Appendix H

Bachelor Degree Program Learning Outcomes Assessment Report
Kennesaw State University  
Construction Management  

Program Learning Outcomes Assessment Report  

The following Table shows the Assessment methods used for assessing the achievement of program level outcomes.

Table G1: Program Level Outcomes and Their Assessment Methods

<table>
<thead>
<tr>
<th>Program Learning Outcome (PLO)</th>
<th>Assessment Method</th>
</tr>
</thead>
</table>
| PLO1: Estimate construction project implementation costs | 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 |
| PLO2: Produce construction project implementation schedules | 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 |
| PLO3: Carryout construction project management related tasks | 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 |
<table>
<thead>
<tr>
<th>Program Learning Outcome (PLO)</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLO4: Demonstrate people skills to function as a team player</td>
<td>M1: Major Course Level Outcomes Assessments</td>
</tr>
<tr>
<td></td>
<td>M3: Under Graduate Students Exit Surveys</td>
</tr>
<tr>
<td></td>
<td>M4: Alumni survey</td>
</tr>
<tr>
<td></td>
<td>M5: Alumni Employer survey</td>
</tr>
<tr>
<td></td>
<td>M6: Participation in competition teams, industry events and chapter meetings</td>
</tr>
<tr>
<td>PLO5: Demonstrate communication ability with construction project team members</td>
<td>M1: Major Course Level Outcomes Assessments</td>
</tr>
<tr>
<td></td>
<td>M2: Capstone Project Evaluation by Industry Panel.</td>
</tr>
<tr>
<td></td>
<td>M3: Under Graduate Students Exit Surveys</td>
</tr>
<tr>
<td></td>
<td>M4: Alumni survey</td>
</tr>
<tr>
<td></td>
<td>M5: Alumni Employer survey</td>
</tr>
<tr>
<td></td>
<td>M6: Participation in competition teams, industry events and chapter meetings</td>
</tr>
<tr>
<td>PLO6: Demonstrate capability to pursue advanced degree programs</td>
<td>M1: Major Course Level Outcomes Assessments</td>
</tr>
<tr>
<td></td>
<td>M3: Under Graduate Students Exit Surveys</td>
</tr>
<tr>
<td></td>
<td>M4: Alumni survey</td>
</tr>
<tr>
<td></td>
<td>M5: Alumni Employer survey</td>
</tr>
<tr>
<td>PLO7: Analyze ethical, social and environmental responsibility of construction professionals</td>
<td>M1: Major Course Level Outcomes Assessments</td>
</tr>
<tr>
<td></td>
<td>M3: Under Graduate Students Exit Surveys</td>
</tr>
<tr>
<td></td>
<td>M4: Alumni survey</td>
</tr>
<tr>
<td></td>
<td>M5: Alumni Employer survey</td>
</tr>
</tbody>
</table>

The following section describes the of assessment method which includes description, sources of evidence, performance criteria used the measure the level of achievement of the program learning outcome.
**Estimating**

**PLO1**: Estimate construction project implementation costs.

**M1**: *Major Course Level Outcome Assessments* - Faculty will be able to assess the students’ level of achievement of this program level outcome through the achievement of course level outcomes at end of the semester. At the beginning of the semester faculty sets the target level of achievement and collects the required data during the semester. At the end of the semester faculty assess the results for each course outcome. These results are compared with stated targets and based on the results each faculty proposes an action plan for the following semester. The courses, which contribute towards this program level outcome, are shown in mapping matrix of Program Level Outcomes with CM Courses. Refer to Appendix U.

**Source of Evidence**: Students’ performance on Assignments or Exams or Projects or Quizzes

**Criteria**: Students will demonstrate that they have mastered techniques for preparing bids and estimates for construction projects by achieving target level of achievement set for the course level outcomes.

**Findings**: Each course notebook includes the details of each semester findings. A sample of course level outcomes assessment for CM 3210 course is included here.
Course: CM 3210: Applied Structures - I  
Spring 2013
Course Level Outcome Assessment and Improvement Plan

<table>
<thead>
<tr>
<th>Related Learning Outcome</th>
<th>Assessment Tool</th>
<th>Target Level (%)</th>
<th>Average Grade (%)</th>
<th>Improvement Plan</th>
<th>Overall Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model real world structures in two dimensions for analysis</td>
<td>HW-1</td>
<td>90</td>
<td>85.8</td>
<td>Target not met. Discuss more examples.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exam I - Part-B - Q-1 &amp; Exam I - Part-B - Q-2</td>
<td>90</td>
<td>90.8</td>
<td>Target met. No action required at this time.</td>
<td>88.3</td>
</tr>
<tr>
<td>Analyze and design simple steel beams and columns for flexure, shear and deflection</td>
<td>HW-2</td>
<td>90</td>
<td>92.9</td>
<td>Target met. No action required at this time.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HW-3</td>
<td>90</td>
<td>75.0</td>
<td>Target not met. Discuss more examples.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exam II Part-B</td>
<td>90</td>
<td>83.5</td>
<td>Target not met. Discuss more examples.</td>
<td>83.8</td>
</tr>
<tr>
<td>Analyze and design simple reinforced concrete beams and columns for flexure, shear and deflection</td>
<td>HW-4</td>
<td>90</td>
<td>86.1</td>
<td>Target not met. Discuss more examples.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HW-5</td>
<td>90</td>
<td>91.7</td>
<td>Target met. No action required at this time.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HW-6</td>
<td>90</td>
<td>90.4</td>
<td>Target met. No action required at this time.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exam III - Q - 1</td>
<td>90</td>
<td>90.0</td>
<td>Target met. No action required at this time.</td>
<td>89.5</td>
</tr>
<tr>
<td>Analyze and design reinforced concrete slab and footing for flexure, shear and deflection</td>
<td>HW-7</td>
<td>90</td>
<td>88.3</td>
<td>Target met. No action required at this time.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exam III - Q - 3, Q - 4</td>
<td>90</td>
<td>90.0</td>
<td>Target met. No action required at this time.</td>
<td>89.2</td>
</tr>
</tbody>
</table>

