

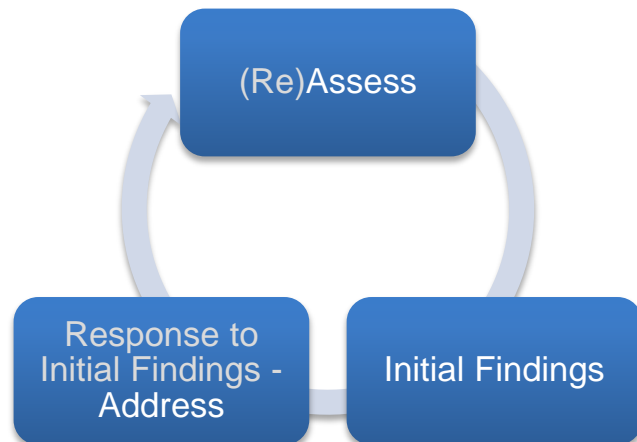
*Subject Area Committee Name:* Welding Technology

*Focal Outcome Being Reassessed:* Function safely in welding environment

*Contact Person:*

<i>Name</i>	<i>e-mail</i>
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Use this form if your assessment project is a follow-up reassessment of a previously completed initial assessment. The basic model we use for core outcome assessment at PCC is an “assess – address – reassess” model.



The primary purpose for yearly assessment is to improve student learning. We do this by seeking out areas of concern, making changes, reassessing to see if the changes helped.

- Refer to the help document for guidance in filling out this report. If this document does not address your question/concern, contact [Wayne Hooke](#) to arrange for coaching assistance.
- Please attach all rubrics/assignments/etc. to your report submissions.
- **Subject Line of Email:** Reassessment Report Form (or RRF) for <your SAC name> (Example: RRF for NRS)
- **File name:** SACInitials\_RRF\_2016 (Example: NRS\_RRF\_2016)
- SACs are encouraged to share this report with their LAC coach for feedback before submitting.
- Make all submissions to [learningassessment@pcc.edu](mailto:learningassessment@pcc.edu).

**Due Dates:**

- **Planning Sections of LAC Assessment or Reassessment Reports: November 28<sup>th</sup>, 2016**
- **Completed LAC Assessment or Reassessment Reports: June 16<sup>th</sup>, 2017**

*Please Verify This Before Beginning this Report:*

- This project is in the second stage of the assess/reassess process (if this is an initial assessment, use the LAC Assessment Report Form CTE. Available [here](#).)*

**Initial Assessment Project Summary (previously completed assessment project)**

*Briefly summarize the main findings of your **initial** assessment. Include either 1 ) the frequencies (counts) of students who attained your benchmarks and those who did not, or 2) the percentage of students who attained your benchmark(s) and the size of the sample you measured:*

In our initial assessment we realized 44% of our students' missed question 16 on our safety test and 30% of our students' missed both questions 6 and 27. Our sample size was all new students (68) to the welding program in Winter 2012.

*Briefly summarize the changes to instruction, assignments, texts, lectures, etc. that you have made to address your initial findings:*

We re-worded the more frequently missed questions.

*If you initially assessed students in courses, which courses did you assess:*

We assessed all new students to our program and not a particular course.

*If you made changes to your assessment tools or processes for this reassessment, briefly describe those changes here:*

No changes were made.

### 1. Outcome Chosen for Focal Analysis

*1A. How does your field interpret the outcome you are reassessing?*

We felt our students' were missing questions representing critical information they should know in order to work in a welding environment.

*1B. If the assessment project relates to any of the following, check all that apply:*

- Degree/Certificate Outcome – if yes, include here: Function safely in a welding environment*
- PCC Core Outcome – if yes, which one: Professional competence*
- Course Outcome – if yes, which one:*

### 2. Project Description

*2A. Assessment Context*

**Check all the applicable items:**

**Course-based assessment.**

Course names and number(s):

Type of assessment (e.g., essay, exam, speech, project, etc.):

Are there course outcomes that align with this aspect of the core outcome being investigated?  Yes  No

If yes, include the course outcome(s) from the relevant CCOG(s):

