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Executive Summary

The intent of the Academic and Outcome Assessment Plan is to provide feedback on the progress of the CM Department in addressing Key Objectives 1 and 2 of the Department Strategic Plan.

Key Objective 1: Assure excellence in academic programs.
Key Objective 2: Create distinctive undergraduate experiences.

This report is used for accreditation and to determine progress in addressing these objectives. To this end the Assessment Committee designed and implemented an Academic Quality and Outcome Assessment Plan (Assessment Plan) in 2012. As part of this process, the Assessment Committee collects data and recommends action plans based on the data analysis. The following tools are utilized to collect assessment data from a variety of sources and gain input from various CM stakeholders:

- AIC – AC (Level 1) Exam
- Alumni Survey
- ASCSU Course Survey
- Employer Survey
- Open Forum
- PADB Undergraduate Curriculum Committee
- PRISM
- Senior Capstone Course
- Senior Exit Survey

Once collected, the Assessment Committee reviews, summarizes and analyzes the data from each assessment tool both separately and collectively. Based on this analysis, the Assessment Committee proposes action plans that reflect Key Objectives 1 and 2 identified above. These recommendations are made available to all department faculty and staff for their consideration via the department website and during department meetings. This report contains summaries of the data collected during the 2013-2014 academic year, the Assessment Committee’s recommended action plans, and updates to previously recommended action plans from prior assessment reports. Summaries 2013 – 2014 data and recommended action plans are provided below. Previous action plans are contained in the report, but are not included in this Executive Summary.

AIC – AC (Level 1) Exam:

No new action items resulted from this review cycle. The following actions are carried over from the last review cycle after they being put on hold due to changes in the American Institute of Constructors (AIC) – Associate Constructor (AC) Level 1 Exam. Previous recommendations were:

- Review the revised AIC – AC Level 1 Exam content and structure, when released, to determine if it fits with the Department’s and ACCE’s student learning outcomes (SLOs).
- Contact the AIC to request a presentation for the PADB membership about the purpose of their organization, the AIC certification program, and the AIC – AC Level 1 Exam.
• Review AIC - AC (Level 1) exam to determine alignment of exam content with CSU CM Curriculum.
• Review material included in the AIC exam to identify content areas where CSU students score below either the AIC passing score or the national average for consecutive semesters.

**Employer Survey Results:**
• Continue to monitor Construction Surveying and Layout (CON 261).
• Continue to target a new hire with experience in MEP disciplines.
• Revise the Employer Survey to align with new ACCE SLOs.

**Senior Exit Survey:**
• Review and revise, as appropriate, the CM Department’s evaluation criteria for students’ confidence level related to each course.
  o Based on overlaps between the Senior Exit Survey and the Employer Survey responses, it is recommended that the course objectives for the following courses be presented and discussed at a CM Department meeting: CON 131 Graphic Communications/CAD
  o CON 261 Surveying Layout and Control
  o CON 360 Electrical and Control Systems
  o CON 371 Mechanical & Plumbing Systems
• Revise Senior Exit Survey to align with new ACCE SLOs.

**PADB Undergraduate Curriculum Committee:**
There were no new action plans recommended by the PADB Undergraduate Curriculum Committee since they have finished reviewing all of the undergraduate courses.

**ASCSU Course Surveys:**
• Review how information from ASCSU Course Surveys can be used in the Assessment Plan without violating confidentiality.
• The following recommended actions were carried forward for inclusion in the next department curriculum review cycle. It is recommended that the Curriculum Committee review the course objectives for the following courses to ensure that they are current and that any identified issues are being addressed:
  o CON 352: Quantify and estimate all direct and indirect costs associated with fabrication of a steel structure.
  o CON 459: Recognize and evaluate safety issues related to temporary support structures.
  o CON 471: Possess an understanding and an awareness of project management skills to provide an effective, efficient and coordinated mechanical project.
Senior Capstone Course Quiz:

- Revise Senior Capstone Course Quiz to assess the new ACCE SLOs.
- Distribute a summary of students’ performance on the capstone quiz to faculty in the department to help them understand how well students retain course content.

Alumni Survey:

- The schedule for administering the Alumni Survey has been changed from every year to every five years for the following reasons: (1) to lessen the impact on alumni, (2) to avoid participant fatigue, and (3) to make better use of department resources.
- Revise and update the Alumni Survey in preparation for when it is next administered in Spring 2016.

Open Forum:

- Re-evaluate how the open forum is utilized in the formal assessment process.

PRISM (now University Assessment):

- Chair of the Assessment Committee should attend Campus Labs training and ACCE SLO training during the 2015 ASC Conference.
- PRISM will be replaced with Campus Labs in next report.
- Review ACCE SLOs during the annual fall retreat.
AIC Associate Constructor (Level 1) Exam

Students in the CON 465 Capstone course are encouraged, but not required, to take the American Institute of Constructors (AIC) Associate Constructor (Level 1) certification exam. This exam is intended for individuals entering the construction field with four years of qualifying experience and/or education (AIC Website, 2013). The 300 question, eight-hour exam gauges academic proficiency in 10 key areas of the CM profession. The ten categories covered in the exam are:

I. Communication Skills 13%
II. Engineering Concepts 5%
III. Management Concepts 12%
IV. Materials, Methods, and Project Modeling and Visualization 10%
V. Bidding and Estimating 12%
VI. Budgeting, Costs, and Cost Control 12%
VII. Planning, Scheduling, and Schedule Control 12%
VIII. Construction Safety 7%
IX. Construction Geomatics 2%
X. Project Administration 15%

Results

Fall 2013 - Spring 2014: There is an overall decline in the number of students taking and passing the AIC exam. The Senior Capstone (CON 465) policy was revised to allow students to use their AIC Exam results to replace the final exam regardless of their score on the AIC exam. In previous semesters, students had to pass the AIC exam to use it as a replacement for the CON 465 Final Exam. In addition to a decline in the percentage of CSU students passing the AIC exam, there is also a decline in the percentage of CSU students electing to take the AIC exam (Figures 1, 2 and Table 1). This decline was discussed at the Fall 2014 Department retreat. Possible reasons for the decline were identified based on informal feedback received from students. Reasons included: increase in cost of AIC exam, lack of employer awareness of the AIC exam/certification, the time during semester when exam is offered and general lack of student motivation to take exam. This lack of motivation on the students’ behalf appears to result from feedback they are receiving from employers/industry on what the exam is and what value it adds to their education. Employers were also surveyed to get an indication of their level of awareness of and the value they place on AIC – AC Level 1 Certification when making hiring decisions. It was found that the majority of employers did not know about the certification and therefore, placed very little value on Certification when hiring students. Additionally, the time during the semester when the exam is offered tends to fall after students have already accepted job offers, decreasing their
motivation to pay for, study for and take the exam. The following graphs and tables are provided to show trends of CSU CM students taking the AIC – AC Level 1 exam compared to the national data for the last five years (Figures 1, 2 and Table 1).

