

## SME Course Syllabus Report

**College:** Lakeland Community College

**Specific Course Reviewed:** WELD 1340 Basic FCAW (Flux Cored) and GMAW (MIG/MAG) Welding

**Prepared By:** Charles Cross, Consultant

**Date Completed:** 5/28/18

**Submitted To:** Lorain County Community College

**Consultant Credentials:** Charles Cross has a B.S. in Technology Education, M.Ed. in Technology Education, and is an American Welding Society (AWS) Certified Welding Inspector (CWI), Certified Welding Educator (CWE), and Certified Welding Supervisor (CWS). Mr. Cross gained tenure in public education as an Industrial Arts/Technology Education Instructor prior to his current employment earning a Golden Apple Award. Mr. Cross has been at his current employer, Lincoln Electric for over six years and is currently the Senior Customer Training Instructor at the Welding Technology Training Center. Current focus areas are industrial/educational training around welding and welding technologies.

**Evaluation Method:** The rubric below was used to evaluate that core curricula meets industry standards.

**Review Scale Definitions:**

**0: Evident**

**1: Not Evident**

**N/A: Not Applicable**

<b>1. Program/Course Overview:</b> <i>The overall design of this course is made clear to the student.</i>	<b>Evident</b>	<b>Not Evident</b>	<b>N/A</b>
1.1 The program/course objectives are clearly stated.	X		
1.2 Learning objectives are specific and appropriately designed for course.	X		
1.3 Learning objectives describe outcomes that are measurable.	X		
1.4 Course objectives/outcomes align to an occupational focus	X		
Comments or recommendations: Course objectives are clearly stated and reference the American Welding Society (AWS) as well as AWS D1.1 to support industry relevance. Other codes such as AWS D1.6 Structural Welding Stainless Steel and AWS D1.2 Structural Welding Aluminum may add value.			
<b>2. Resources and Materials:</b> <i>Instruction materials align with stated course objectives and outcomes.</i>	<b>Evident</b>	<b>Not Evident</b>	<b>N/A</b>
2.1 The instructional materials contribute to the achievement of the stated course learning objectives.	X		
2.2 The course materials, activities, and outcomes are relevant/reflect industry workforce development needs.	X		
2.3 The instructional materials on course content provide quality options for different learning styles.	X		
2.4 The learning activities are designed at an appropriate level for the course.	X		
2.5 Equipment/technology support course learning objectives and are relevant to industry.	X		
Comments or recommendations: There is no text book required and upon the discretion of the instructor. It is nice to see a variety of metals for the students to explore.			

<b>3. Learner Activities and Relevancy:</b> <i>Course objectives and outcomes are relevant to students, industry and employers.</i>	<b>Evident</b>	<b>Not Evident</b>	<b>N/A</b>
3.1 Learning objectives describe outcomes that are measurable.	X		
3.2 Course outcomes and objectives provide content that is relevant to industry and employers.	X		
3.3 Instruction, activities, and assignments are relevant to and engaging to students.	X		
3.4 Learning activities align to industry workforce development initiatives.	X		
Comments or recommendations: The ability for students to weld with FCAW and GMAW are relevant to industry and should keep students engaged. Although FCAW and GMAW are different processes, student should not be overwhelmed since this course focuses on welding in the flat and horizontal positions.			
<b>4. Assessment and Measurement:</b> <i>Assessment strategies use established ways to measure effective learning, evaluate student progress by reference, to stated learning objectives, and are designed to be integral to the learning process.</i>	<b>Evident</b>	<b>Not Evident</b>	<b>N/A</b>
4.1 The course evaluation criteria/course grading policy is stated clearly on the syllabus.	X		
4.2 Course-level assessments measure the stated learning objectives and are consistent with course activities and resources.	X		
4.3 Assessments are varied and appropriate to the content being assessed.	X		
Comments or recommendations: The basis for grading contains a variety of assessments to address student competency.			

### Overall Summary:

This course syllabus on Basic FCAW and GMAW is a model and aligns to industry standards. This course combines both GMAW and FCAW, but keeping the welding positions in the flat and horizontal positions to build confidence and not overload student with information. Several references to the American Welding Society are present throughout the course outline supporting industry initiatives. As a recommendation, it may be valuable to add ANSI Z49.1 as topic in the course outline to cover other safety topics not mentioned. Another safety reference that may add value to use is the American Welding Society Safety & Health Fact Sheets. In the course outline, I would suggest adding “Advanced wire feeders” next to “Smart” in Section V, Part A and adding “conventional wire feeders” next to “Dumb feeders” in Section V, Part B. Another recommendation may be to modify course objectives 6 and 7 by adding references to AWS D1.6 for Stainless Steel and AWS D1.2 for Aluminum.

Reviewers Signature: Charles Cross

Date: 5/28/18

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