Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Welding and Fabrication	231	WAF 231 07/14/2021-Gas Tungsten Arc Welding (GTAW)
College	Division	Department
Advanced Technologies and Public Service Careers	Advanced Technologies and Public Service Careers	Welding and Fabrication
Faculty Preparer		Alexander Pazkowski
Date of Last Filed Assessment Report		

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

   No

2. Briefly describe the results of previous assessment report(s).

   3.

4. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

   5.

II. Assessment Results per Student Learning Outcome

Outcome 1: Perform surface, groove, tee, lap, corner and edge welds in the flat, horizontal, vertical and overhead positions on plate.

- Assessment Plan
  - Assessment Tool: Welded samples
  - Assessment Date: Fall 2019
  - Course section(s)/other population: All
  - Number students to be assessed: All

- How the assessment will be scored: The welds will be scored as pass or fail in accordance with applicable AWS welding codes.
- Standard of success to be used for this assessment: 80% of students will create passing welds in accordance with AWS welding codes.
- Who will score and analyze the data: Departmental faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2019	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
18	18

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

All students were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

The visual acceptance criteria for qualification from each applicable code are applied to the student's welds. When the faculty member has deemed that the student has met the criteria of the code that corresponds to that base material/welding position combination, it is accepted and the information is recorded in the student's booklet. The student may move on to the next weld objective. At the end of the semester, the instructors use the weld information from the student's record and assigns a total score (0-500). That value is recorded on the grade calculation sheet and applied to the final grade. Because of the way the information is gathered, we are unable to identify which of the 60 unique welds/welding position combinations the students completed. In order to pass the class, students must achieve a minimum total welding score. This will be addressed in the intended changes.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No
We cannot tell if the standard of success was met based on individual statistics for that outcome alone. This will be a recommended fix for the next assessment cycle. However, if we take the statistics from the results of the final exam which tests the students' knowledge of the outcome we can deduct that 77% of the students passed. However, this doesn't address the question of whether the standard of success was met or not.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The current criteria we use are based on American Welding Society code. Each instructor looks at the student's submission and determines if the weld will pass the visual assessment criteria on a pass fail basis. If the student fails to give us a weld that meets the criteria given by the code, the weld is rejected and the student must try again until the weld is satisfactory. That being said, there are no measureable strengths or weaknesses as the objective sheets will only show that the student completed the objective.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The standard of success was not met for this objective. However, the way the objective is measured makes it hard to accurately identify areas for improvement as the students are required to repeat the objectives until they pass. A rubric for the assessment of certain objectives would make it easier to identify individual aspects of the acceptance criteria such as excessive face reinforcement, undercut, lack of fusion, and other defects listed in the applicable code. This will allow us to have more accurate results for this outcome in the future.

Outcome 2: Perform welds on carbon steel, stainless steel and aluminum on pipe or tube in the 2F/G, 5F/G and 6F/G positions using the GTAW process.

- Assessment Plan
    - Assessment Tool: Welded samples
    - Assessment Date: Fall 2019

- Course section(s)/other population: All
- Number students to be assessed: All
- How the assessment will be scored: The welds will be scored as pass or fail in accordance with applicable AWS welding codes.
- Standard of success to be used for this assessment: 80% of students will create passing welds in accordance with AWS welding codes.
- Who will score and analyze the data: Departmental faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

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All students were assessed.

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All students were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

The visual acceptance criteria for qualification from each applicable code is applied to the student's welds. When the faculty member has deemed that the student has met the criteria of the code that corresponds to that base material/welding position combination, it is accepted and the information is recorded in the student's booklet. The student may move on to the next weld objective. At the end of the semester, the instructors use the weld information from the student's record and assigns a total score (0-500). That value is recorded on the grade calculation sheet and applied to the final grade.

Because of the way the information is gathered, we are unable to identify which of the 60 unique welds/welding position combinations the students completed. In order to pass the class, students must achieve a minimum total welding score. This will be addressed in the intended changes.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No
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7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The current criteria we use are based on American Welding Society code. Each instructor looks at the student's submission and determines if the weld will pass the visual assessment criteria on a pass fail basis. If the student fails to give us a weld that meets the criteria given by the code, the weld is rejected and the student must try again until the weld is satisfactory. That being said, there are no measureable strengths or weaknesses as the objective sheets will only show that the student completed the objective.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The standard of success was not met for this objective. However, the way the objective is measured makes it hard to accurately identify areas for improvement as the students are required to repeat the objectives until they pass. A rubric for the assessment of certain objectives would make it easier to identify individual aspects of the acceptance criteria such as excessive face reinforcement, undercut, lack of fusion, and other defects listed in the applicable code. This will allow us to have more accurate results for this outcome in the future.

Outcome 3: Perform a corner, groove and tee weld on cast iron and copper in the horizontal and vertical positions.

- Assessment Plan

- Assessment Tool: Welded Samples
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from the student's record and assigns a total score (0-500). That value is recorded on the grade calculation sheet and applied to the final grade.

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8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The standard of success was not met for this objective. However, the way the objective is measured makes it hard to accurately identify areas for improvement as the students are required to repeat the objectives until they pass. A rubric for the assessment of certain objectives would make it easier to identify individual aspects of the acceptance criteria such as excessive face reinforcement, undercut, lack of fusion, and other defects listed in the applicable code. This will allow us to have more accurate results for this outcome in the future.

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

This course was not previously assessed.

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

This course is great as final preparation for students who wish to enter industry as a GTAW welder. However, it is clear that better records need to be kept of the learning outcomes. Also, it is clear that the final written exam and quizzes are not mentioned as assessment tools. This will need to change for future assessments.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

Departmental meetings

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	The final written exam needs to be implemented as an assessment tool for future assessments, and an outcome will be added.	The final written exam is not currently listed as an assessment tool. Therefore, this assessment does not show the students aptitude for the theory of the welding processes covered in this course.	2022
Other: Collecting Student Data	Identify a way to record and track the welds that the student completes, at minimum, by student learning outcome.	The way we are currently recording data doesn't provide enough information for assessment.	2021

5. Is there anything that you would like to mention that was not already captured?

6.

III. Attached Files

Picture of Column Stats for WAF231 Final Exam W19

Faculty/Preparer:	Alexander Pazkowski	**Date:** 08/13/2021
Department Chair:	Bradley Clink	**Date:** 08/13/2021
Dean:	Jimmie Baber	**Date:** 08/19/2021
Assessment Committee Chair:	Shawn Deron	**Date:** 12/01/2021