Figure 1. CSU CM Students Taking and Passing AIC Exam (Fall 2008 – Spring 2014).
Figure 2. Percentage of Capstone students taking and passing AIC Exam (Fall 2008 – Spring 2014).

Table 2 shows the average score for CSU CM students and the national average for each of the 10 categories along with the minimum passing score required for each category. Failing scores are starred. Only data from Fall 2013 is considered in this report. Data from Spring 2014 is
presented but not reviewed since only 7 CSU CM students took the exam that semester. The CSU average was below passing in two categories in Fall 2013 (Table 2): Engineering Concepts and Construction Geomatics. In both of these cases, CSU students outperformed the national average.

<table>
<thead>
<tr>
<th>Area Scores</th>
<th>Fall 2013</th>
<th>Spring 2014³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CSU Average</td>
<td>National Average</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>23.12</td>
<td>20.92</td>
</tr>
<tr>
<td>Engineering Concepts</td>
<td>9.20**</td>
<td>8.95</td>
</tr>
<tr>
<td>Management Concepts</td>
<td>27.36</td>
<td>24.90</td>
</tr>
<tr>
<td>Materials, Methods, and Project Modeling and Visualization¹</td>
<td>23.48</td>
<td>20.16</td>
</tr>
<tr>
<td>Bidding and Estimating</td>
<td>33.28</td>
<td>28.34</td>
</tr>
<tr>
<td>Budgeting, Costs, and Cost Control Planning, Scheduling, and Schedule Control</td>
<td>25.48</td>
<td>23.37</td>
</tr>
<tr>
<td>Construction Safety</td>
<td>35.64</td>
<td>32.68</td>
</tr>
<tr>
<td>Construction Geomatics²</td>
<td>16.08</td>
<td>15.18</td>
</tr>
<tr>
<td>Project Administration</td>
<td>4.76**</td>
<td>4.47</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>CSU Average</th>
<th>National Average</th>
<th>Passing Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>19.86**</td>
<td>20.22</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>9.43**</td>
<td>9.08</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>25.71</td>
<td>25.00</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>21.71**</td>
<td>20.49</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>30.14**</td>
<td>28.62</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>22.43**</td>
<td>23.11</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>32.14</td>
<td>32.37</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>16.71</td>
<td>15.12</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>4.86**</td>
<td>4.59</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>27.43</td>
<td>26.27</td>
<td>25</td>
</tr>
</tbody>
</table>

** Below minimum passing score.

¹ Previously referred to as Materials, Methods, and Plan Reading.

² Previously referred to as Surveying and Project Layout.

³ Only 7 students took the AIC exam in Spring 2014.

Due to the decline in students taking the AIC exam, analysis of the data for Fall 2013 – Spring 2014 was limited. A member of the Assessment Committee contacted AIC to discuss the exam and was made aware that the exam is being revised to align with the new ACCE SLOs, which will be implemented in the CM Department in Fall 2015. As a result, the recommendation from the Assessment Committee is to continue promoting the exam to students, but not to require the exam until the CM Department has had a chance to review the revised structure of the exam and how it fits with department objectives and the ACCE’s new SLOs.

**Action Plan**

No new action items resulted from this review cycle. The following actions were carried over from the last review cycle after they were put on hold due to changes in the AIC – AC Level 1 Exam Previous recommendations are:

- Review the revised AIC – AC Level 1 Exam content and structure when released to determine if it fits with the Department’s and ACCE’s SLOs
- Contact the AIC to request a presentation for the PADB membership about the purpose of their organization, the AIC certification program, and the AIC – AC Level 1 Exam.
• Review AIC - AC (Level 1) exam to determine alignment of exam content with CSU CM Curriculum.
• Review material included in the AIC exam to identify content areas where CSU students score below either the AIC passing score or the national average for consecutive semesters.

Updates
Updates to Recommendations from the Fall 2013 Assessment Report:

• Discuss results and present trends at a Department meeting.
  o Update: Data was presented and discussed during a Department meeting. The result of the discussion was a recommendation to review how well the AIC exam fit the goals of the Department with possible consideration of removing it from the assessment tools used by the Assessment Committee.
• Survey employers to identify if they are aware of and/or support the AIC exam.
  o Update: questions were added to the Employer survey. The survey indicates that few employers know about or look for AIC certification, suggesting limited support for the exam.
• Re-evaluate how students are encouraged to, and their motivation for taking the AIC exam.
  o Update: Feedback from students (to faculty and staff) is that they do not see value in paying for and taking the AIC exam for various reasons.
• Contact AIC about changes to the exam structure and reasons for those changes.
  o Update: Received feedback, tabled further action for now since AIC announced it is revamping exam to be in line with new ACCE SLO’s.
• Continue to discuss possible alternative certifications.
  o Update: List was generated. No further action since assessment will be switching to SLO’s in Fall 2015.
  o Update: Discussed creation of grading rubrics to allow Capstone to better utilize industry for the assessment of student projects and presentations.
• Explore the possibility of bringing back the lab component for CON 151.
  o Update: Assessment Committee made a recommendation to the Curriculum Committee. This recommendation was discussed at the Fall 2014 retreat along with lab components for other courses. No action decided on yet.
• Explore the possibility of using the professional fee to cover the cost of the AIC exam for students.
  o Update: Professional fee has been discontinued.
Employer Survey

The companies that attend the CM Career Fair represent the majority of recruiters/employers hiring CSU CM graduates. Employers attending the career fair are formally surveyed each semester to gauge their satisfaction with the career fair and their recruiting of CSU CM students as well as to evaluate the strengths and weaknesses of graduates from the CSU CM Department.

