Course Assessment - Part A: Your Plan

#370

Your Email *	
Please select your course & name from the drop-down menu. If your course or name are incorrect or missing, contact the Curriculum and Assessment Administrative Assistant, 541-506-6037 or ggilliland@cgcc.edu.	MFG 150 - Manufacturing Processes - 1093624 - Robert Clark - Winter 2019
Part A: Your Plan Directions	Perform SMAW 3G and F welds to an apprentice level of welding
1. Choose three of your course outcomes to assess and report on this term (these will also be used in your Student Course Evaluation survey):	
Outcome #1 *	
Outcome #2 *	Demonstrate knowledge of intermediate and advanced welding joints
Outcome #3 *	Create and weld appropriate joints for common manufacturing processes
Have you completed an assessment for this course prior to this term?	No
If yes, are you assessing different outcomes?	No
Comments:	This is my first time doing this type of assessment. I tried to follow the guide accurately. If any changes are necessary please do not hesitate to contact me. Thank you!
2. To which degree(s) or certificate(s) does your course map? Degree, Certificate, & Program Outcomes	• OTHER

Method of Assessment

3. What methods will be used to assess individual student understanding of each of these outcomes? (Please be specific.)

Outcome #1: Method to assess student understanding *

1. Students in the course are assessed using a good/bad welds rubric to begin self-diagnostic and metacognitive weld assessment processes. For SMAW welding in 3G and F students will look closely at puddle control to understand the effect on the end result. By starting in lecture and progressing into active "coaching" in the lab students receive feedback and skills to better their weld quality at every step of the assessment process. All samples produced prior to exams are cut for assessment of interior weld quality and assessed using the good/bad weld quality rubric to make appropriate changes before the next practice sample is produced. All of these assessment strategies are based on AWS code specific welding certification instruments, but with additional leeway given as students are learning each process for the first time.

Once students are prepared for exams the same process is used for assessment. After welding sample fillets are cut in

two places, groove samples are cut in 4 places and the backing plate is cut off on one. This simulates AWS certification testing for both joints, except for the bending procedure that we do not currently have equipment to replicate. In the future the bending procedure will be added and assessment values will be adjusted appropriately.

Points values are assigned for each error- minor errors being 1 point deduction, major errors or slag inclusions found being a 3 point deduction. Students begin each assessment with 12 total points out of 10 before deductions begin to reflect the "Apprentice" level of weld quality and consistency. After the piece is cut, each assessment is individually gone through using the rubric and precision measuring tools (fillet gauge, caliper and micrometer) with the student present to receive feedback and learn their score.

Outcome #2: Method to assess student understanding *

Students learn throughout the course about the different commonly welded joints, and in Manufacturing 150 they are put in to different positions. Students are taught through lecture and demonstration the different joints and types of fixtures that those joints are welded in to. The joints in the class are welded together by students with multiple processes on multiple pieces of equipment. Tools knowledge is integrated and students must use previous learning to create the joint with commonly used manufacturing tools and ensure that it stays in the correct position and angle as it is welded. Students also demonstrate knowledge by reading welding position and joint coding to weld the joint in the appropriate position and angle. Students should also show decision making by picking the joint most appropriate for the end product. Joint specific projects are assessed by accuracy of joint fitment to weld specification.

Outcome #3: Method to assess student understanding *

- 3. When finished joints are assessed by measurement. Total degree of change is recorded to establish the amount of warp that the weld created and the joint fitment is assessed prior to welding. Joint fitment and total warp are assessed after the finished weld sample is completed and cut. Determining if the joint chosen is correct is dependent on the situation that the welder encountered and the placement of the welds on the joint. Assessment of the fitment and warp of the joint is done through measurement with the student present and explaining the choices that
- 4. How will you know if you were successful in your efforts to teach this outcome?

Outcome #1: *

1. Student growth and improvement over the course of the term is the primary goal. That said, the more measurable aspect of this outcome is the amount of identified weld errors and inclusions within the welded joints. Students in this class should aim for 4 or fewer total identified inclusions and identified weld errors as how by the rubric in each of their assessed welds, giving them a total score of 8/10. Of students attending regularly to class, 80% will meet or exceed an 8/10 on their 3G and 3F weldments.

Outcome #2: How will you know if you were successful in your efforts to teach this outcome? *

2. Students will tack weld each of their joints in to the correct position prior to welding. Beyond just a hands-on assessment students will also take a joint test where they must name each type of joint and the position that it is welded in to. This test is assessed out of 20 possible points. Each joint varies in position and type and students must name each joint and type. Students will be successful with an 18/20 or greater, and 85% of the students who attend regularly will meet or exceed an 18.

Outcome #3: How will you know if you were successful in your efforts to teach this outcome? *

3. Again growth is the goal. Starting with 12 total points of twelve students will have points reduced from any errors found during assessment. Joint fitment is assessed as a measure of error from intended / best case joint fitment and finish. For each 2 degrees from intended / actual students are marked down by 1 point. If the joint is welded in the incorrect position it is an automatic retake. The type of weld on the joint is also important. If the weld process sheet calls for a flush weld, one must be made to the correct contour. If the weld is incorrect contoured students will lose one point per weld as such. Of students attending class regularly, 80% should meet or exceed an 8/10 on their joint fitment scores.

5. Instructor Questions: Create two course specific questions to be included on the Student Course Evaluation.

What area did you improve in the most during this course, and why?

Question #1

Question #2

What is one area of improvement that the instructor can make in teaching practice, expectation or course functionality?

Do you require the names of students who complete the course evaluation survey? (Please note: names will be sent to instructors the Thursday before term ends)

Ok!

Reminder, when completing Part B, instructors will be asked the following questions:

Describe anything you did to assist the institutional effort to support students in improving achievement of the specified criteria for the following Core Learning Outcomes (CLO):

- 1. CLO#1 Communication "Sources and Evidence" and/or "Organization and Presentation"
- 2. CLO#2 Critical Thinking/Problem
 Solving "Student Position" and/or "Evaluate
 Potential Solutions"
- 3. CLO#4 Cultural Awareness "Curiosity" (Encouraging our students to "Ask deeper questions about other cultures and seek out answers to these questions")

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