# Part 1

**PROGRAM STUDENT LEARNING OUTCOMES (PSLO’s)**

**B.S. Construction Science**

<table>
<thead>
<tr>
<th>Student Learning Outcome 1</th>
<th>Students completing a B.S. in Construction Science will demonstrate their ability to apply their leadership skills to create a proposal that represents a collaborative interdisciplinary team problem solution.</th>
</tr>
</thead>
</table>
| **Method(s) of Assessment** | **Direct Measure AND Number of Students Assessed (Required)**  
Course project proposal submission  
10 students assessed  
**Performance Target**  
70% or better  
**Describe rubric criteria and scales (if applicable)**  
Students were evaluated based on the following criteria:  
1. Accuracy and completeness of proposed construction specific solutions for building constructability, quality assurance, cost estimate, project schedule, and site logistics plan as required of problem statement  
2. Integration of construction solution with design team members’ solutions  
3. Accuracy and completeness of team’s proposal  
4. Written presentation, oral presentation, and ability to collaborate.  
Students were evaluated on a weighted scale of 1 – 10 for each category  
**Indirect Measure AND Number of Students Completing Surveys**  
An online Likert-type survey was used to measure student perception about their ability to be leaders in the construction industry.  
10 students completed the survey  
**Expected Target**  
Majority of students will agree, or strongly agree, that the program prepares them to apply their leadership skills in a collaborative interdisciplinary team project. |
| **Assessment Results** | **Direct Measure(s):**  
70% of students achieved a 70% or better performance evaluation  
**Indirect Measure(s):**  
90% of students agree, or strongly agree, that the program is preparing them to be leaders. |
| **Use of Results** | The senior level interdisciplinary project recurs annually during the spring semester. Results will be used to develop and deliver additional instruction about collaborative teaming and leadership of collaborative teams. Specifically additional instruction will focus on understanding of roles, responsibilities, deadlines, accountability, and communication. |
| **Student Learning Outcome 2** | Students completing a B.S. in Construction Science will demonstrate their ability to apply current construction technology to analyze and create solutions for typical construction problems. |
| **Method(s) of Assessment** | **Direct Measure AND Number of Students Assessed (Required)**  
Course mid-term assignment requiring an architectural model and construction schedule for 3D site logistics planning and 4D simulation.  
10 students assessed  
**Performance Target**  
70% or better  
**Describe rubric criteria and scales (if applicable)**  
Students were evaluated based on the following criteria:
1. Accuracy and completeness of architectural model, site logistics, schedule, and 4D simulation.
2. Valid BIM and 4D sequence
3. Feasible 3D site logistics
4. Oral presentation
5. Quality of deliverables

### Indirect Measure AND Number of Students Completing Surveys

An exit survey was used to measure student perception about the integration of construction technology in the classroom.

10 students completed the survey

**Expected Target**

Majority of students will agree, or strongly agree, that the program is integrating construction technology in the classroom.

### Assessment Results

**Direct Measure(s):**

90% of students achieved a 70% or better performance evaluation

**Indirect Measure(s):**

70% of students agree, or strongly agree, that the program is integrating construction technology in the classroom.

### Use of Results

Results will be used to increase the number of courses in which construction technology is introduced, reinforced, and applied to appropriate projects and problem solving activities.

### Student Learning Outcome

Students completing a B.S. in Construction Science will demonstrate technical competencies required of construction industry professionals.

### Method(s) of Assessment

**Direct Measure AND Number of Students Assessed (Required)**

American Institute of Constructors Associate Constructor (AC) Level 1 certification exam was used to measure the following areas of competency:

1. Communication skills
2. Engineering concepts
3. Management concepts
4. Materials, methods, and project modeling and visualization
5. Bidding and estimating
6. Budgeting, costs, and cost control
7. Planning, scheduling, and schedule control
8. Construction safety
9. Construction geomatics
10. Project administration

10 students assessed

**Performance Target**

70% or better

**Describe rubric criteria and scales (if applicable)**

Rubric criteria and scales established by external certification exam

**Indirect Measure AND Number of Students Completing Surveys**

Majority of students will be satisfied, or extremely satisfied, with the construction specific knowledge gained from the program.

10 students completed the survey

**Expected Target**

Majority of students will be satisfied, or extremely satisfied, with the program education in areas of technical competencies.
60% of students achieved a 70% or better exam score.

*Indirect Measure(s):*
70% of students are satisfied, or extremely satisfied, with the construction specific knowledge gained from the program.

| Use of Results | The program believes students’ low scores may reflect aspects of measurement error attributable to timing of the exam. The exam is currently administered late (April) in the spring semester of the senior year. Effective AY 2016-2017 the exam will be administered in the fall semester of the senior year. Score results will be reviewed and future actions taken to improve performance based on fall 2016 areas of weakness identified by the exam results. |

### Part 2

**PROGRAM EDUCATIONAL OUTCOMES (PEO’s)**

**Construction Science**

<table>
<thead>
<tr>
<th>Program Educational Outcome 1</th>
<th>Students will be employed in the construction industry at the time of graduation.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Method(s) of Assessment</strong></td>
<td><strong>Measure</strong></td>
</tr>
<tr>
<td></td>
<td>Student informational form</td>
</tr>
<tr>
<td><strong>Expected Target</strong></td>
<td>90% of students will be employed in the construction industry upon graduation.</td>
</tr>
<tr>
<td><strong>Assessment Results</strong></td>
<td>90% of students reported accepting an offer for full-time employment in the construction industry at the time of graduation.</td>
</tr>
<tr>
<td><strong>Use of Results</strong></td>
<td>Results will be used to continue expanding the number and diversity of companies recruiting students from the program.</td>
</tr>
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<thead>
<tr>
<th>Program Educational Outcome 2</th>
<th>Graduates of the program will rate the effectiveness of the educational content as above average.</th>
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</thead>
<tbody>
<tr>
<td><strong>Method(s) of Assessment</strong></td>
<td><strong>Measure</strong></td>
</tr>
<tr>
<td></td>
<td>Online Likert-type survey</td>
</tr>
<tr>
<td><strong>Expected Target</strong></td>
<td>Majority of respondents will rate the effectiveness of educational content as above average.</td>
</tr>
<tr>
<td><strong>Assessment Results</strong></td>
<td>100% of respondents rated the effectiveness of the program's educational content as above average.</td>
</tr>
<tr>
<td><strong>Use of Results</strong></td>
<td>Results will be used to continue monitoring program educational content.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program Educational Outcome 3</th>
<th>1 year alumni will be satisfied, or extremely satisfied, with the education received from the program.</th>
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</thead>
<tbody>
<tr>
<td><strong>Method(s) of Assessment</strong></td>
<td><strong>Measure</strong></td>
</tr>
<tr>
<td></td>
<td>Online Likert-type survey with text boxes for additional comments.</td>
</tr>
<tr>
<td><strong>Expected Target</strong></td>
<td>Majority of 1 year alumni participating in the survey will report being satisfied, or extremely satisfied, with their education.</td>
</tr>
<tr>
<td><strong>Assessment Results</strong></td>
<td>86% of participants reported being satisfied, or extremely satisfied, with their education.</td>
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<tr>
<td><strong>Use of Results</strong></td>
<td>Results from survey will be supplemented with participants’ recommendations for program improvements.</td>
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