Results

In the fall 2013 and spring 2014 employer survey, companies were asked to identify up to 5 areas of strength and 5 areas needing improvement based on the companies past experience hiring CM graduates (Table 3 & 4). In an effort to increase company feedback the link to the online survey was sent to the lead recruiter for each company attending the Fall 2013 and Spring 2014 career fairs.

| Table 3. Employer Survey - Top 5 Strengths and Improvement Areas (Fall ‘12/Spring ‘13) |
|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| **Fall 2012** | **Spring 2013** |
| Top 5 Strength Areas | Top 5 Improvement Areas | Top 5 Strength Areas | Top 5 Improvement Areas |
| 1. Project Administration (56.52%) | 1. BIM 3D Technology (52.17%) | 1. Communication Skills - verbal and presentation (72.73%) | 2-way tie for 1st (36.36%) each: 1. BIM 3D Technology 1. ‘Not Familiar with Their Weaknesses’ |

1 A total of 23 out of 73 companies (32%) completed the survey in Fall 2012.
2 A total of 11 out of 68 companies (16%) completed the survey in Spring 2013.
In Fall 2013, new questions were added to the employer survey, including ‘Where does CSU rank compared to other universities in your recruiting plans?’ In both the Fall 2013 and Spring 2014 semesters, 68% of respondents ranked CSU ‘Above Other Universities’ and 32% ranked CSU the ‘Same as Other Universities’. Not one recruiter responded ‘Below Other Universities’.

After reviewing the survey results, the assessment committee determined the answer ‘Not Familiar with Their Weaknesses’ (Table 4) was ambiguous. This response could be interpreted in two ways: (1) individuals filling out the survey do not have enough interaction with graduates to provide an answer or (2) that employers did not feel CSU CM graduates had any particular weaknesses. It should be noted that there is a response option within the strengths question for ‘Not familiar with their strengths’ and yet this answer never made the Top 5. This suggests that most recruiters felt familiar enough with students’ performance to answer this question.

To avoid this ambiguity in future surveys, the single response will be broken into multiple responses: ‘Do not interact directly with graduates enough to know their weaknesses’ and ‘Do not feel students have any particular weaknesses’. Similar responses for the strength questions will also be created.

![Table 4. Employer Survey Top 5 Strengths and Improvement Areas (Fall ‘13/Spring ‘14)](image)

<table>
<thead>
<tr>
<th>Top 5 Strength Areas</th>
<th>Top 5 Improvement Areas</th>
<th>Top 5 Strength Areas</th>
<th>Top 5 Improvement Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Plan Reading (40.91%)</td>
<td>1. BIM 3D Technology (40.91%)</td>
<td>1. Communication Skills - verbal and presentation (56.52%)</td>
<td>1. Mechanical and Electrical Systems (39.13%)</td>
</tr>
<tr>
<td>2-way tie for 2nd (31.82%) each:</td>
<td>2. ‘Not Familiar with Their Weaknesses’ (27.27%)</td>
<td>2. Plan Reading (43.48%)</td>
<td>2. Budgeting, Costs and Cost Control (26.09%)</td>
</tr>
<tr>
<td>2. Communication Skills - verbal and presentation</td>
<td>3. Engineering Concepts</td>
<td>3. Project Administration (34.78%)</td>
<td></td>
</tr>
<tr>
<td>3. Construction Safety Management</td>
<td>2-way tie for 3rd (22.73%) each:</td>
<td>2-way tie for 3rd (21.74%) each:</td>
<td></td>
</tr>
<tr>
<td>5. Graphic Communications/CAD (18.18%)</td>
<td>4. Communication Skills - written</td>
<td>5. Communication Skills - verbal and presentation</td>
<td></td>
</tr>
<tr>
<td>5. Planning, Scheduling, and Control</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 A total of 23 out of 84 companies (27%) completed the survey in Fall 2013.

2 A total of 22 out of 93 companies (24%) completed the survey in Spring 2014.
In each of the semesters reviewed in this report (Table 3 and 4), both verbal and written communication skills were identified as areas of strength for CSU CM students; however it appears there is still room for improvement in both of these areas since they were both identified as areas needing improvement. The fact that industry identifies communication as both a strength and an area of needed improvement conveys the importance industry places on communication skills. As shown in the Senior Exit Survey results (Table 6) communication skills, both oral and written, consistently rate near the top in student confidence levels.

Plan reading was also noted as a Top 5 Area of Strength of CSU CM students all four semesters; however, when looking back over results from this assessment cycle and the previous cycle, BIM 3D Technology was noted as the top area needing improvement in 3 of 4 semesters. These results appear to support the Senior Exit Survey results. As noted in Table 5, in the combined Fall 2012/Spring 2013 results, graduating seniors rated their confidence in BIM 3D Technology very low with only 9% indicating that they were ‘extremely to very’ confident in this area. It should be noted that beginning with the Fall 2013 survey, the BIM course area was combined with Graphic Communication/CAD (CON 131) and renamed ‘Project Modeling & Visualization’ to match the AIC – AC Level 1 exam terminology. Under this new heading, student confidence went up considerably to 58% in Fall 2013 and 46% in Spring 2014 (Table 6). However, CON131 still ranked high as a course needing improvement in the Senior Exit Survey (Table 7).

Another content area that consistently ranks in the Top 5 Improvement Areas is ‘Mechanical and Electrical Systems’, which was ranked as the top area needing improvement in Spring 2014. This is consistent with the Senior Exit Survey (Table 6) where only 40% of students self-identified as ‘extremely’ or ‘very’ confident in ‘Engineering Concepts – Mechanical & Electrical Systems’. CON371 – Mechanical & Plumbing Systems continues to rank high as a course needing improvement (Table 7).

