

University of Arkansas - Fort Smith
5210 Grand Avenue
P. O. Box 3649
Fort Smith, AR 72913-3649
479-788-7000

General Syllabus

WELD 24042 GMAW Certification Assessment

Credit Hours: 2 Lecture Hours: 1 Laboratory Hours: 2

Prerequisite: WELD 24044 MIG Welding – Advanced

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Assesses the student's ability to pass certification tests in gas metal arc welding and flux core arc welding by studying the procedures and standards established by the American Welding Society and used in the certification examination.

B. Additional Information

This course is an assessment of the student's ability to pass certification test in Gas Metal Arc Welding and Flux Core Arc Welding process. The assessment will be evaluated on national welding standards and procedures.

II. Student Learning Outcomes

A. Subject Matter

Upon successful completion of this course, the student will be able to:

1. Describe what a welding code is.
2. Discuss the use of WPS (Welding Procedure Specification)/PQR 9Procedure Qualification Record)
3. Describe methods of weld inspection
4. Explain weld joint geometry
5. Complete certification tests

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills: Students must analyze situations and make decisions in materials and techniques and make judgments in accordance with American Welding Society standards.

Quantitative Reasoning: Students must make precision measurements and figure acceptable tolerances within American Welding Society guidelines.

Ethical Decision Making

Students will evaluate work to meet American Welding Society standards and guidelines as well as evaluate how stakeholders are affected by the quality and safety of the finished welds.

III. Major Course Topics

- A. 3G test GMAW
- B. 4G test GMAW
- C. 3G test FCAW Inter-shield
- D. 4G test FCAW Inter-shield
- E. 3G test FCAW Dual-shield
- F. 4G test FCAW Dual-shield