Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Welding and Fabrication	106	WAF 106 01/05/2016-Blueprint Reading for Welders
Division	Department	Faculty Preparer
Advanced Technologies and Public Service Careers	Welding and Fabrication	Amanda Scheffler
Date of Last Filed Assessment Report		

I. Assessment Results per Student Learning Outcome

Outcome 1: Identify shop tools and equipment and demonstrate proper and safe use of tools and equipment.

- Assessment Plan
    - Assessment Tool: Final Project
    - Assessment Date: Winter 2017
    - Course section(s)/other population: All
    - Number students to be assessed: Random sample of 50% of the students with a minimum of 10.
    - How the assessment will be scored: Departmentally-developed rubric
    - Standard of success to be used for this assessment: 75% of the students will score 80% or higher.
    - 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)
2015		

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

# of students enrolled	# of students assessed
31	14

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.

I do not have access to all 31 students' grades that are generated through CurricUNET. I only have access to the sections I taught on Blackboard. For fall 2015 semester there were 17 students enrolled at the beginning of the semester.

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 who were populated in Blackboard in courses I taught are the student scores that were used to complete this assessment report.

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

The students had to complete a welded project for this course. This includes using the equipment and power tools in the shop to assemble and weld the metal project. A rubric was used to assess this project.

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: Yes
The lowest score was 71%. The highest score was 100%. Fourteen of seventeen enrolled students (82%) completed this assignment. Thirteen of the fourteen (93%) scores were 80% or above. Yes, the standard of success (75% of students will score 80% or higher) was met.

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

The average score for this assignment was 91%. The median score was 93%. There were no safety violations identified. It was observed that students requested assistance in setting up their welding machines for the intended welding process to be used for the project. Overall, the students assessed were strong in properly using the tools required to complete this assignment.

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.

Based on the observation, more time will be spent to emphasize basic welding machine set up per process when lecturing on the chapter in the book that explains welding processes.

Outcome 2: Identify basic lines, views, symbols, notes, specifications and dimensions on a blueprint of a 2-dimensional or 3-dimensional shape.

- Assessment Plan
    - Assessment Tool: Written Exam
    - Assessment Date: Winter 2017
    - Course section(s)/other population: All
    - Number students to be assessed: All
    - How the assessment will be scored: Answer key
    - Standard of success to be used for this assessment: 75% of students will score an average of 80% or higher.
    - 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)
2015		

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

# of students enrolled	# of students assessed
31	14

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.

I do not have access to all 31 students' grades that are generated through CurricUNET. I only have access to the sections I taught on Blackboard. For fall 2015 semester there were 17 students enrolled at the beginning of the semester.

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 who were populated in Blackboard in courses I taught are the student scores that were used to complete this assessment report.

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

Students were given a print and a quiz for this assignment. The assessment tool was an answer key.

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: Yes
The lowest score was 47%. The highest score was 98%. Fourteen of seventeen enrolled students (82%) completed this assignment. Eleven of fourteen students (78%) scored 80% or above. Yes, the standard of success (75% of students will score 80% or higher) was met.

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

The average score for this assignment was 83%. The median score was 92.5%. The other students who scored below 80% the scores were 47%, 49% and 57.5%. Overall, students either did well or very poorly on this quiz. The quizzes with lower scores had more unanswered questions than the other quizzes.

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.

No changes for this outcome are planned at this time.

Outcome 3: Read and interpret blueprints using both ISO and AWS standard requirements.

- Assessment Plan
    - Assessment Tool: Written Exam
    - Assessment Date: Winter 2017
    - Course section(s)/other population: All
    - Number students to be assessed: All
    - How the assessment will be scored: Answer key

- Standard of success to be used for this assessment: 75% of students will score an average of 80% or higher.
- 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)
2015		

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

# of students enrolled	# of students assessed
31	16

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.

I do not have access to all 31 students' grades that are generated through CurricUNET. I only have access to the sections I taught on Blackboard. For fall 2015 semester there were 17 students enrolled at the beginning of the semester.

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 who were populated in Blackboard in courses I taught are the student scores that were used to complete this assessment report.

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

The students were assigned to design a project and draw a print using AWS standards. A rubric was used to assess this assignment.

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: Yes
The lowest score was 92%. The highest score was 100%. Sixteen of seventeen enrolled students (94%) completed this assignment. Thirteen of the 14 (93%) scores were 80% or above. Yes, the standard of success (75% of students will score 80% or higher) was met.

