

Subject Area Committee Name: Architectural Drafting & Design

Focal Outcome Being Assessed:

AAS in Architectural Drafting & Design Core Outcome Number 2:

Produce architectural drawings using a range of computer-aided drafting software.

AAS in Architectural Drafting & Design Core Outcome Number 3:

Select and recommend building systems, structural systems, construction materials, and structural components responsive to the building's design.

Contact Person:

<i>Name</i>	<i>e-mail</i>
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This form is for the initial assessment of a focal outcome.

- Refer to the help document for guidance in filling out this report. If this document does not address your question/concern, contact [Nora Stevens](#) to arrange for coaching assistance.
- Please attach all rubrics/assignments/etc. to your report submissions.
- **Subject Line of Email:** Assessment Report Form (or ARF) for <your SAC name> (Example: ARF for NRS)
- **File name:** SACInitials_ARF_2018 (Example: NRS_ARF_2018)
- SACs are encouraged to share this report with their LAC coach for feedback before submitting.

- Make all submissions to learningassessment@pcc.edu.

Due Dates:

- **Planning Sections of LAC Assessment or Reassessment Reports: November 27th, 2017**
- **Completed LAC Assessment or Reassessment Reports: June 16th, 2018**

Please Verify This Before Beginning this Report:

X This project is not the second stage of the assess/reassess process (if this is a follow-up, re-assessment project, use the LAC Re-assessment Report Form CTE. Available [here](#)).

1. Outcome Chosen for Focal Analysis

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

AAS in Architectural Drafting & Design Core Outcome Number 2:
Produce architectural drawings using a range of computer-aided drafting software.

AAS in Architectural Drafting & Design Core Outcome Number 3:
Select and recommend building systems, structural systems, construction materials, and structural components responsive to the building's design.

Please note that our assessment seeks to provide a multitude of outcomes; these 2 (of 6) degree outcomes are probably the most pertinent, since they comprise what's reflected in students' portfolios as they seek employment upon (and prior to) graduation.

Certainly, there are many specific and wide-ranging skillsets that students must demonstrate prior to taking either of these studios. Nothing in the Initial Assessment (ARF) or this Reassessment (RRF) reports addresses those. It is our goal to focus these assessments on those who are about to enter the workforce; we feel this provides an insight into the most pertinent question we can pose, namely 'how well are we preparing our people for finding, and succeeding at, work?'

It may be worth mentioning that all of our recent graduates have found employment upon completion of the program, as we are confident in their skills and the job market is humming.

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

X Degree/Certificate Outcome – if yes, include here:

The 2nd and 3rd degree outcomes in the AAS in Architectural Design & Drafting degree are spelled out immediately above in 1A.

X *PCC Core Outcome – if yes, which one:*

Professional Competence:

Demonstrate and apply the knowledge, skills and attitudes necessary to enter and succeed in a defined profession or advanced academic program.

X *Course Outcome – if yes, which one:*

Upon successful completion of these courses, students should be able to create a set of construction documents including structural analysis and design of structural systems for a new single-family residence or duplex.

Exploratory Outcome – if yes, briefly describe: N/A

2. Project Description

2A. Assessment Context

Check all the applicable items:

X **Course-based assessment.**

Course names and number(s): ARCH 201 and ARCH 203

Type of assessment (e.g., essay, exam, speech, project, etc.): Term-long design project

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

If yes, include the course outcome(s) from the relevant CCOG(s): Upon successful completion of the ARCH 201 and 203 courses, students should be able to: - Apply design development strategies to a new single-family residence/duplex and remodel design - Create a set of construction documents including structural analysis and design of structural systems for a new single-family residence/duplex and remodel design.

X **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.): The final project in both classes is a complete set of construction documents.

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.):

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.):

Please see attached file.

Survey

Interview

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

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)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Quantitative | <input checked="" type="checkbox"/> Direct Assessment |
| <input type="checkbox"/> Qualitative | <input type="checkbox"/> 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 calculations (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 students taking the courses: we collect a complete drawing set from each student for whom the course (Fall ARCH 201 or Spring 203) is their final studio.

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' (most often a 'pilot study'), briefly describe why you opted to do a pilot study, along with 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 5th 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 a few instructors are participating in a project taught via multiple sections, so, only those instructors' students are included)

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:

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

All students taking the courses: we collect a complete drawing set from each student for whom the course (ARCH 201 or 203) is their final studio. These students are near-graduates and are already applying for, and finding, work in the field.

