5. **Program Effectiveness – Outcomes Assessment**

5.1 **Learning outcomes assessment procedures**

A requirement of the University is to provide Expected Learning Outcomes (ELOs) and Outcomes Assessments (OAs) for all programs of academic study as well as individual courses. As a part of our curriculum re-imagination, we are in the process of rewriting our ELOs as well as providing additional layers of assessment to ensure that the new curriculum is appropriately taught (see Appendix J for a current draft of our program ELOs). In addition to tracking student information (recruitment, quality of students, retention, graduation rates), and employer satisfaction (through our advisory committee, extensive contact with and surveys of our professional community, and the participation of local professionals in the review of student work throughout the semester), the data and information sources used to assess outcomes include year-end individual student exit surveys conducted by the Chair, online evaluations of all courses (administered by the University), surveys completed by jurors for the final capstone studios, and the end-of-semester all-faculty reviews of student work. Additionally, in February and March 2014, in preparation for our curriculum re-imagination project, then SoA Associate Chair Mimi Locher conducted four discussions – one each with members of the professional community, students, faculty, and adjunct faculty – to define the “ideal Utah architectural graduate.”

In addition, with the new curriculum we are in the process of formalizing our semester assessments of ELOs by incorporating our end-of-semester all-faculty reviews into a two-phase assessment process in which we assess ELOs at the beginning of each semester and then use the faculty review to gather, analyze, and interpret evidence of actual outcomes. The following proposal is a draft that will be vetted by the faculty during the 2018-19 academic year.

**Assessing Expected Learning Outcomes**

Before the beginning of each semester, department faculty and instructors will provide the Chair with syllabi for the courses they will teach. The Chair then will organize a workshop in which faculty are grouped according to their areas of expertise. Groups will evaluate the syllabi based on the mapping of objectives as developed in the new curriculum.
The working groups will:
1) discuss how to map specific expected learning outcomes onto courses based on the new curriculum/objective plans;
2) identify gaps in how current course offerings fulfill learning outcomes across their area; and
3) make proposals to the faculty on how to fill those gaps and further develop their syllabi.

In the course of teaching and student assessment, faculty will evaluate whether learning outcomes have been met and bring this analysis to the end-of-semester retreat.

AND

Systematically Gathering, Analyzing, and Interpreting Evidence
Taking into consideration the program’s professional accreditation process for evaluating student performance, the faculty has developed a feasible assessment process to provide useful ongoing feedback for necessary curricular adjustments and future resource planning.

At the end of each semester, the faculty will perform a direct summative evaluation. Direct proof of learning is concrete, observable, clear evidence of what students have or have not learned. Summative assessment will take place after the completion of each semester and be used for documenting and presenting student learning outcomes to internal and/or external stakeholders.

The process will entail staggering the assessment of one or two student learning outcomes per semester over a three-semester period. Each semester, appraisal of the selected learning outcomes will occur through an end-of-semester retreat in which student work for specific courses that are expected to cover the selected learning outcome will be presented and assessed by the full faculty. Faculty teaching courses selected for review will present examples of both low and high achieving student projects as well as their grading rubrics for assessment and discussion. In addition to quantitative evaluation from grading rubrics, this entails employing a qualitative analysis that is more flexible and naturalistic in searching for recurring patterns and themes. The goal is not precision in measurement but truthful information about what students have learned and how it is manifest in the design, communication, and analysis of their projects and papers.
Student learning assessment will occur after the semester is over and will be independent from the instructor’s individual assessment of a student’s work. To ensure further anonymity and confidentiality, the faculty presenting the work will remove students’ names and any other potential identifiers from assignments.

