Appendix I

Bachelor Degree Program Objectives Assessment
Plans and Results
Southern Polytechnic State University

Construction Management

Program Objectives Assessment Plans and Results

**Mission:** The mission of the Construction Management Department is to prepare students for professional construction leadership positions, with a sense of ethical and environmental responsibility, and prepare them for advanced degree programs.

The long term and short term program objectives are given in the following table. It also indicates the metrics methods and assessment tools used to assess the progress made towards the accomplishment of the program objectives.

**Table I: Program Objectives and Assessment Plan**

<table>
<thead>
<tr>
<th>Long Term Program Objective (LPO)</th>
<th>Short Term Program Objective (SPO)</th>
<th>Program Objective Metric (POM)</th>
<th>Assessment Tool</th>
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</thead>
<tbody>
<tr>
<td>LPO1: Continue to update curriculum to reflect global and national construction industry needs.</td>
<td>SPO1: Prepare students for successful construction industry career.</td>
<td>POM1: Achievements of PLOs</td>
<td>• Capstone Project Evaluation by Industry Panel.</td>
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<td>• Under Graduate Students Exit Surveys</td>
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</table>
| SPO2: Offer courses to prepare students for global and national construction industry needs | POM4: Revise Course Content: Use feedback from students, alumni, industry professionals and revise the existing courses to reflect the current industry trends. **POM5**: Curriculum Changes: Introduce new courses in the curriculum to reflect the current industry trends. | • Current Students Feedback – Course SIRS  
• Current Students Feedback: Under Graduate Students Exit Surveys.  
• Alumni Feedback: Alumni survey.  
• Industry Feedback: Employer survey. |
| SPO3: Fulfill accreditation agency requirements for curriculum. | POM6: Maintain Accreditation and Curriculum matrix. **POM7**: Continue Outcomes assessment for each course | • ACCE self-study  
• Course Level Outcomes Assessments |
| LPO2: Improve managerial/business skills of students to take leadership roles | SPO1: Prepare students for successful construction industry career. **POM1**: Achievements of PLOs | • Capstone Project Evaluation by Industry Panel.  
• Under Graduate Students Exit Surveys  
• Alumni survey |
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<td>SPO4: Encourage undergraduate student to participate in student competitions, industry events, and various professional chapter meetings.</td>
<td><strong>POM8:</strong> Involvement of students in participation of students competitions, professional student chapter meetings</td>
<td></td>
<td>Names of Competition Teams</td>
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<td>Names of Active Student Chapters.</td>
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</tbody>
</table>
LPO 1: Continue to update curriculum to reflect global and national construction industry needs.

SPO 1: Prepare students for successful construction industry career.

POM1: Achievements of PLOs - Achievements of PLOs are used as indicators to access the progress towards the achievement of program objectives. PLOs achievements are assessed from students, alumni, industry professionals through capstone evaluation, faculty and alumni employers.

Findings:

<table>
<thead>
<tr>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
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<tr>
<td>Target</td>
<td>Achieved</td>
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<tr>
<td>PLO1</td>
<td>3.75</td>
<td>3.73</td>
<td>4.25</td>
<td>4.08</td>
<td>4.00</td>
</tr>
<tr>
<td>PLO2</td>
<td>3.75</td>
<td>3.73</td>
<td>4.25</td>
<td>4.08</td>
<td>4.00</td>
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<tr>
<td>PLO3</td>
<td>3.75</td>
<td>3.75</td>
<td>4.25</td>
<td>4.31</td>
<td>4.00</td>
</tr>
<tr>
<td>PLO4</td>
<td>3.75</td>
<td>N/A</td>
<td>4.25</td>
<td>4.15</td>
<td>4.00</td>
</tr>
<tr>
<td>PLO5</td>
<td>3.75</td>
<td>3.93</td>
<td>4.25</td>
<td>4.23</td>
<td>4.00</td>
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<tr>
<td>PLO6</td>
<td>3.75</td>
<td>N/A</td>
<td>4.25</td>
<td>4.77</td>
<td>4.00</td>
</tr>
<tr>
<td>PLO7</td>
<td>3.75</td>
<td>N/A</td>
<td>4.25</td>
<td>4.38</td>
<td>4.00</td>
</tr>
</tbody>
</table>

