



## THE ASSOCIATE OF APPLIED SCIENCE (A.A.S.)

The Associate of Applied Science Degree is designed for employment purposes, and it should not be assumed that the degree or the courses in the degree can be transferred to another institution. While a few institutions have recently begun to accept some courses in A.A.S. programs, the general rule is that courses in the A.A.S. degree are not accepted in transfer toward bachelor's degrees. Students to whom transfer is important should get assurance in writing in advance from the institution to which they wish to transfer.

**ATTENTION STUDENTS: PLEASE SEE CURRENT CATALOG FOR ALL FEES AND CHARGES ASSOCIATED WITH THIS DEGREE.**

### DEGREE PLAN ASSOCIATE OF APPLIED SCIENCE IN WELDING

#### GAS METAL ARC WELDING EMPHASIS (MIG)

**Degree Code: 3509; CIP Code: 48.0508**

The program is designed to prepare students for careers in welding and metal fabrication. Curriculum for the A.A.S. in Welding Technology degree is based on American Welding Society (AWS) standards. Course content emphasizes both the underlying theory as well as the hands-on repetition needed to build welding proficiency.

#### Student Learning Outcomes for Welding Program

1. Demonstrate safe and proper use of welding, cutting and grinding equipment.
2. Demonstrate sufficient skill and proficiency in the Shielded Metal Arc Welding or Gas Metal Arc Welding or Gas Tungsten Arc Welding process to successfully complete certification requirements in accordance with industry-recognized standards.
3. Demonstrate the ability to make accurate measurements to within 1/16" tolerance using a tape measure and utilize essential mathematic concepts required in the welding, fabrication, and manufacturing industries.
4. Read and interpret fabrication blueprints to create layouts to specifications.
5. Identify and select suitable welding consumable materials and set up and operate welding equipment in such a manner as to produce a quality weld in accordance with established industry standards.
6. Demonstrate the proper procedures for preparing a welding test plate in accordance with established industry standards.
7. Identify the cause of various weld defects including slag inclusions, porosity, undercut and cracking.
8. Produce an acceptable weld to industry standards in the 1G (flat), 2G (horizontal), 3G (vertical up), and 4G (overhead) welding positions.
9. Select the appropriate rod or wire type and shielding element for Gas Metal Arc Welding, Shielded Metal Arc Welding, and Gas Tungsten Arc Welding processes.

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Advisor: \_\_\_\_\_ Student ID# \_\_\_\_\_

<u>COURSE CODE</u>	<u>COURSE NAME</u>	<u>CREDIT HOURS</u>	<u>HOURS COMPLETED</u>
<b>General Education Requirements (18 credit hours)</b>			
CIS	1053 Computer Essentials	3	_____
ENG	1003 Composition I (must earn a "C" or better)	3	_____
ENG	1013 Composition II (must earn a "C" or better)	3	_____
MATH	1103 Technical Math or higher-level mathematics course	3	_____
COMM	1203 Oral Communication	3	_____
<b>Social Science Elective (3 credit hours) (Select 1 Course)</b> (Choose any three credit hour course from ECON 2313, GEOG, HIST, POSC, PSY, <b>OR</b> SOC)			
ECON	2313 Principles of Macroeconomics, <b>OR</b> GEOG, HIST, POSC, PSY, or SOC course	3	_____
<b>Welding Core (26 credit hours)</b>			
MACH	1002 Metallurgy	2	_____
TECH	1012 Employment Strategies	2	_____
TECH	1032 Blueprints and Layouts	2	_____
TECH	1044 Computer Aided Design (CAD)	4	_____
WELD	1024 Shielded Metal Arc Welding (SMAW)	4	_____
WELD	1204 Gas Metal Arc Welding (MIG)	4	_____
WELD	1404 Gas Tungsten Arc Welding (TIG)	4	_____
	Welding Elective (4 credit hour course)	4	_____

<u>COURSE CODE</u>	<u>COURSE NAME</u>	<u>CREDIT HOURS</u>	<u>HOURS COMPLETED</u>
<b>Gas Metal Arc Welding Emphasis (MIG) (16 credit hours)</b>			
WELD 1234	Intermediate Gas Metal Arc Welding	4	_____
WELD 1304	Advanced Gas Metal Arc Welding	4	_____
	Welding Elective (4 credit hour course)	4	_____
	Welding Elective (4 credit hour course)	4	_____
<b>Program Total 60 Hours</b>			