In the Spring 2013 Employer Survey, Construction Surveying and Project Layout (CON 261) was identified as needing improvement, and was supported by AIC – AC Level 1 Exam results and the Senior Exit Survey. At the time, graduating seniors identified surveying as an area they had low confidence in and that needs improvement. This area has shown improvement from the previous assessment review and report cycle. Surveying did not show up on either of the Fall 2013 or Spring 2014 employer surveys as areas needing improvement (Tables 3 and 4). Additionally, in the Senior Exit Survey, Surveying and Project Layout (also renamed to align with AIC exam terminology to become ‘Construction Geomatics – Basic Layout, Topographic Maps, Calculations’) did not make the Top 5 courses needing improvement in either the Fall 2013 or Spring 2014 surveys (Table 7), and the percentage of students identifying as being ‘extremely’ to ‘very’ confident in this area increased slightly from 56% in Fall 2012/Spring 2013 to 58% in Fall 2013 and 76% in Spring 2014 (Table 6).
Other areas identified as needing improvement were Management Concepts (Spring 2013 survey), Engineering Concepts (Spring 2014 survey), and Budgeting, Costs and Cost Control (Spring 2013 & Spring 2014 surveys). Additionally, with the exception of Engineering Concepts (which is now broken down into four categories on the Senior Exit Survey), graduating seniors indicated a high level of confidence in these areas on the Senior Exit survey. As a result, performance and confidence of students in these areas should be watched but no immediate action is being recommended.

**Action Plan**

The following actions are recommended based on the results of the Employer Survey

- Continue to monitor Construction Surveying and Layout (CON 261).
- Continue to target a new hire with experience in MEP disciplines.
- Revise Employer Survey to align with new SLOs.

**Updates**

Updates to Recommendations from the Fall 2013 Assessment Report:

- Target a new hire with expertise in one or more areas which include surveying, MEP disciplines, or BIM/VDC, to help strengthen these areas identified by students and industry as needing improvement.
  - Update: Currently performing a search for two new tenure-track faculty positions. Teaching ability in each of these areas is listed as one of the preferred qualifications. One new faculty was successfully hired during this search who has expertise in BIM.
  - Update: Surveying and BIM are showing improved results between this review cycle and the previous review cycle.
- Design and present CON 261 (Construction Surveying) course revisions to the Curriculum Committee and Department based on feedback from PADB.
  - Update: No formal action taken but improvements in surveying have been identified.
- Revisit separating CON 367 (Project Admin. & Contracts) into two courses to expand on Management Concepts.
  - Update: Discussed at Fall 2014 retreat and decided not to pursue at this time.
- Revise CON 371: Mechanical Systems and CON360: Electrical and Controls Systems
  - Update: Department head spent time with industry, including MCAA and NECA, to discuss both Mechanical and Electrical courses and has made efforts to update the two courses.
  - Update: Industry adjunct faculty will be teaching the Mechanical course beginning Spring 2015.
Update: NECA and industry have worked with course instructor on updates to the electrical and controls curriculum.
Senior Exit Survey

Each semester, an on-line survey is sent out to graduating seniors. The purpose of this survey is to gather information from graduates related to:

- Job placement, salary, and benefits of recent graduates
- Internship experience
- Quality of course design and instruction
- Quality of teaching facilities, computer labs, and availability of software
- Student involvement in and the impact of extra-curricular activities related to construction management on student educational experience and job placement

Preliminary material related to students’ perceptions of course quality was presented at the Fall 2013 Department Retreat. Specific comments related to individual courses were distributed to faculty in the Fall 2014 semester for consideration in future course modifications.

Results

Table 5 summarizes graduating seniors’ perceptions of the quality of the education they received. The five quality statements that graduating seniors agreed with the most are starred with a single asterisk. Statements that less than 75% of graduating seniors agreed with are starred with a double asterisk. In the FA13/SP14 surveys, the list decreased from four areas falling below 75% ‘strongly’ to ‘moderately’ agree, to just two - both of which showed improvement: affective use of teaching assistants (75%/52%) where the 52% is footnoted as also having 32% of students responding ‘Neither agree or Disagree’; and opportunities to explore individual interest areas in construction (73%/74%), barely missing the 75% cutoff.

### Table 5. Senior Exit Survey – Students’ Perceptions of Quality of Education

<table>
<thead>
<tr>
<th>Statement</th>
<th>% of students responding ‘Strongly Agree’ or ‘Moderately Agree’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall 2012&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Excellent education that I am proud of.</td>
<td>94%*</td>
</tr>
<tr>
<td>Faculty and instructors for CM courses were knowledgeable about their course material.</td>
<td>94%*</td>
</tr>
<tr>
<td>Faculty and instructors were concerned about my progress in their class.</td>
<td>73%&lt;sup&gt;5**&lt;/sup&gt;</td>
</tr>
<tr>
<td>Faculty and instructors were accessible for consultation.</td>
<td>87%</td>
</tr>
<tr>
<td>Statement</td>
<td>88%*</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>The academic rigor of the construction courses was appropriate</td>
<td>59%**</td>
</tr>
<tr>
<td>Teaching Assistants were used effectively in my courses</td>
<td></td>
</tr>
<tr>
<td>There were ample opportunities for &quot;hands-on&quot; experiences in my courses</td>
<td>73%**</td>
</tr>
<tr>
<td>The overall quality of lab and classroom facilities was high.</td>
<td>88%*</td>
</tr>
<tr>
<td>I had ample access to computers and technology.</td>
<td>93%*</td>
</tr>
<tr>
<td>My construction courses utilized current software and technology.</td>
<td>88%*</td>
</tr>
<tr>
<td>The level of technology utilized in construction courses was appropriate.</td>
<td>81%</td>
</tr>
<tr>
<td>There were ample opportunities for exploration of individual construction</td>
<td>59%**</td>
</tr>
<tr>
<td>interest areas.</td>
<td></td>
</tr>
</tbody>
</table>

1 Total number of responses received was 86 in FA12
2 Total number of responses received was 67 in SP13
3 Total number of responses received was 60 in FA13
4 Total number of responses received was 50 in SP14
5 High response of 'Neither agree nor disagree': 23% in FA12, 16% in SP13, 13% in FA13, and 12% in SP14
6 High response of 'Neither agree nor disagree': 27% in FA12, 27% in SP13, 18% in FA13, and 32% in SP14
7 High response of 'Neither agree nor disagree': 20% in FA12, 13% in SP13, 10% in FA13, and 6% in SP14
8 High response of 'Neither agree nor disagree': 17% in FA12, 19% in SP13, 13% in FA13, and 12% in SP14
* Identified in Top five of student’s perception of quality
** Statements agreed to by less than 75% of graduating seniors