RCNB: Refer to Course NoteBook

**Targets are shown in Red. Results are shown in Blue.**

M1: Major Course Level Outcomes Assessments
M2: Capstone Project Evaluation by Industry Panel
M3: Under Graduate Students Exit Surveys
M4: Alumni survey
M5: Alumni Employer survey
M6: Participation in competition teams, industry events and chapter meetings

PLO1: Estimate construction project implementation costs
PLO2: Produce construction project implementation schedules
PLO3: Carryout construction project management related tasks
PLO4: Demonstrate people skills to function as a team player
PLO5: Demonstrate communication ability with construction project team members
PLO6: Demonstrate capability to pursue advanced degree programs
PLO7: Analyze ethical, social and environmental responsibility of construction professionals
**Action Plan:** CM faculty teaching the courses will be presented with the results of the assessment. CM faculty will develop and implement plans to make any needed improvements. Faculty will continue to monitor the performance of the students to identify any problems associated with achieving the outcome. CM faculty will continue to support students teams and encourage them to involve in various activities.

<table>
<thead>
<tr>
<th>LPO1 - SPO1 – POM2</th>
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**LPO 1:** Continue to update curriculum to reflect global and national construction industry needs.

**SPO 1:** Prepare students for successful construction industry career.

**POM2:** Providing Employment opportunities to Graduating students – This is assessed through

- Under Graduate Students Exit Survey Question # 4: *If you have a job upon graduation, do you feel that the skills/knowledge that you acquired at SPSU helped you obtain this position? If "yes", what specifically stood out as being the most important?*

- Under Graduate Students Exit Survey Question # 18: *Did the program provide adequate opportunities to meet with potential employers?*

- Alumni survey Question # 13: *Did the skills/knowledge that you acquired at SPSU help you obtain your first employment after graduation?*

- Alumni Employer survey Question # 14: *Would you hire another SPSU CM graduate when there is a need?*

**Findings:**

- Under Graduate Students Exit Survey Question # 4:
• Under Graduate Students Exit Survey Question # 18:

If you have a job upon graduation, do you feel that the skills/knowledge that you acquired at SPSU helped you obtain this position? If "yes", what specifically stood out as being the most important?

Did the program provide adequate opportunities to meet with potential employers?
• Alumni survey Question # 13:

Did the skills/knowledge that you acquired at SPSU help you obtain your first employment after graduation?

- Yes
- No

• Alumni Employer survey Question # 14

Would you hire another SPSU CM graduate when there is a need?

- Yes
- No - provide additional comment below
**Action Plan:** CM department continues the efforts to increase the potential employment opportunities to students with the help of industry advisory board.

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**LPO1 - SPO1 – POM3**

**LPO 1:** Continue to update curriculum to reflect global and national construction industry needs.

**SPO 1:** Prepare students for successful construction industry career.

**POM3:** Career growth of the Alumni – This is assessed through

- Alumni survey Question #15: *From an overall perspective how would you compare yourself with other CM school graduates who work for your firm in the following key areas?* (estimating, scheduling, project management/leadership, safety planning, accounting/finance, computer applications & use, blueprint & spec reading)

- Employer survey Question #13: *Do you agree that the education that your SPSU Alumni graduate received has provided them with adequate skills and training to hold positions of higher responsibility within your organization?*

- Employer survey Question #15: *From an overall perspective how would you compare your SPSU CM graduates versus other CM school graduates who work for your firm in the following key areas?* (estimating, scheduling, project management/leadership, safety planning, accounting/finance, computer applications & use, blueprint & spec reading) If you have employed SPSU graduates in the past but do not have any currently employed, please answer this question by comparing those SPSU graduates that used to work for your firm versus those from other schools.

**Findings:**

- Alumni survey Question #15:
From an overall perspective how would you rate the performance?

- Much Better than others
- Better than others
- Comparable
- Worse than others
- No basis of comparison

Percentage distribution:
- Much Better than others: 35.0%
- Better than others: 40.0%
- Comparable: 25.0%
- Worse than others: 15.0%
- No basis of comparison: 10.0%
Employer survey Question #13:

Do you agree that the education that your SPSU Alumni graduate received provided them with adequate skills and training to hold positions of higher responsibility within your organization?