**Common/embedded assignment in all relevant course sections.** An embedded assignment is one that is already included as an element in the course as usually taught. Please attach the activity in an appendix. If the activity cannot be shared, indicate the

type of assignment (e.g., essay, exam, speech, project, etc.):

**Common – but not embedded - assignment used in all relevant course sections.** Please attach the activity in an appendix. If the activity cannot be shared, indicate the type of assignment (e.g., essay, exam, speech, project, etc.): **exam**

**Practicum/Clinical work.** Please attach the activity/checklist/etc. in an appendix. If this cannot be shared, indicate the type of assessment (e.g., supervisor checklist, interview, essay, exam, speech, project, etc.):

**External certification exam.** Please attach sample questions for the relevant portions of the exam in an appendix (provided that publically revealing this information will not compromise test security). Also, briefly describe how the results of this exam are broken down in a way that leads to nuanced information about the aspect of the core outcome that is being investigated.

**SAC-created, non-course assessment.** Please attach the assessment in an appendix. If the assessment cannot be shared, indicate the type of assignment (e.g., essay, exam, speech, project, etc.):

**Portfolio.** Please attach sample instructions/activities/etc. for the relevant portions of the portfolio submission in an appendix. Briefly describe how the results of this assessment are broken down in a way that leads to nuanced information about the aspect of the core outcome that is being investigated:

**TSA.** Please attach the relevant portions of the assessment in an appendix. If the assessment cannot be shared, indicate the type of assignment (e.g., essay, exam, speech, project, etc.):

**Survey**

**Interview**

**Other.** Please attach the activity/assessment in an appendix. If the activity cannot be shared, please briefly describe:

**In the event publicly sharing your assessment documents will compromise future assessments or uses of the assignment, do not attach the actual assignment/document. Instead, please give as much detail about the activity as possible in an appendix.**

*2B. How will you score/measure/quantify student performance?*

**Rubric** (used when student performance is on a continuum - if available, attach as an appendix – if in development, attach to the completed report that is submitted in June)

**Checklist** (used when presence/absence rather than quality is being evaluated - if available, attach as an appendix – if in

development, attach to the completed report that is submitted in June)

**Trend Analysis** (often used to understand the ways in which students are, and are not, meeting expectations; trend analysis can complement rubrics and checklist)

**Objective Scoring** (e.g., Scantron-scored examinations)

**Other** – briefly describe:

2C. Type of assessment (select one per column)

**Quantitative**

**Direct Assessment**

**Qualitative**

**Indirect Assessment**

If you selected 'Indirect Assessment', please share your rationale:

Qualitative Measures: projects that analyze in-depth, non-numerical data via observer impression rather than via quantitative analysis. Generally, qualitative measures are used in exploratory, pilot projects rather than in true assessments of student attainment. Note that the **use of a numerical rubric is considered quantitative analysis**, even if the artifacts under consideration are not based on quantitative evaluations (e.g. an essay scored by a rubric counts as quantitative in the context of assessment).

Indirect assessments (e.g., surveys, focus groups, etc.) do not use measures of direct student work output. These types of assessments are also not able to truly document student attainment.

2D. Check any of the following that were used by your SAC to create or select the assessment/scoring criteria/instruments used in this project:

Committee or subcommittee of the SAC collaborated in its creation

Standardized assessment

Collaboration with external stakeholders (e.g., advisory board, transfer institution/program)

Theoretical model (e.g., Bloom's Taxonomy)

Aligned the assessment with standards from a professional body (for example, The American Psychological Association Undergraduate Guidelines, etc.)

Aligned the benchmark with the Associate's Degree-level expectations of the Degree Qualifications Profile

Aligned the benchmark to within-discipline post-requisite course(s)

Aligned the benchmark to out-of-discipline post-requisite course(s)

Other (briefly explain: )

2E. In which quarter will student artifacts (samples of student work) be collected? If student artifacts will be collected in more than one term, check all that apply.

- Fall**   
  **Winter**   
  **Spring**   
  **Other** (e.g., if work is collected between terms)

2F. What student group do you want to generalize the results of your assessment to? For example, if you are assessing performance in a course, the student group you want to generalize to is 'all students taking this course.'