Table 6 provides a summary of self-reported student confidence. It is important to note that all students completing this survey have completed one or more internships, which should help ground their self-evaluations. Areas that scored 75% or above were considered acceptable. Areas scoring below 75% were noted and compared to feedback received from the AIC – AC Level 1 Exam and the Employer Survey. There were nine categories (out of eighteen total categories) which fell below 75% in the Fall 2012/Spring 2013 report. The nine areas below 75% overlapped with the AIC – AC Level 1 Exam results and the Employer Survey. Specifically, the recommended areas for improvement identified in the last report were: Engineering Concepts (Structures) (71%), Surveying and Project Layout (56%), Graphic Communication/CAD (42%), Mechanical and Electrical systems (40%), and BIM 3D Technology (9%). In the FA13/SP14 surveys, there is noted improvement in many of these areas. Engineering Concepts (Structures) improved slightly to 74%. Surveying and Project Layout, renamed to Construction Geomatics to the revised AIC – AC Level 1 exam terminology, increased significantly from 56% to 76% in SP14. Graphic Communication/CAD was combined with BIM 3D Technology and renamed Project Modeling and Visualization and while still well below acceptable levels, improvement was
noted (58%/46%). Mechanical and Electrical systems remained neutral at 40%. One new area of concern in SP13/FA14 is one of the new Engineering Concepts breakouts – Soil Mechanics (52%/50%).

Table 6. Senior Exit Survey – Student Confidence and Knowledge in CM Course Areas

<table>
<thead>
<tr>
<th>CM Course Areas</th>
<th>Fall 2012</th>
<th>Spring 2013</th>
<th>Fall 2013</th>
<th>Spring 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills (oral)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Skills (written)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Concepts - Soil Mechanics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Concepts - Structures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Concepts - Mech. &amp; Electrical Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management Concepts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mgmt. Concepts - Contracts, Entities, Acctg. &amp; Finance, Mgmt. Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mgmt. Concepts - Business Ethics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material and Methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material and Methods - Construction Equip.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material and Methods - Drawings., Specs, CSI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphic Communication / CAD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIM 3D Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Modeling &amp; Visualization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bidding and Estimating</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budgeting, Costs, and Cost Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning, Scheduling and Control (Lean)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Safety Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surveying and Project Layout</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Geomatics - Layout, Maps, Topos, Calcs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Administration and Contracts</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Project Admin. – Procurement, Site Admin., Closeout,</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainable / Green Building</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of responses received was 86 in FA12</td>
<td>93%</td>
<td>96%</td>
<td>87%</td>
<td>90%</td>
</tr>
<tr>
<td>Total number of responses received was 67 in SP13</td>
<td>91%</td>
<td>85%</td>
<td>92%</td>
<td>92%</td>
</tr>
<tr>
<td>Total number of responses received was 60 in FA13</td>
<td></td>
<td></td>
<td>88%</td>
<td>72%</td>
</tr>
<tr>
<td>Total number of responses received was 50 in SP14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High response of ‘Moderately Confident’: 28% in FA12, 25% in SP13, 25% in FA13, and 24% in SP14</td>
<td>52%**</td>
<td>50%**</td>
<td>74%**</td>
<td>74%**</td>
</tr>
<tr>
<td>High response of ‘Moderately Confident’: 44% in FA12, 25% in SP13, 35% in FA13, and 42% in SP14</td>
<td>71%**</td>
<td>52%**</td>
<td>72%**</td>
<td>50%**</td>
</tr>
<tr>
<td>High response of ‘Moderately Confident’: 28% in FA12, 15% in SP13, 17% in FA13, and 20% in SP14</td>
<td>40%**</td>
<td>40%**</td>
<td>40%**</td>
<td>40%**</td>
</tr>
<tr>
<td>High response of ‘Moderately Confident’: 33% in FA12, 27% in SP13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High response of ‘Moderately Confident’: 15% in FA12, 18% in SP13, 12% in FA13, and 18% in SP14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High response of ‘Moderately Confident’: 16% in FA12, 19% in SP13, 22% in FA13, and 16% in SP14</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>High response of ‘Moderately Confident’: 12% in FA12, 19% in SP13, 7% in FA13, and 22% in SP14</td>
<td></td>
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</tr>
</tbody>
</table>
In the fall of 2014 the Assessment Committee discussed and decided that the ‘Very Confident’ or ‘Extremely Confident’ metric for student confidence does not accurately reflect department expectations for student knowledge in coursework across all areas. As a result, it was decided to change the confidence to ‘Moderately Confident’. Using this metric, 75% of students indicated that they were at least ‘Moderately Confident’ in all areas as shown in figure below. Going forward, it is recommended that target outcomes for student confidence levels be adjusted to better reflect Department goals for each individual course area as reflected in the new SLOs.

12 High response of ‘Moderately Confident’: 40% in FA12, 30% in SP13, 35% in FA13, and 18% in SP14
13 High response of ‘Moderately Confident’: 27% in FA12, 37% in SP13, 13% in FA13, and 14% in SP14
14 High response of ‘Moderately Confident’: 41% in FA12, 33% in SP13, 33% in FA13, and 40% in SP14
** Course areas in which less than 75% of graduating seniors rated their confidence in as ‘extremely to very’ confident.
Figure 3. Student Confidence by Topic Area (Fall 13 – Spring 2014).
Table 7 summarizes the Top 5 courses that students identified as most beneficial in their understanding of construction management and construction practices, as well as course areas/topics they feel need improvement or emphasis within the program. In both FA13 and SP14 exit surveys, five courses were identified as most beneficial in understanding construction management and construction practices: CON365 Construction Estimating II, CON487 Internship, CON461 Construction Project Scheduling & Cost Control, and CON465 Construction Management Professional Practice. There was slightly less overlap with the areas of needed improvement. In the same two terms, three courses showed up on both surveys: CON360 Electrical & Control Systems, CON131 Graphic Communications/CAD, CON371 Mechanical & Plumbing Systems.

