbooks and supplies.

#### **Additional Costs:**

Include textbooks plus approximately \$100.00 for personal supplies.

#### **Advisors:**

*John Goss:* (360) 596-5220  
Building 22 - Room 114  
e-mail: jgoss@spscc.ctc.edu

*Chuck Baumgarten:* (360) 596-5220  
Building 22 - Room 114  
e-mail: cbaumgarten@spscc.ctc.edu

#### **Special Program Note:**

Continuing education classes are offered in the evening for everyone, from beginners to journey level wanting to upgrade their skills. These classes are 3 hours per night for eleven weeks and students may take one or two nights per week depending upon their needs.

**PROGRAM REQUIREMENTS:****Basic Skills Requirement:**

English, Reading, or Math may be required based on placement testing. Students are encouraged to complete basic skills requirements at the beginning of their education. Basic skill deficiencies must be completed prior to graduation.

ENGL	097	Basic Writing II	5
READ	097	Analytical Reading II	5
MATH	090	Basic Math II	5

**Associate Degree:**

An Associate of Technical Arts degree will be awarded upon successful completion of a minimum of 90 credits in courses numbered 100 or above. All core and general education list requirements must be met, with any additional credits to be selected as electives.

**Core Requirements:****Day Classes**

FAID	153	Basic First Aid	2
WELD	110	Oxy-Acetylene Welding and Cutting Processes	12
WELD	119	Welding Theory	5
WELD	120	Shielded Metal Arc Welding	12
WELD	130	Flux Core Arc Welding	12
WELD	140	Gas Metal Arc Welding	12
WELD	170	Blueprint Reading for Welders	5

Pick 12 credits from the following 4 options:

WELD	150	Gas Tungsten Arc Welding	6
WELD	155	Gas Tungsten Arc Welding	6
WELD	160	Welding Certification Preparation	6
WELD	165	Welding Certification Preparation	6

**Evening Classes:**

Note: Three 4- credit evening classes are equivalent to one 12- credit day class.

WELD	111	Oxy-Acetylene Welding and Cutting Process I	4
WELD	112	Oxy-Acetylene Welding and Cutting Process II	4
WELD	113	Oxy-Acetylene Welding and Cutting Process III	4
WELD	121	Shielded Metal Arc Welding I	4
WELD	122	Shielded Metal Arc Welding II	4
WELD	123	Shielded metal Arc Welding III	4
WELD	131	Flux Core Arc Welding I	4
WELD	132	Flux Core Arc Welding II	4
WELD	133	Flux Core Arc Welding III	4
WELD	141	Gas Metal Arc Welding I	4
WELD	142	Gas Metal Arc Welding II	4
WELD	143	Gas Metal Arc Welding III	4
WELD	151	Gas Tungsten Arc Welding I	4
WELD	152	Gas Tungsten Arc Welding II	4
WELD	153	Gas Tungsten Arc Welding III	4
WELD	161	Welding Certification Prep I	4
WELD	162	Welding Certification Prep II	4
WELD	163	Welding Certification Prep III	4

**General Education Requirements:**

Complete a minimum of three credits from each of the four categories: Reading/Writing, Listening/Speaking, Computation, and Human Relations. Unless specific courses are listed below, refer to the General Education List for the Associate of Technical Arts/Associate Degree Nursing/Certificate of Completion.

For an ATA, a single course may not be used to satisfy more than one category.

**Communication**

Reading/Writing			
ENGL&	101	English Composition I (formerly WRIT 101)	5

Speaking/Listening	Choose from the General Education List	5
<b>Computation</b>		
MATH 101	Technical Mathematics I	5
<b>Human Relations</b>		
CMST& 230	Small Group Communication (formerly SPCH 115)	5

**Cooperative Work Experience/Internships:**

Cooperative Work Experience is the internship program a South Puget Sound Community College and offers students an opportunity to receive college credit for paid or unpaid work experience related to their educational goals. This program gives students an opportunity to apply their skills while still in college.

The Cooperative Work Experience/Internship Office number is (360) 596-5359. Please call for an appointment.

For more information, contact the Cooperative Work Experience/Internship office at (360) 596-5359 (Bldg 22-204) or at <http://www.spscc.ctc.edu/internship/>

**DIVERSITY REQUIREMENT:** South Puget Sound Community College requires all new students seeking an Associate Degree to complete a “diversity” course which meets the college criteria for listing as a diversity course and has been approved for such listing by the college Instruction Council prior to the student enrolling in the class.

**CERTIFICATE OPTIONS:**

**Beginning Welding Certificate** will be awarded upon completion of WELD 110, WELD 120, WELD 119 and WELD 170.

**Intermediate Welding Certificate** will be awarded with the addition of WELD 130 and WELD 140.

**Advanced Welding Certificate** will be awarded with the addition of WELD 150, WELD 155 and WELD 160.

**OFFICE OF CIVIL RIGHTS COMPLIANCE STATEMENT:** South Puget Sound Community College’s equal opportunity policy prohibits discrimination in our services and in employment against any person on the basis of race or ethnicity, creed, color, national origin, sex, marital status, sexual orientation, age, religion, Vietnam-era or disabled veteran status, or the presence of any sensory, physical or mental disability except in the case of a bona fide occupation qualification. South Puget Sound Community College is an equal opportunity/affirmative action employer and complies with the Americans with Disabilities Act (ADA).

**Effective:** 2007-2008 Academic Year

**Revised:** February 21, 2008