All first term welding students

2G. There is no single, recommended assessment strategy. Each SAC is tasked with choosing appropriate methods for their purposes. Which best describes the purpose of this project?

- To measure established outcomes and/or drive programmatic change**  
 **To participate in the Multi-State Collaborative for Learning Outcomes Assessment**  
 **Preliminary/Exploratory Investigation**

If you selected 'Preliminary/Exploratory', briefly describe your rationale for selecting your sampling method:

2H. Which will you measure?

- the population** (all relevant students – e.g., all students enrolled in all currently-offered sections of the course)  
 **a sample** (a subset of students)

If you are using a sample, select all of the following that describe your sample/sampling strategy (refer to the Help Guide for assistance):

- Random Sample** (student work selected completely randomly from all relevant students)  
 **Systematic Sample** (student work selected through an arbitrary pattern, e.g., 'start at student 7 on the roster and then select every 5<sup>th</sup> student following'; repeating this in all relevant course sections)  
 **Stratified Sample** (more complex, consult with an LAC coach if you need assistance)  
 **Cluster Sample** (students are selected randomly from meaningful, naturally-occurring groupings (e.g., SES, placement exam scores, etc.))  
 **Voluntary Response Sample** (students submit their work/responses through voluntary submission – e.g., via a survey)  
 **Opportunity/Convenience Sample** (only some of the relevant instructors are participating)

The last three options in bolded red have a high risk of introducing bias. If your SAC is using one or more of these sample/sampling strategies, please share your rationale:

*2J. Briefly describe the procedure you will use to select your sample (including a description of the procedures used to ensure student and instructor anonymity).*

We collected all the safety tests available and compare each one to determine the more frequently missed questions and collaborate as a sac to determine why these questions are missed.

*2K. Follow this link to determine how many artifacts (samples of student work) you should include in your assessment: <http://www.raosoft.com/samplesize.html> (see screen shot below).*

*Start with the number of students you estimate will be enrolled in the course(s) from which you will draw the sample – that is your “population.” Enter the other numbers as indicated in the screenshot. The sample size calculator will tell you how many artifacts you need to collect. Enter that number below:*

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**Sample size calculator**

What margin of error can you accept?  
5% is a common choice

What confidence level do you need?  
Typical choices are 90%, 95%, or 99%

What is the population size?  
If you don't know, use 20000

What is the response distribution?  
Leave this as 50%

Your recommended sample size is

**10** %

**90** %

**105**

**50** %

**42**

The margin of error is the amount of error that you can tolerate. If 90% of respondents answer yes, while 10% answer no, you may be able to tolerate a larger amount of error than if the respondents are split 50-50 or 45-55. Lower margin of error requires a larger sample size. **Use 10% and 90% in these boxes.**

The confidence level is the amount of uncertainty you can tolerate. Suppose that you have 20 yes-no questions in your survey. With a confidence level of 95%, you would expect that for one of the questions (1 in 20), the percentage of people who answer yes would be more than the margin of error away from the true answer. The true answer is the percentage you would get if you exhaustively interviewed everyone. Higher confidence level requires a larger sample size. **Enter the total number of students currently enrolled in all sections of the courses you are assessing here.**

How many people are there to choose your random sample from? The sample size does not have to be a population larger than 20,000.

For each question, what do you expect the results will be? If the sample is skewed highly one way or the other, the population probably is, too. If you don't know, use 50%, which gives the largest sample size. See below under **More information** if this is confusing. **Measure this many students.**

This is the minimum recommended size of your survey. If you create a sample of this many people and get responses from everyone, you're more likely to get a correct answer than you would from a large sample where only a small percentage of the sample responds to your survey.

### 3. Project Mechanics

3A. Does your project utilize a rubric for scoring?  Yes  No

If 'No', proceed to section B. If 'Yes', complete the following:

Which method of ensuring consistent scoring (inter-rater reliability) will your SAC use for this project?

**Agreement** – the percentage of raters giving each artifact the same/similar score in a norming session; ideally, that will be 75% agreement or greater.