5.2 Outcomes assessment feedback

In summer 2018, the SoA Chair and Associate Chair conducted a series of teaching development workshops for the first time to help implement the roll-out of the new curriculum. This series of four workshops was designed to enhance our innovative new undergraduate and graduate curricula, engage faculty and instructors with important pedagogical theories and practices, and assist them with writing syllabi and assessment rubrics to ensure that the ELOs conceived for the new curriculum were a central guiding aspect of the development of new courses. These workshops were for all SoA tenured, tenure-track, career-line, and adjunct faculty teaching in the 2018-19 academic year.

The workshop schedule and topics were as follows:

SoA Teaching Training Series, Part I:
Curriculum re-imagination overview, pedagogical theories and practices (learning objectives and outcomes, transparency, accessibility, power dynamics, etc.), introduction to syllabus writing.

SoA Teaching Training Series, Part II:
Syllabus workshop (peer to peer review) – introduction to writing assessment rubrics. Faculty were asked to bring complete drafts of course syllabi.

SoA Teaching Training Series, Part III:
Assessment rubrics workshop (peer to peer review) – review of writing assessment rubrics. Faculty were asked to bring drafts of assessment rubrics for course assignments.

SoA Teaching Training Series, Part IV:
TA and faculty mentoring – Faculty who have a TA assigned to their course were requested to be prepared to meet with the TA (to bring a description of the TA’s duties). TAs were present for TA training and discussion with faculty. Faculty without an assigned TA met with other faculty in their teaching area to continue curriculum discussions.
Parts II and III were specifically designed to allow for the assessment of the ELOs and their relationship to syllabus development. Overall, the teaching training series was very successful. Faculty and instructors explored the importance of ELOs for their courses, and during the training series syllabi were developed with appropriate ELOs and with projects and assignments designed to provide students with fitting opportunities to learn and illustrate their mastery of the ELOs. As we move forward with the new curriculum, we will continue to offer our training series. However, once the pedagogical theories and practices are fully adopted as a part of our teaching culture, the series may be less extensive and more focused on assessing the ELOs and their role in structuring syllabi and learning activities.

Our end-of-semester all-faculty reviews of student work are a long-standing method of evaluating the effectiveness of our curriculum. One clear concrete example of how this method works is sequence of reviews that we conducted leading up to our most recent NAAB accreditation in 2016. We focused on particular Student Performance Criteria (SPCs) required for professional accreditation for each review. This allowed the faculty to prepare for the accreditation by assigning SPCs appropriately and developing particular assignments and rubrics to ensure that student work showed evidence of meeting SPCs. Our Design Development studio was created as a direct result of this process.

After evaluating student work in graduate level studios in our end-of-semester evaluation in the spring of 2015, the faculty determined that there was not adequate evidence to meet several SPCs required by NAAB. As a solution, a working group of faculty was created to design a course and a series of exercises that would allow students to show their mastery of building codes, skin assemblies, large scale wall sections, and project scheduling and delivery. In our new curriculum, this Design Development studio has developed into our Professional Integration Studio, which in the spring 2019 semester will be focused on integrating the conceptual design process and professional design development processes that allow students to understand the requisite consultation with allied trades including engineers, codes, contractors, etc. In the Professional Integration Studio, both studio and the building systems application course are given equal weight and coordinated throughout the semester to ensure that students are capable of designing and developing buildings from conception to delivery.

5.3 Degree completion data

See Table 5.1 for graduate degree completion/attrition data.
The data provided by the Office of Budget and Institutional Analysis (OBIA) for Table 5.1 seems mostly accurate, although the number of students in cohort remaining in graduate program for 2015-16 and 2016-17 and the number of students in cohort who completed the master’s degree in 2016-17 seem inaccurate (and discussions with OBIA yielded no new information on this discrepancy). The SoA experiences very low attrition in the graduate program, particularly in the two-year program and in the 3+ program after the second semester. The attrition that does occur typically happens during the first (summer) semester of the 3+ program. Please note that the data in Table 5.1 is somewhat distorted by including both the two-year and 3+ Master of Architecture degree students in the same cohort, even though their average time to complete the master’s program and their years of graduation are different.