| Table 7. Senior Exit Survey - Top 5 Beneficial Courses and Courses Needing Improvement |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| **Fall 2013** | **Spring 2014** | **Fall 2013** | **Spring 2014** |
| **Top 5 Beneficial Courses** | **Top 5 Courses Needing Improvement** | **Top 5 Beneficial Courses** | **Top 5 Courses Needing Improvement** |
| 1. CON365 Construction Estimating II (71.67%) | 1. CON360 Electrical & Control Systems (50.00%) | 1. CON365 Construction Estimating II (68.00%) | 1. CON462 Financial Management for Construction (52.00%) |
| 2. CON487 Internship (56.67%) | 2-way tie for 2nd (46.67%) each: 2. CON371 Mechanical & Plumbing Systems | 2. CON487 Internship (60.00%) | 2. CON371 Mechanical & Plumbing Systems (50.00%) |
| 3. CON367 Construction Contracts & Project Admin. (48.33%) | 2. CON371 Mechanical & Plumbing Systems | 3. CON459 Structures II (52.00%) | 2-way tie for 3rd (44.00%) each: 3. CON317 Safety Management (40.00%) |
| 4. CON465 Construction Management Prof. Practice (46.67%) | 4. CON317 Safety Management (40.00%) | 4. CON465 Construction Project Scheduling & Cost Control (48%) each: 4. CON461 Construction Project Scheduling & Cost Control (33.33%) | 3. CON360 Electrical & Control Systems (44.00%) |
| 5. CON461 Construction Project Scheduling & Cost Control (43.33%) | 5. CON461 Construction Project Scheduling & Cost Control (33.33%) | 4. CON465 Construction Management Prof. Practice | 5. CON351 Construction Field Management (36.00%) |
**Action Plan**
The following actions are recommended based on the senior exit survey:

- Review and revise, as appropriate, the CM Department’s evaluation criteria for students’ confidence level related to each course.
- Based on overlaps between the Senior Exit Survey and the Employer Survey responses, it is recommended that the course objectives for the following courses be presented and discussed at a CM Department meeting:
  - CON 131 Graphic Communications/CAD
  - CON 261 Surveying layout and Control
  - CON 360 Electrical and Control Systems
  - CON 371 Mechanical & Plumbing Systems
- Revise Senior Exit Survey to align with new SLOs.

**Updates**
Updates to Recommendations from the Fall 2013 Assessment Report:

- Discuss results with faculty and instructors at a Department Meeting.
  - Update: The Department emailed all faculty and staff the student responses on general program evaluation questions and their confidence level.
- Provide instructors with recommendations for course improvements based on Senior Exit Survey responses/recommendations
  - Update: Discussed content and flow of different courses at Fall 2014 department retreat.
  - Update: Initially, issues arose with instructor confidentiality, but the department has taken survey responses, removed any identifiers, and emailed instructors the feedback from courses they are currently or have previously taught.
- Evaluate how teaching assistants are being used to identify opportunities to maximize the value of teaching assistants.
  - Update: Discussed at a Department Meeting how teaching assistants should be utilized in courses and how to clarify their role to students.
  - Update: Key is to clarify what students can expect.
  - Update: Change wording in Senior Exit Survey to be more appropriate and more clear:
    - Current: ‘Teaching Assistants were used effectively in my courses’
    - Update: ‘Graduate Teaching Assistants were used effectively in my courses’
- Reevaluate rational for deleting “hands-on” labs to see if opportunities exist to bring some labs back.
  - Update: Discussed at Fall 2014 Retreat.
  - Update: Further action has been put on hold and will be discussed as part of next curriculum updating process.
• Look for ways to allow students to explore individual interests related to construction.
  o Update: Need to better market the importance and opportunity to participate in competition teams, student organizations, etc.
  o Update: Department has a long term plan to hire endowed chairs to represent different sectors of the industry allowing exposure to different disciplines and providing additional elective courses.
Results
During Fall 2012 and Spring 2013, the following courses were reviewed by the PADB Undergraduate Curriculum Committee:

Fall 2012:
- CON 366 – Construction Equipment and Methods
- CON 359 – Structures I
- CON 459 – Structures II
- CON 469 – Soils in Engineering for Construction Managers

Spring 2013:
- CON 265 – Construction Estimating I
- CON 365 – Construction Estimating II
- CON 367 – Construction Contracts and Project Administration
- CON 461 – Construction Project Scheduling and Cost Control

The results of the PADB Undergraduate Curriculum Committee’s review were presented at Department meetings throughout the Fall and Spring Semesters.

During the Fall 2013 semester, this committee met to begin discussing the new SLO requirements.

Action Plan
There were no new action plans recommended by the PADB Undergraduate Curriculum Committee since they have finished reviewing all of the undergraduate courses.

Updates
Updates to Recommendations from the Fall 2013 Assessment Report: The following recommendations are based on the Assessment Committee’s discussion of the PADB Undergraduate Curriculum Committees’ review process:

- Recommendation was made to the Curriculum Committee to review their feedback loop from course reviews to ensure that recommendations are reaching the appropriate course instructors.

The following actions are recommended by the PADB Undergraduate Curriculum Committee:
• CON 461 - Scheduling:
  o PADB members recommended keeping P6 software and adding an advanced scheduling class if possible.
    ▪ Update: No action required.
• CON 366 and 469:
  o Add storm water management and erosion control as part of site layout to CON 366 Trucks.
    ▪ Update: Done
  o Remove soils classification material from CON 366 Trucks since it is covered in CON 469 Soils
    ▪ Update: Done.
  o Add focus on fixed-fee contracts.
    ▪ Update: This was discussed at the Fall 2014 retreat.
  o Add information on geo-fabrics for stabilization.
    ▪ Update: Waiting on update.
  o Keep information related to mass diagrams.
    ▪ Update: No action required.
• CON 265 and 365
  o Estimating documents for projects in the $3-$7M range have been requested from industry to support student learning.
    ▪ Update: In progress.
  o Assistance with models for model-based estimating has been requested from industry.
    ▪ Update: In progress.
The standard ASCSU Course Survey administered each semester provides the opportunity for instructors to add additional questions to the survey. As part of the Quality Assessment Plan, the CM Department began requesting that faculty include course objectives as additional questions in the course survey beginning Spring 2011. In this process, students are asked to evaluate how well they feel the course objectives were met during the course of the semester using a 5-point rating scale (5 = Excellent, 3 = Average, 1 = Poor, 0 = N/A). This data is provided directly to the CM Department in a summary format. The number of course objectives per course ranges from a low of 2 (CON 360: Electrical and Control Systems, 3 credit hours) to a high of 9 (CON 370: Asphalt Pavement Materials and Construction, 3 credit hours).

