SME Course Outline Report

College: Lakeland Community College

Specific Course: WELD 1320 Basic SMAW (Stick) Welding

Prepared By: Charles Cross, Consultant

Date Completed: 5/27/18

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

1. Program/Course Overview: *The overall design of this course is made clear to the student.*	**Evident**	**Not Evident**	**N/A**
1.1 The program/course outcomes are clearly stated.	X		
1.2 Prerequisites and/or any competencies are clearly stated.	X		
1.3 Learning outcomes are specific and appropriately designed for course.	X		
1.4 Course outcomes align to an occupational focus.	X		
Comments or recommendations: It is nice to see references from the American Welding Society (AWS) and the American Society of Mechanical Engineers (ASME).			
2. Resources and Materials: *Instruction materials align with stated course outcomes.*	**Evident**	**Not Evident**	**N/A**
2.1 The course materials, activities, and outcomes are relevant/reflect industry workforce development needs.	X		
2.2 The instructional materials on course content provide quality options for different learning styles.	X		
2.3 The learning activities are designed at an appropriate level for the course.	X		
2.4 Equipment/technology support course learning outcomes and are relevant to industry.	X		
Comments or recommendations: It may add value to add the AWS F1-4 numbers next to the electrode group descriptions under section III, Part C, Clause 1-4.			

3. Learner Activities and Relevancy: *Course outcomes are relevant to students, industry and employers.*	**Evident**	**Not Evident**	**N/A**
3.1 Course outcomes provide content that is relevant to industry and employers.	X		
3.2 Instruction, activities, and assignments are relevant and engaging to students.	X		
3.3 Learning activities align to industry workforce development initiatives.	X		
Comments or recommendations: This is course outline is industry relevant since this is a basic SMAW course focusing on the flat and horizontal positions. Students will have the opportunity to be engaged and build confidence before moving to ore advanced positions/applications.			
4. Assessment and Measurement: *Assessment strategies use established ways to measure effective learning, evaluate student progress by reference, to stated learning outcomes, and are designed to be integral to the learning process.*	**Evident**	**Not Evident**	**N/A**
4.1 The course evaluation criteria/course grading policy is stated clearly on the outline.	X		
4.2 Course-level assessments measure the stated learning outcomes 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: Instructional procedure and grading procedures provide a variety options for different learning styles.			

Overall Summary:

This course is a model example of how a Basic SMAW course outline should look. One of the unique options reviewed was the integration of weld quality and examination, theory of the processes and machines, and types of electrodes; all industry relevant. Since this is a basic course outline students master the process in the flat and horizontal positon which is appropriate to build confidence. 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. Under performance indicator 2 and 3, possibly look into change 12 gauge steel to 11 gauge steel since AWS D1.1 2015 is based off 1/8" (3mm) and thicker plate. If not, just change the gauge size to inches to keep it appropriate based off the code being followed. Under performance indicator 5 and 8, butt weld is mentioned which is commonly used in API 1104, but the acceptable weld is to meet D1.1 criteria. For indicator 5, possibly change to butt weld to groove weld in butt joint and indictor 8 possibly change to butt weld to groove weld in butt joint.

Reviewers Signature: *Charles Cross* **Date: 5/27/18**

This work is adapted from the TREND Consortium Curriculum Review, Michigan Coalition for Advanced Manufacturing Subject Matter Expert Course Review, and the South West Arkansas Community College Consortium Syllabus Evaluation, all licensed under the Creative Commons Attribution 4.0 International License.

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