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

For assessment tool number one, the average score for this assignment was 97.5 % and the median score was 98%. For assessment tool number two, the average score was 98% and the median score was 99%. Overall, the students scored extremely well on this assignment. I think this may be a result of the distribution of a rubric which included a list of requirements the students could check off once their project met that requirement.

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.

This course is one of the first courses a student will take in the welding program. I kept that in mind when I developed the rubric and acceptance criteria for this project. My plan for continuous improvement is to narrow the acceptance criteria for the welds and the acceptable tolerance ranges for the project assembly from what this rubric had defined. The area of improvement for this outcome is to incorporate a portion of the assignment to include ISO standards as well as AWS standards. An assessment area of ISO standards was not included in these assessment tools.

Outcome 4: Design detail assembly prints using welding symbols and abbreviations, and construct (weld) basic joints for weldment fabrication.

- Assessment Plan
    - Assessment Tool: Final Project
    - Assessment Date: Winter 2017
    - Course section(s)/other population: All
    - Number students to be assessed: Random sample of 50% of the students with a minimum of 10.
    - How the assessment will be scored: Departmentally-developed rubric
    - Standard of success to be used for this assessment: 75% of the students will score 80% or higher.
    - 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)
2015		

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

# of students enrolled	# of students assessed
31	14

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.

I do not have access to all 31 students' grades that are generated through CurricUNET. I only have access to the sections I taught on Blackboard. For fall 2015 semester there were 17 students enrolled at the beginning of the semester.

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 who were populated in Blackboard in courses I taught are the student scores that were used to complete this assessment report.

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

Students were assigned to design a project and then draw a print for their project within AWS standards. A rubric was used to assess this assignment.

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: Yes
The lowest score was 76%. The highest score was 100%. Fourteen of seventeen enrolled students (82%) completed this assignment. Thirteen of 14 of students (93%) received 80% or above. Yes, the standard of success (75% of students will receive 80% or above) was met.

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

The average score for this assignment was 93%. The median score was 93%. One student scored below the benchmark of 80%. The students were given a rubric

with a list of requirements they could check off to make sure all assessed criteria was included.

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.

I plan to continue to distribute the rubric with a detailed list of assessment criteria. I believe that doing so allowed for students to ensure they did not miss any critical material.

Outcome 5: Interpret and create a welding procedure specification (WPS).

- Assessment Plan
    - Assessment Tool: Written exam
    - Assessment Date: Winter 2017
    - Course section(s)/other population: All
    - Number students to be assessed: All
    - How the assessment will be scored: Answer key
    - Standard of success to be used for this assessment: 75% of students will score an average of 80% or higher.
    - Who will score and analyze the data: Department 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)
2015		

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

# of students enrolled	# of students assessed
31	12

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.

I do not have access to all 31 students' grades that are generated through CurricUNET. I only have access to the sections I taught on Blackboard. For fall 2015 semester there were 17 students enrolled at the beginning of the semester.

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 who were populated in Blackboard in courses I taught are the student scores that were used to complete this assessment report.

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

The students were given a WPS, a copy of AWS B2.1 Section 5 and a quiz referencing the information in the documents. An answer key was used to assess this portion of the assignment.

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
The lowest score was 57.5%. The highest score was 95%. Twelve of seventeen enrolled students (70.5%) completed this assignment. Eight of the twelve students who completed this assignment (66%) scored 80% or above. No, the standard of success (75% of students will score 80% or higher) was not met.

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

For assessment tool number one, the average score for this assignment was 81% and the median score was 85%. For assessment tool number two, the average score was 91% and the median score was 93%. Students did better on the lab activity than on the written assignment.

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.

Students did well on this assignment overall. A little more time could be spent in class explaining and doing exercises on navigation of a code book and how to reference multiple documents to determine an answer. It was noticed that the lower quiz scores also had more answers left blank.

Outcome 3: Read and interpret blueprints using both ISO and AWS standard requirements.

- Assessment Plan
    - Assessment Tool: Lab assignment
    - Assessment Date: Winter 2017
    - Course section(s)/other population: All
    - Number students to be assessed: All
    - How the assessment will be scored: Department rubric
    - Standard of success to be used for this assessment: 75% of students will score an average of 80% or higher.
    - Who will score and analyze the data: Department 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)
2015		

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

# of students enrolled	# of students assessed
31	16

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.