If you are using agreement, describe your plan for plan for conducting the “norming” or “calibrating” session:

**Consensus** - all raters score all artifacts and reach agreement on each score

**Consistency\*** – raters' scores are correlated: this captures relative standing of the performance ratings - but not precise



agreement. Briefly describe your plan:

**Notes:** the agreement method is the most frequently used for assessment, but the **calculation of inter-rater reliability is also among the more challenging issues** within assessment as a whole. If your SAC is unfamiliar with norming procedures, contact your assessment coach, or if you don't know who your coach is, contact LAC Vice Chair [Chris Brooks](#) to arrange for coaching help for your SAC's norming session.

The consistency method is not generally recommended; see the help guide for details.

*3B. Have performance benchmarks been specified?*

The fundamental measure in educational assessment is the number of students who complete the work at the expected/required level. We are calling this SAC-determined performance expectation the 'benchmark.'

- Yes**
- No**

If yes, briefly describe your performance benchmarks, being as specific as possible (if needed, attach as an appendix):

Our students are expected to complete this safety exam with a score of 80% or greater.

If no, what is the purpose of this assessment? (For example, this assessment will provide information that will lead to developing benchmarks in the future; or, this assessment will lead to areas for more detailed study, etc.)

**3C.** The purpose of this assessment is to have SAC-wide evaluation of student work, not to evaluate a particular instructor or student. Before evaluation, remove student-identifying information (and, when possible remove instructor-identifying information). If the SAC wishes to return instructor-specific results, see the Help Guide for suggestions on how to code and collate. **Please share your process for ensuring that all identifying information has been removed.**

The sac chair will collect all of the safety tests and compile all of the data into a spreadsheet.

*3D. Will you be coding your data/artifacts in order to compare student sub-groups?*  **Yes**  **No**

If yes, select one of the boxes below:

- student's total earned hours     previous coursework completed     ethnicity     other

Briefly describe your coding plan and rationale (and if you selected 'other', identify the sub-groups you will be coding for):

*3E. Ideally, student work is **evaluated** by both full-time and adjunct faculty, even if students being assessed are taught by only full-time and/or adjunct faculty. Further, more than one rater is needed to ensure inter-rater reliability. If you feel only one rater is feasible for your SAC, please explain why:*

Who will be assessing student work for this project? Check all that apply.

- PCC Adjunct Faculty within the program/discipline
- PCC FT Faculty within the program/discipline
- PCC Faculty outside the program/discipline
- Program Advisory Board Members
- Non-PCC Faculty
- External Supervisors
- Other:

***End of Planning Section – Complete the remainder of this report after your assessment project is complete.***

***Beginning of End-of-Year Reporting Section – complete the following sections after your reassessment project is complete.***

*4. Changes to the Assessment Plan*

*Have there been changes to your project since you submitted the planning section of this report?*  **Yes**  **No**

*If so, summarize those changes below:*

*5. Narrative*

*Broadly, what did your SAC learn this year from the assessment of the selected core outcome?*

*We learned our safety test still needs some improvements in order for it to be an accurate tool for assessing professional competence.*

## 6. Results of the Analysis of Assessment Project Data

### 6A. Quantitative Summary of Sample/Population

How many students were enrolled in all sections of the course(s) you assessed this year? 59  
 If you did not assess in a course, report the number of students that are in the group you intend to generalize your results to.

How many students did you actually assess in this project? 58

Did you use a recommended sample size (see the Sample Size Calculator linked to in section 2J)?

Yes    No

If you did not use a recommended sample size in your assessment, briefly explain why:

6B. Did your project utilize a rubric for scoring?    Yes    No

If 'No', proceed to section C. If 'Yes', complete the following:

How was inter-rater reliability assured? (Contact your SAC's LAC Coach if you would like help with this.)

