

## SME Course Outline Report

**College:** Lakeland Community College

**Specific Course:** WELD 2330 Advanced GTAW (TIG) Welding

**Prepared By:** Charles Cross, Consultant

**Date Completed:** 6/2/18

**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 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 interesting this course has students not only weld in the 5F position, but the 6F position when following qualification per AWS D1.1. The AWS D1.1:2015 lists that 5F covers qualification in all positions per table 9.9 and 9.13. 6F is listed in AWS A3.0 and not specifically in AWS D1.1:2015, but is relevant to industry.			
<b>2. Resources and Materials:</b> <i>Instruction materials align with stated course outcomes.</i>	<b>Evident</b>	<b>Not Evident</b>	<b>N/A</b>
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: A variety of material for students to weld on in this course aligns with industry standards from steel, stainless, and aluminum. Materials students must furnish are listed in the course description.			

<b>3. Learner Activities and Relevancy:</b> <i>Course outcomes are relevant to students, industry and employers.</i>	<b>Evident</b>	<b>Not Evident</b>	<b>N/A</b>
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: A variety of weld metals and welding positions are in the course outline to keep students engaged.			
<b>4. Assessment and Measurement:</b> <i>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.</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 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: Several forms of instructional and grading procedures are included in this course.			

#### Overall Summary:

This course outline on Advanced GTAW (TIG) Welding aligns to industry standards and is a model for duplication; however the top of the outline states this is a work in process, not yet approved. This course outline allows students to focus on vertical and overhead positions with GTAW. 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 number 6, the student is to follow the visual acceptance quality requirements of AWS D1.1 which deals with 1/8 (3mm) plate and thicker. It may be valuable to reference inspection criteria from other sources such as AWS D9.1: 2012 Sheet Metal Welding Code or AWS D17.1 2010 Specification for Fusion Welding for Aerospace Applications. It may also be valuable to change Section III, Part D "Electrode stick out" to "Arc length" since this is GTAW.

Reviewers Signature: Charles Cross

Date: 6/2/18

*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.*

This workforce solution was funded by a grant awarded by the U.S Department of Labor's Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.



This work is licensed under the Creative Commons Attribution 4.0 International License. It is attributed to Ohio TechNet. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.