I do not have access to all 31 students' grades that are generated through CurricUNET. I only have access to the sections I taught on Blackboard. For fall 2015 semester there were 17 students enrolled at the beginning of the semester.

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 who were populated in Blackboard in courses I taught are the student scores that were used to complete this assessment report.

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

Students were given a print and were assigned to assemble and weld the project according to the print and AWS standards.

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: Yes
The lowest score was 87%. The highest score was 100%. Sixteen of seventeen enrolled students (94%) completed this assignment. Sixteen of the sixteen (100%) scored 80% or above. Yes, the standard of success (75% of students will score 80% or higher) was met.

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

For assessment tool number one, the average score for this assignment was 97.5 % and the median score was 98%. For assessment tool number two, the average score was 98% and the median score was 99%. Overall, the students scored extremely well on this assignment. I think this may be a result of the distribution of a rubric which included a list of requirements the students could check off once their project met that requirement.

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.

This course is one of the first courses a student will take in the welding program. I kept that in mind when I developed the rubric and acceptance criteria for this project. My plan for continuous improvement is to narrow the acceptance criteria for the welds and the acceptable tolerance ranges for the project assembly from what this rubric had defined. The area of improvement for this outcome is to incorporate a portion of the assignment to include ISO standards as well as AWS standards. An assessment area of ISO standards was not included in these assessment tools.

Outcome 5: Interpret and create a welding procedure specification (WPS).

- Assessment Plan
    - Assessment Tool: Lab assignment
    - Assessment Date: Winter 2017
    - Course section(s)/other population: All
    - Number students to be assessed: All

- How the assessment will be scored: Department rubric
- Standard of success to be used for this assessment: 75% of students will score an average of 80% or higher.
- Who will score and analyze the data: Department 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)
2015		

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

# of students enrolled	# of students assessed
31	14

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.

I do not have access to all 31 students' grades that are generated through CurricUNET. I only have access to the sections I taught on Blackboard. For fall 2015 semester there were 17 students enrolled at the beginning of the semester.

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 who were populated in Blackboard in courses I taught are the student scores that were used to complete this assessment report.

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

A welded project with a rubric was used for this assessment tool. The students were assigned to weld a project in accordance with the print and AWS standards.

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: Yes
The lowest score was 71%. The highest score was 100%. Fourteen of seventeen enrolled students completed this assignment. Thirteen out of fourteen students

(93%) scored 80% or above. Yes, the standard of success (75% of students will score 80% or above) was met.

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

For assessment tool number one, the average score for this assignment was 81% and the median score was 85%. For assessment tool number two, the average score was 91% and the median score was 93%. Students did better on the lab activity than on the written assignment.

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.

Students did well on this assignment overall. A little more time could be spent in class explaining and doing exercises on navigation of a code book and how to reference multiple documents to determine an answer. It was noticed that the lower quiz scores also had more answers left blank.

II. Course Summary and Action Plans Based on Assessment Results

1. 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?

My overall impression about this course is that it is meeting the needs of the students. Nothing really surprised me. I noticed the students who scored lower on the written quizzes used in the assessment tools also scored lower than average on many other quizzes. More time needs to be spent on ISO standards since there is currently a heavy focus on AWS standards. A different lab assignment will be used for outcome 5 assessment tool 2. The acceptance criteria for the welded projects will be narrowed and better defined in the rubrics. The way the WAF department had this Blackboard class set up limited access of data and information to use for assessing purposes. The setup of WAF courses in BB has already been changed to rectify this issue.

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

This information will be shared with Departmental Faculty in the next Department meeting.

3. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Course Assignments	One of the welded assignments will include an ISO standards component.	ISO standards are important for welding personnel to have knowledge of since the welding industry is becoming more globalized.	2018

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

5.

III. Attached Files

Column Stats Open Vessel Print
Column Stats of Open Vessel Project
Column Stats of Week 9 Quiz
Rubrics for Project/Print #2
Column Stats of Weld Print #2
Column Stats of Weld Project #2
Column Stats of WPS Quiz
Rubrics for Open Vessel Project/Print

Faculty/Preparer:	Amanda Scheffler	**Date:**	12/10/2017
Department Chair:	Glenn Kay II	**Date:**	12/12/2017
Dean:	Brandon Tucker	**Date:**	12/27/2017
Assessment Committee Chair:	Michelle Garey	**Date:**	01/29/2018