



## WEL141 Gas Metal Arc Welding (GMAW) Syllabus

### Course Information

Credits	3
Campus	Washburn Institute of Technology
Address	5724 SW Huntoon
City/State/Zip	Topeka, Kansas 66604
Office Fax	785-273-7080

### Description

Through classroom and/or lab/shop learning and assessment activities, students in this course will explain gas metal arc welding (GMAW) process, demonstrate the safe and correct set-up of the GMAW work station, correlate GMAW electrode classifications with base metals and joint criteria, demonstrate proper electrode selection and use based on metal types and thicknesses, building pads of weld beads with selected electrodes in the flat position, build pads of weld beads with selected electrodes in the horizontal position, produce basic GMAW welds on selected weld joints, and conduct visual inspection of GMAW welds. Prerequisite: WEL101 (Safety) and WEL135 (SMAW 1).

### Textbooks

none

### Student Learning Outcomes:

- A. Communicate effectively
- B. Integrate technology
- C. Learn effectively
- D. Demonstrate cooperative teamwork skills
- E. Apply safety in the workplace
- F. Think critically and creatively
- G. Demonstrate responsible work ethics

### Competencies

- 1. Set-up operation and shut-down procedures
- 2. Demonstrate surface weld flat position
- 3. Demonstrate surface weld horizontal position
- 4. Demonstrate surface weld vertical position
- 5. Demonstrate surface weld overhead position

## Guidelines for Success

### Assessment Plan

Assessment is an integral part of the educational process at Washburn Tech and accurate feedback is an important tool in continuously improving the institution's technical programs. Students can expect to participate in assessment activities prior to entry into programs, within specific courses and following program completion for specific fields of study.

### Grading Rationale and Grading Scale

#### Rating Scale

- 4 Skilled – can perform task with no additional training
- 3 Moderately skilled – has performed task during training program; limited additional training may be required
- 2 Limited Skill – has performed task during training program; additional training is required to develop skill
- 1 Exposed to content – is familiar with process; no opportunity to develop skill
- 0 No Exposure – not covered

**Directions:** Evaluate the student by checking the appropriate number to indicate the degree of competency reached. Rate each task to reflect employability readiness.

### Attendance

Attendance is required.

### Disability

The Special Support Services (SSS) Office is responsible for assisting in arranging accommodations and for identifying resources at Washburn Institute of Technology for persons with disabilities. Qualified students with disabilities MUST register and provide documentation with the office to be eligible for services. New requests for accommodations should be submitted two months or more prior to the date services should begin; however, contact the SSS Office as soon as a need may arise. Depending on the accommodation request, four to eight week lead time may be needed for timely and effective provision of services. SSS coordinates and assist in arranging services it deems appropriate of eligible students on a case-by-case basis.

If you are a student with a disability that may substantially limit your ability to participate in this class and believe you will need accommodations, it is your responsibility to contact:

Special Support Services Coordinator

Phone: 785-228-6356

E-Mail: [ssscoordinator@washburn.edu](mailto:ssscoordinator@washburn.edu)