2J. 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 doesn't matter for populations 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):

Performance benchmarks are addressed through a scoring worksheet that measures ability and consistency across each student's drawing set and in individual categories (site plans, floor plans, framing/foundation plans, elevations, sections/details, overall consistency and neatness). The maximum score of each individual student assessment is 80, across 15 sub-categories. A passing score entails 60+.

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). Please share your process for ensuring that all identifying information has been removed.

We replace students' names with randomly assigned numbers, and input only those numbers for our in-house documenting. TSA protocol also asks that we remove all student identifying information: they want only student G numbers. This is the first column in the XLSX form we're attaching.

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 assessment 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 X No

If so, summarize those changes below:

5. Narrative

Broadly, what did your SAC learn from the assessment of the focal outcome under consideration this year?

We've had a consistently high percentage of students meeting the benchmarks over the past several years. A recent change in the ARCH 201 course from single-family to duplex design was important, as it better prepares our people for employment in the Portland market. Students' abilities and talents have not been affected by that change. The bulk of our students have the core abilities required to succeed in the field, though there are the occasional exceptions.

We've recently (prior to Fall 2017 term) brought on a new full-time instructor, Rebeca Cotera. She taught the Spring 2018 ARCH 203 (one of the two studios comprising the assessment); this translates into our students receiving something of a wider perspective than they may have had in the past, as variety in instruction is always a positive.

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? 16
 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? 16

Did you use a recommended sample size (see the Sample Size Calculator linked to in section 2J)? Yes X **No**

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

Our program is too small to warrant the use of a random sampling; we are compelled to gauge the work of each student who completes the studios. In the 2015-16 cycle, this was 22 students. In the 2016-17 cycle, it was 18 students. In the 2017-18 cycle it is 16 students. We are expecting a higher than usual enrollment in the coming Fall 2018 ARCH 201 class, so this number will be higher in the future. That said, we will continue to measure the population.

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

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

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

- Agreement** – the percentage of raters giving each artifact the same/similar score in a norming session
- X **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 Your Results

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.*

In this 2017-18 assessment cycle, 15 of 16 students attained the benchmark level of 60 set by the scoring worksheet for Degree Outcome Objectives 2 and 3.

In the 2016-17 assessment cycle, 14 of 18 students attained this benchmark level.

In the 2015-16 assessment cycle, 16 of 22 students attained this benchmark level.

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.”*

In this 2017-18 assessment cycle, 15 of 16 students (93.75%) attained the benchmark level of 60 set by the scoring worksheet for Degree Outcome Objectives 2 and 3.

In the 2016-17 assessment cycle, 14 of 18 students (77.78%) attained this benchmark level.

In the 2015-16 assessment cycle, 16 of 22 students (72.73%) attained this benchmark level.

6D. *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 academic 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 studio projects form the backbone of learning in this program, and student engagement (and satisfaction) are high.

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

6F. *Has all identifying information been removed from your documents? (Information includes student/instructor/supervisor names/identification numbers, names of external placement sites, etc.)* X **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.):

X *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).

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

very well X *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):

I would like to see a broader involvement by more people in the department: however, most are adjuncts, and it is nearly impossible to get them to commit beyond the cursory.

I have good discussions with an adjunct, Dorothy Payton, on assessments, but it seems time goes by and we don't close the loop on things as much as either one of us would like.

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)*

- email
- campus mail
- no changes to share
- phone call
- face-to-face meeting
- workshop
- other

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.

8C. Re-assessment is a critical part of the overall assessment process. This is especially important if academic changes have been implemented. How will you assess the effectiveness of the changes you plan to make?

- follow-up project in next year's annual report
- in a future assessment project
- on-going informal assessment
- 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.

As a small CTE program, it often seems that all SAC work falls upon one person, and that that one person is left on an island. When we have SAC meetings on In-Service days, very few non-FT faculty members attend, and while they generally seem to understand the role the SAC plays, there is very little follow-through with the things important to the full-timers (like myself) here. It seems an inevitable by-product of institutional form.

I've asked for input from colleagues many times on the sorts of things they've revised or updated in their courses, and I rarely hear anything back. It's tiring hearing the 'we're so busy' refrain time after time. In end effect, the SAC is a one-person committee. This is again front and center as I prepare for the upcoming November 2018 Program Review: I expect I'll have some difficulties hearing back from most of our adjuncts on the sorts of things they've done/revised/improved over the past 5 years since our last Program Review in December 2013.

On the plus side, we have recently hired a new full-time person for the department (our first such hire since 2010), and she has added a certain energy and fresh perspective.