**Results**

*Fall 2012/Spring 2013:* Overall, students indicated that all course objectives were being met; all course objectives were rated at 3.00 (on a scale of 1-5) or above for the Fall 2012/Spring 2013 academic year. It is recommended that course objectives which scored between 3.0 and 3.5 are reviewed by the Curriculum Committee and the faculty teaching those courses to ensure that course objectives are current, clearly communicated to students, and are fully covered. During the FA2012/SP2013 review cycle, issues with confidentiality were identified in the use of this assessment information.

**Action Plan**

- Review how information from ASCSU Course Surveys can be used in the Assessment Plan without violating confidentiality.
- The following recommended actions were carried forward for inclusion in the next curriculum review cycle. It is recommended that the Curriculum Committee review the course objectives for the following courses to ensure that they are current and that any identified issues are being addressed:
  - CON 352: Quantify and estimate all direct and indirect costs associated with fabrication of a steel structure.
  - CON 459: Recognize and evaluate safety issues related to temporary support structures.
  - CON 471: Possess an understanding and an awareness of project management skills to provide an effective, efficient and coordinated mechanical project.

**Updates**

Updates to Recommendations from the Fall 2013 Assessment Report:
Update: These recommended actions are being carried forward to the next curriculum review process.
Senior Capstone Course Quiz

At the beginning of each semester, students in the Senior Capstone Course (CON 465) are given a quiz to determine what knowledge they have retained from previous courses. The purpose is to identify areas of weaknesses and strengths to share with faculty. This also gives capstone instructors an understanding of students’ knowledge base and what topics need to be reviewed. The quiz results are reported to the CM Department’s Assessment Committee by one of the course instructors. There are no reviews given prior to the quiz. The percentage of students correctly answering each question is tracked and averaged across topical areas to determine the Average Percentage Correct (APC) score. Student understanding in each topic area is assessed using 1 to 3 questions. APC scores above 75% are categorized as acceptable. APC scores below 60% are seen as deficient and APC scores between 60% and 75% are considered marginal.

Results
The Fall 2013 Capstone Quiz 1 consisted of 30 questions provided by other professors teaching within the CM program at CSU, with a grade value of 30 points. The quiz was revised between FA2013 and SP2014. It now covers all topics and contains 40 questions provided by professors and instructors in the CM Department. The total point value remained at 30 points. Table 8 shows the results for the Fall 2013 Capstone Quiz 1.

Table 8. Fall 2013 Capstone Quiz Results

<table>
<thead>
<tr>
<th>Areas of study</th>
<th>Question Number</th>
<th>% Correct</th>
<th>Average Percentage Correct (APC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>4 23 24</td>
<td>77 42 89</td>
<td>69.3</td>
</tr>
<tr>
<td>Codes</td>
<td>29</td>
<td>14</td>
<td>14.0</td>
</tr>
<tr>
<td>Contracts</td>
<td>2 11 12 15 18 25 28</td>
<td>51 28 77 92 90 97 74</td>
<td>72.7</td>
</tr>
<tr>
<td>Estimating</td>
<td>1 14 27</td>
<td>73 56 45</td>
<td>58.0</td>
</tr>
<tr>
<td>Finance</td>
<td>9 10</td>
<td>71 65</td>
<td>61.7</td>
</tr>
</tbody>
</table>
The Quiz was reviewed by the Assessment Committee in Fall 2013 and a recommendation was made to review and update the Capstone Quiz 1 since some topics were no longer considered relevant to the current CM curriculum. At the same time, the recommendation was made to add other topics. Nine questions were removed or updated for the Spring 2014 Quiz. Additional questions were requested from department faculty to create a question pool for each content area. The capstone instructors used their discretion to select an additional 10 questions from this pool, which were added to the quiz. As previously mentioned, the revised quiz now contains 40 questions. Other changes include the deletion of the LEED and Math categories. The LEED category was removed since some students might choose to study other green/sustainability tools that cannot be reflected in this quiz. The Math section was removed and questions requiring students to perform mathematical calculations were identified. A total of 51 students took the quiz. Table 9 provides the results of the revised Spring 2014 Quiz 1 based on percentage correct per category and the average percentage grade for each category and for the class as a whole.

### Table 9. Spring 2014 Capstone Quiz Results

<table>
<thead>
<tr>
<th>Areas of study</th>
<th>Calculation Required (Y or N)</th>
<th>Question Number</th>
<th>% Correct</th>
<th>Average Percentage Correct (APC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>N</td>
<td>4</td>
<td>88</td>
<td>88.0</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>31</td>
<td>61</td>
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<td></td>
<td>N</td>
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<td>45</td>
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<tr>
<td></td>
<td>N</td>
<td>12</td>
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<td></td>
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<td>N</td>
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<td>N</td>
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</tr>
<tr>
<td></td>
<td>YES</td>
<td>2</td>
<td>45</td>
<td>70.0</td>
</tr>
<tr>
<td></td>
<td>YES</td>
<td>4</td>
<td>88</td>
<td></td>
</tr>
</tbody>
</table>
## Action Plan

- Revise Senior Capstone Quiz to align with new SLOs.
- Distribute a summary of students’ performance on the capstone quiz to faculty in the department to help them understand how well students retain course content.

## Updates

Updates to Recommendations from the Fall 2013 Assessment Report:

1. Course revisions:
   a. Update: CON 371: Mechanical and Plumbing Systems is undergoing course redesign in Fall 2013 partially as a result of lower student performance on this portion of the Capstone quiz.