[Pie chart showing the percentage of respondents who agree and disagree.]

Employer survey Question #15:

[Bar chart showing the distribution of responses to the question of how much better or worse the SPSU Alumni graduates were compared to others.]

Much Better than others
Better than others
Comparable
Worse than others
No basis of comparison
**Action Plan:** CM faculty teaching the courses will be presented with the results of the assessment. CM faculty will develop and implement plans to make any needed improvements. Faculty will continue to monitor the performance of the students to identify any problems associated with achieving the outcome. CM faculty will continue to support students teams and encourage them to involve in various activities.

| LPO1 – SPO2 – POM4 |

**LPO 1:** Continue to update curriculum to reflect global and national construction industry needs.

**SPO 2:** Offer courses to prepare students for global and national construction industry needs

**POM4:** Revise Course Content - Seek the industry needs from Graduating Students, Alumni, Alumni Employer, and Industry Advisory board. Use feedback from students, alumni, industry professionals and revise the existing courses to reflect the current industry trends. Feedback is obtained through

- Under Graduate Students Exit Survey Question # 14: *Please rank the following skills as they relate to the future of the construction industry:*

- Alumni survey Question #18: *Looking to the future of the construction industry, what skill sets do you believe are the most important as it relates to future graduates being competitive and successful in the construction industry? Rank the following skills on a scale from 1-5 with “1” being very low and “5” being very high.*

- Employer survey Question #17: *Looking to the future of the construction industry, what skill sets do you believe are the most important as it relates to future graduates being competitive and successful in the construction industry? On a scale from 1-5 with “1” being very low and “5” being very high, please assess the following skills of SPSU graduates who work for you.*

**Findings:**

- Under Graduate Students Exit Survey Question # 14:
Please rank the following skills as they relate to the future of the construction industry:

1. Writing Skills
2. Oral Presentation Skills
3. Computer based project management applications
4. Design/Build (BIM) modeling & applications
5. Computer based estimating
6. Computer based scheduling
7. Understanding & applying LEED principles
8. Financial Planning
9. Leadership & Management
10. Marketing Skills
11. Risk Management
12. Business Skills
• Alumni survey Question #18:

Looking to the future of the construction

- Business Operation Skills
- Risk Management Skills
- Marketing Skills
- Leadership/Management Skills
- Financial Planning Skills
- Understanding & applying LEED principals Skills
- Computer based scheduling Skills
- Computer based estimating Skills
- Building Information Modeling (BIM)
- Design Build
- Computer based project management..
- Communication Skills

0.00 1.00 2.00 3.00 4.00 5.00

• Employer survey Question #17:

Looking to the future of the construction industry, what skill sets do you believe are

- Business Operation Skills
- Risk Management Skills
- Marketing Skills
- Leadership/Management Skills
- Financial Planning Skills
- Understanding & applying LEED principals Skills
- Computer based scheduling Skills
- Computer based estimating Skills
- Building Information Modeling (BIM)
- Design Build
- Computer based project management..
- Communication Skills

0.00 1.00 2.00 3.00 4.00 5.00
**Action Plan:** CM faculty teaching the courses related to this program level outcome will be presented with the results of the assessment. CM faculty will develop and implement plans to make any needed improvements. Faculty will continue to monitor the performance of the students to identify any problems associated with achieving the outcome.

**LPO1 – SPO2 – POM5**

**LPO 1**: Continue to update curriculum to reflect global and national construction industry needs.

**SPO 2**: Offer courses to prepare students for global and national construction industry needs

**POM5**: Curriculum Changes: Introduce new courses in the curriculum to reflect the current industry trends.

- Under Graduate Students Exit Survey Question # 14: *Please rank the following skills as they relate to the future of the construction industry:*

- Alumni survey Question #18: *Looking to the future of the construction industry, what skill sets do you believe are the most important as it relates to future graduates being competitive and successful in the construction industry? Rank the following skills on a scale from 1-5 with “1” being very low and “5” being very high.*