Table 5.1: Graduate Degree Completion/Attrition Data
School of Architecture 2011-2018

<table>
<thead>
<tr>
<th>Entering Student Cohort Academic Year</th>
<th>Number of students newly enrolled in master’s programs</th>
<th>Number of students in cohort who left before completing master’s degree</th>
<th>Number of students in cohort who completed master’s degree</th>
<th>Average time (in semesters) to complete master’s degree*</th>
<th>Number of students in cohort remaining in graduate programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-12</td>
<td>41</td>
<td>2</td>
<td>39</td>
<td>4.9</td>
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<tr>
<td>2012-13</td>
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<td>5</td>
<td>29</td>
<td>5.27</td>
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<tr>
<td>2013-14</td>
<td>33</td>
<td>3</td>
<td>30</td>
<td>5.6</td>
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<tr>
<td>2014-15</td>
<td>35</td>
<td>2</td>
<td>30</td>
<td>5.6</td>
<td>0</td>
</tr>
<tr>
<td>2015-16</td>
<td>32</td>
<td>3</td>
<td>29</td>
<td>4.3</td>
<td>8</td>
</tr>
<tr>
<td>2016-17</td>
<td>23</td>
<td>4</td>
<td>15</td>
<td>4.73</td>
<td>19</td>
</tr>
<tr>
<td>2017-18</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>29</td>
</tr>
</tbody>
</table>

*The 3+ M.Arch degree is a seven-semester program, and the two-year M.Arch is a four-semester program.*
5.4 Employment

Data from 2015 shows that employment demand for recent architecture graduates and intern architects was good, with 98% of employers reporting moderate to very strong demand for this group nationally (http://www.acsa-arch.org/images/default-source/data/acsa-atlas-2015-05.jpg?sfvrsn=0). Since that time, the national economy has continued to grow about 2-2.5% annually, and average Architecture Billing Index (ABI) scores for the first part of 2017 exceeded those from the previous two years (http://www.acsa-arch.org/images/default-source/data/acsa-atlas-2015-05.jpg?sfvrsn=0). The ABI score for June 2018 showed growth for the ninth consecutive month, according to information from the American Institute of Architects (https://www.aia.org/press-releases/205031-june-architecture-firm-billings-stay-positi), which suggests that 2018 will be the eighth consecutive year of growth. Forecasts are cautiously optimistic, with similar growth as in 2018 projected for 2019 and 2020 (https://www.aia.org/articles/205181-despite-emerging-economic-concerns-construc).

This trend is reiterated locally, with a March 2018 article from Utah Business stating, “Utah’s construction industry is faced with the challenge of plentiful work with no sign of slowing” (https://utahbusiness.com/industry-outlook-construction-2/). In the “2018 Economic Report to the Governor,” the Kem C. Gardner Policy Institute of the University of Utah states, “Utah’s construction sector posted the highest job growth in 2017, 5.4 percent, fueled by both robust residential and commercial activity. The value of permit authorized nonresidential construction was $2.4 billion in 2017 led by a record-setting $520 million in new office construction.” The report also echoes other data sources by forecasting that Utah will continue to be one of the highest performing economies in the country (http://gardner.utah.edu/economics/economic-report-to-the-governor/).

Data from the Bureau of Labor Statistics from May 2017 shows that employment for architects in Utah remains strong, with a mean salary of $63,350 and a mean hourly wage of $31.42 (https://www.bls.gov/oes/current/oes171011.htm). This correlates to graduate student exit interview data collected by the SoA Chair in spring 2017 and 2018. For both years the average post-graduation starting salary was $52,000 and the average hourly wage was about $18.00. In spring 2018 all domestic graduate students who actively sought employment had no difficulty finding a job in the Salt Lake area. As a matter of fact, the majority of domestic graduate students (94% of those interviewed) were working an average of 15.5 hours per week at local architecture firms during the academic year – with some students regularly working as many as 30 hours per week.