2. Capstone (CON 465) Survey Revisions:
a. Update: The capstone quiz results were presented at the Fall 2013 Department retreat and it was agreed to update the quiz. The Assessment Committee is working with the CON 465 faculty to revise the quiz materials. A pool of questions will be solicited from each required CM course for use in this quiz. The resulting quiz will be piloted with CM faculty. Update: The quiz was updated as noted above.
Alumni Survey

Action Plans
The following recommendations and actions are based on the 2011 Alumni Survey which were reported in the Spring 2012 Assessment Report. Revisions to incorporate into the next survey:

- The schedule for administering the Alumni Survey has been changed from every year to every five years for the following reasons: (1) to lessen the impact on alumni, (2) to avoid participant fatigue, and (3) to make better use of department resources.
- Revise and update the Alumni Survey in preparation for when it is next administered in Spring 2016.
  - Revise survey to align with new SLOs.
  - Survey questions related to “Drafting” need to be revised to better reflect current practices. The term drafting conveys work done by hand and does not accurately reflect the incorporation of CAD, 3-D and BIM technologies. As a result, the survey results related to Drafting are inconclusive.
  - Revise Q24, about rigor, to allow respondents to indicate if the rigor of course work was too low or too high.

Updates
Updates to Recommendations from the Fall 2013 Assessment Report:

- Re-administer the survey annually to graduates who have reached their 5-year graduation mark.
  - Update: The survey schedule has been changed to every 5 years as noted above. The next time the Alumni Survey will go out will be Spring 2016. During the year prior to that, the survey will need to be updated to ensure it is current and in line with other assessment tools.

Based on the survey responses, the following courses will be evaluated to reflect the skills and knowledge needed by graduates to be well prepared and successful in these areas:

- Construction Equipment: This course curriculum will be reviewed by the PADB Undergraduate Curriculum Committee in Fall 2012.
  - Update: This course was reviewed and recommendations were made to improve the course. These are covered in the PADB Undergraduate Curriculum Committee review section of this report.
• Drafting: The department has been working with industry to educate students about the advances in drafting. These include 3-D modeling, CAD, and integration of BIM technologies. Additionally, students have the opportunity to learn more about the application of these technologies through workshops organized by department faculty and industry experts for CM students.
  o Update: A dedicated BIM computer lab was funded and constructed in Guggenheim. This lab is dedicated for use by CM students.
  o Update: Three industry boot camps, each worth one credit hour, were implemented utilizing the BIM Computer Lab. They covered the areas of BIM, estimating and scheduling. Students attending the boot camps are surveyed at the mid-point and at the end of each boot camp class to provide feedback on teaching and facilities.
  o Update: The Department is continuing to discuss ways to utilize the BIM computer lab in current courses and activities.

• Mechanical: This course was revised and a new curriculum implemented in 2006. It was also reviewed by the PADB Undergraduate Curriculum Committee in Fall 2011.
  o Update: The course is undergoing a complete revamp in Fall 2013 based on training provided by MCAA.

• Surveying: New surveying equipment, specifically total stations, were purchased and incorporated into this course in 2011. The course activities will be revised in Fall 2012 to better reflect surveying activities graduates will encounter on construction sites.
  o Update: Additional attention is still needed in this course. A survey was sent out to PADB members requesting feedback on what skills they are looking for in our graduates related to surveying. This information is being incorporated into upcoming course revisions. These changes will also be reviewed with the curriculum committee.
Open Forum

The Open Forum functions as an informal assessment tool. The Open Forum is organized and hosted by the CM Student Board of Directors (CMBoD) and provides an opportunity for students to openly discuss the program with the department head (faculty do not attend this event). The Department Head responds to questions and concerns and encourages students to come meet with him or send him an email with any items they would like (which does happen). The Department Head follows up directly with faculty as needed based on any concerns/comments made about specific courses or faculty.

Action

- Re-evaluate how the open forum is utilized in the formal assessment process.

Update

- None
PRISM
(now University Assessment)

The University Assessment process is a periodic process with reviews conducted every six (6) years plus or minus one year. There are three major parts to this process: departmental operations, academic degree program quality, and action plans. In the past, the University has used PRISM as a framework to manage this process. Prior to 2014, the outcomes of the University Assessment process were measured against program outcomes. Beginning in 2014, the University Assessment replaced program outcomes with student learning outcomes. At the same time, the PRISM framework was replaced with Campus Labs. The goal of the University Assessment process is assurance of continued program quality through careful, periodic evaluation, identification of clear program goals, faculty involvement, and the use of analysis to inform the decision making process. This process begins with the identification of aspirational program goals, establishment of criteria for success (which are the SLOs), provide programs and services, determine effectiveness, and use results for improvement. The Assessment, Planning and Effectiveness office facilitates this process and transition in several ways. They provide leadership to the campus regarding the establishment of specific student learning outcomes for each program through training workshops, department presentation and one-on-one consultations. They empower faculty to create assessment/evaluation plans that accurately reflect the values, culture, and curriculum unique to their program and that are reflective of their accreditation requirements. They also provide resources and support for designing, implementing and sustaining effective assessment/evaluation cycles. Additionally, they advocate for the use of assessment/evaluation findings in budgeting, strategic planning, and institutional learning while also helping to communicate findings to the campus community, including prospective students and other constituents such as regional and specialized accrediting agencies, the CSUS Board of Governors, and the public.

Campus Labs, an on-line tool, is intended to increase the efficiency of each individual assessment process while simultaneously furthering awareness about their inherent interconnectivity. This on-line tool is intended to be an evolving and dynamic process devoted to data collection, analysis, reflection, prioritization of challenges, discussion and interpretation, and the development of continuous improvement strategies.

Actions

- Chair of the Assessment Committee should attend Campus Labs training and ACCE SLO training offered during the 2015 ASC Conference.
- PRISM will be replaced with Campus Labs in next report.
- Review ACCE SLOs at a Department meeting.
Update

- Chair of the Assessment Committee should attend Campus Labs training and ACCE SLO training offered in conjunction with the 2015 ASC Conference.
- The Chair and members of the Assessment Committee attended workshops held by the University related to the new University assessment requirements and the new tracking tool, Campus Labs.
- Data from the ACCE self-study will be uploaded into the Campus Labs system once the study is complete.
- The Fall 2014 Assessment Report, once approved by the Assessment Committee, will be uploaded into the Campus Labs System.