- Agreement** – the percentage of raters giving each artifact the same/similar score in a norming session
- Consensus** - all raters score all artifacts and reach agreement on each score
- Consistency** – raters' scores are correlated: this captures relative standing of the performance ratings - but not precise agreement
- Inter-rater reliability was not assured.**

If you utilized agreement or consistency measures of inter-rater reliability, report the level here:

### 6C. Brief Summary of Benchmark Achievement (frequencies and/or averages)

In most cases, report the numbers of students who attain your benchmark level and the numbers who do not. **Do not average these numbers or combine dissimilar categories (e.g., do not combine ratings for communication and critical thinking together).** If your project measures how many students attain the overall benchmark level of performance, report the summary numbers below (choose one):

1. *If you used frequencies of benchmark achievement, report those here. For example, “46 students attained or exceeded the benchmark level in written communication and 15 did not.” If necessary, provide detailed results in an appendix.*
  
2. *If you used percentages of the total to identify the degree of benchmark attainment in this project, report those here. For example, “75% of 61 students attained or exceeded the benchmark level over-all in written communication.”*  
 88% of our 58 students attained or exceeded the benchmark of professional competency as demonstrated by completing the safety exam with a grade at or above 80%.
  
3. *Compare your students’ attainment of your expectations/benchmarks in this reassessment with their attainment in the initial assessment. Briefly summarize your conclusions.*

*6D. If possible, attach a more detailed description or analysis of your results (e.g., rubric scores, trend analyses, etc.) as an appendix to this document. Appendix attached?  Yes  No*

*6E. Do the results of this project suggest that additional academic / training changes might be beneficial to your students (changes in curriculum, content, materials, instruction, pedagogy etc.)?  Yes  No*

*If you answered ‘Yes,’ briefly describe the changes to improve student learning below. If you answered ‘No’, detail why no changes are called for.*

The Sac needs to look at our safety training process and ensure critical information is being addressed. Additionally we need to review our test to clear up any vague or misleading questions.

*If you are planning changes, when will these changes be fully implemented?*

Winter 18

6F. Has all identifying information been removed from your documents? (Information includes student/instructor/supervisor names/identification numbers, names of external placement sites, etc.)  Yes  No

### 7. SAC Response to the Assessment Project Results

7A. Assessment Tools & Processes: Indicate how well each of the following worked for your assessment:

Tools (rubrics, test items, questionnaires, etc.):

very well  some small problems/limitations to fix  notable problems/limitations to fix  completely inadequate/failure

Please comment briefly on any changes to assessment tools that would lead to more meaningful results if this assessment were to be repeated (or adapted to another outcome).

In order to continue to use our safety test as a means to assess professional competence we need to clean up more of the frequently missed questions.

Processes (faculty involvement, sampling, norming, inter-rater reliability, etc.):

very well  some small problems/limitations to fix  notable problems/limitations to fix  tools completely inadequate/failure

Please comment briefly on any changes to assessment process that would lead to more meaningful results if this assessment were to be repeated (or adapted to another outcome).

No changes to report

### 8. Follow-Up Plan

8A. How will the changes detailed in this report be shared with all FT/PT faculty in your SAC? (select all that apply)

- |  |  |                                   |
|--|--|-----------------------------------|
| <input type="checkbox"/> email               | <input type="checkbox"/> phone call                      | <input type="checkbox"/> workshop |
| <input type="checkbox"/> campus mail         | <input checked="" type="checkbox"/> face-to-face meeting | <input type="checkbox"/> other    |
| <input type="checkbox"/> no changes to share |  |                                   |

If 'other,' please describe briefly below.

8B. Is further collaboration/training required to properly implement the identified changes?  Yes  No

If 'Yes,' briefly detail your plan/schedule below.

We need to review our program entry safety test to ensure all vital information is being covered.

8C. Sometimes reassessment projects call for additional reassessments. These can be formal or informal. How will you assess the effectiveness of the changes you plan to make?

- |   |   |
|---|---|
| <input type="checkbox"/> follow-up project in next year's annual report | <input type="checkbox"/> on-going informal assessment |
| <input checked="" type="checkbox"/> in a future assessment project      | <input type="checkbox"/> other                        |

If 'other,' please describe briefly below.

8D. SACs are learning how to create and manage meaningful assessments in their courses. This development may require SAC discussion to support the assessment process (e.g., awareness, buy-in, communication, etc.). Please briefly describe any successful developments within your SAC that support the quality assessment of student learning. If challenges remain, these can also be shared.

The Welding Sac has done a lot of work recently to update our curriculum to better suit both industry needs and student's success. The assessment process helps this development by ensuring we're creating meaningful focal outcomes that align with the college's core outcomes.