- Employer survey Question #17: *Looking to the future of the construction industry, what skill sets do you believe are the most important as it relates to future graduates being competitive and successful in the construction industry? On a scale from 1-5 with “1” being very low and “5” being very high, please assess the following skills of SPSU graduates who work for you.*

**Findings:**

- Under Graduate Students Exit Survey Question # 14:
Please rank the following skills as they relate to the future of the construction industry:

1. Writing Skills
2. Oral Presentation Skills
3. Computer based project management applications
4. Design/Build (BIM) modeling & applications
5. Computer based estimating
6. Computer based scheduling
7. Understanding & applying LEED principles
8. Financial Planning
9. Leadership & Management
10. Marketing Skills
11. Risk Management
12. Business Skills
Alumni survey Question #18:

**Action Plan:** To address industry needs a new BIM course is added to the curriculum. LEED courses are introduced as Electives. Additionally, CM faculty teaching the courses will be presented with the results of the assessment. CM faculty will develop and implement plans to make any needed improvements. Faculty will continue to monitor the performance of the students to identify any problems associated with achieving the outcome. CM faculty will continue to support students teams and encourage them to involve in various activities.
• Employer survey Question #17:

Looking to the future of the construction industry, what skill sets do you believe are

- Business Operation Skills
- Risk Management Skills
- Marketing Skills
- Leadership/Management Skills
- Financial Planning Skills
- Understanding & applying LEED principals Skills
- Computer based scheduling Skills
- Computer based estimating Skills
- Building Information Modeling (BIM)
- Design Build
- Computer based project management...
- Communication Skills

0.00 1.00 2.00 3.00 4.00 5.00

LPO1 – SPO3 – POM6

LPO1: Continue to update curriculum to reflect global and national construction industry needs.

SPO3: Fulfill accreditation agency requirements for curriculum.

POM6: Maintain Accreditation and Curriculum matrix – Maintain accreditation from ACCE and include ACCE curriculum matrix requirements in the courses.

Findings: Program maintains accreditation.

Action Plan: CM department maintains ACCE accreditation.

LPO1 – SPO3 – POM7

LPO1: Continue to update curriculum to reflect global and national construction industry needs.

SPO3: Fulfill accreditation agency requirements for curriculum.
POM7: Continue Outcomes assessment for each course – Each faculty continues to monitor the achievement of outcomes and take appropriate actions as needed.

**Findings:** Refer to course notebooks

**Action Plan:** CM faculty teaching the courses will be presented with the results of the assessment. CM faculty will develop and implement plans to make any needed improvements. Faculty will continue to monitor the performance of the students to identify any problems associated with achieving the outcome.

<table>
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<th>LPO2 – SPO1 – POM1</th>
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<tr>
<td><strong>LPO2:</strong> Improve managerial/business skills of students to take leadership roles</td>
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<td><strong>SPO1:</strong> Prepare students for successful construction industry career.</td>
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<tr>
<td><strong>POM1:</strong> Achievements of PLOs - – Same as POM1 under LPO1 SPO1 section.</td>
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<td><strong>Findings:</strong> Same as POM1 under LPO1 SPO1 section.</td>
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<tr>
<td><strong>Action Plan:</strong> Same as POM1 under LPO1 SPO1 section.</td>
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<tr>
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<td><strong>Action Plan:</strong> Same as POM2 under LPO1 SPO1 section.</td>
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<tr>
<td><strong>POM3:</strong> Career growth of the Alumni – Same as POM3 under LPO1 SPO1 section.</td>
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</table>
**Findings:** Same as POM3 under LPO1 SPO1 section.

**Action Plan:** Same as POM3 under LPO1 SPO1 section.

**LPO2 – SPO4 – POM8**

**LPO2:** Improve managerial/business skills of students to take leadership roles

**SPO4:** Encourage undergraduate student to participate in student competitions, industry events, and various professional chapter meetings.

**POM8:** Involvement of students’ participation in students competitions, and professional student chapter meetings – This is assessed through the number of teams participating in various student competitions and number of active student chapters.

**Findings:** Students Participation in various student competitions and number of active student chapters has been increased from past. Refer to Appendix V for details.

**Action Plan:** CM faculty will continue to support students teams and encourage them to involve in various activities.