Note: Q - Question

Future Actions:

- The target expectation will be set to 90%.
- More examples will be discussed related to HW-3 and Exam –2 concepts.
**Action Plan:** The steps suggested in the improvement plan or Future Actions will be implemented in the next course offering.

**M2: Capstone Evaluation by Industry Panel** - Industry panel members and faculty will be able to assess the graduating students’ level of achievement of this program level outcome through of capstone project evaluation. Industry panel members and faculty will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at end of the semester.

**Source of Evidence:** Capstone Evaluation Results.

**Criteria:** Industry panel members and faculty will rate that the graduating students’ level have mastered techniques for preparing bids and estimates for construction projects by specifying at least 3.75 as the level of achievement for this program level outcome.

**Findings:** Based on Fall 2013 capstone outcome assessment results, the average value of achievement of this program level outcome is 3.73.

**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.

**M3: Undergraduate Student Exit Survey** – Students will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) two week before their graduation.

**Source of Evidence:** Students Exit Survey Results.

**Criteria:** Students will demonstrate that they have mastered techniques for preparing bids and estimates for construction projects by specifying at least 4.25 as their level of achievement for this program level outcome.

**Findings:** Based on Fall 2013 graduating student exit survey results, the average value of achievement of this program level outcome is 4.08.

**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.
**M4: Alumni Survey** - Alumni will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Survey Results.

**Criteria:** Alumni will demonstrate that they have mastered techniques for preparing bids and estimates for construction projects by specifying at least 4.0 as their level of achievement for this program level outcome.

**Findings:** Based on 2012-2013 three year alumni survey results, the average value of achievement of this program level outcome is 3.89.

**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.

**M5: Alumni Employer Survey** - Alumni Employer will specify the level of achievement of this program learning outcome on a scale from 1-4 (highest "4" being Very High and lowest "1" being Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Employer Survey Results.

**Criteria:** Alumni Employer will rate that Alumni have mastered techniques for preparing bids and estimates for construction projects by specifying at least 3.0 as the level of achievement for this program level outcome.

**Findings:** Based on 2012-2013 three year alumni survey results, the average value of achievement of this program level outcome is 3.04.

**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.

**Construction Scheduling**

**PO2:** Produce construction project implementation schedules.
**M1: Major Course Level Outcome Assessments** - Faculty will be able to assess the students’ level of achievement of this program level outcome through the achievement of course level outcomes at end of the semester. At the beginning of the semester faculty sets the target level of achievement and collects the required data during the semester. At the end of the semester faculty assess the results for each course outcome. These results are compared with stated targets and based on the results each faculty proposes an action plan for the following semester. The courses, which contribute towards this program level outcome, are shown in mapping matrix of Program Level Outcomes with CM Courses. Refer to Appendix U.

**Source of Evidence:** Students’ performance on Assignments or Exams or Projects or Quizzes

**Criteria:** Students will demonstrate that they have mastered techniques for preparing schedule for construction projects by achieving target level of achievement set for the course level outcomes.

**Findings:** Refer to each course notebook which includes the details of each semester findings.

**Action Plan:** Refer to each course notebook which includes the details of implementation.

**M2: Capstone Evaluation by Industry Panel** - Industry panel members and faculty will be able to assess the graduating students’ level of achievement of this program level outcome through of capstone project evaluation. Industry panel members and faculty will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at end of the semester.

**Source of Evidence:** Capstone Evaluation Results.

**Criteria:** Industry panel members and faculty will rate that the graduating students’ level have mastered techniques for preparing schedule for construction projects by specifying at least 3.75 as the level of achievement for this program level outcome.

**Findings:** Based on Fall 2013 capstone outcome assessment results, the average value of achievement of this program level outcome is 3.73.

**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.
**M3: Undergraduate Student Exit Survey** – Students will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) two week before their graduation.

**Source of Evidence:** Students Exit Survey Results.

**Criteria:** Students will demonstrate that they have mastered techniques for preparing schedule for construction projects by specifying at least 4.25 as their level of achievement for this program level outcome.

**Findings:** Based on Fall 2013 graduating student exit survey results, the average value of achievement of this program level outcome is 4.08.

**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.

**M4: Alumni Survey** - Alumni will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Survey Results.

**Criteria:** Alumni will demonstrate that they have mastered techniques for preparing schedule for construction projects by specifying at least 4.0 as their level of achievement for this program level outcome.

**Findings:** Based on 2012-2013 three year alumni survey results, the average value of achievement of this program level outcome is 3.82.

**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.

**M5: Alumni Employer Survey** - Alumni Employer will specify the level of achievement of this program learning outcome on a scale from 1-4 (highest "4" being Very High and lowest "1" being Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Employer Survey Results.
Criteria: Alumni Employer will rate that Alumni have mastered techniques for preparing schedule for construction projects by specifying at least 3.0 as the level of achievement for this program level outcome.

Findings: Based on 2012-2013 three year alumni employer survey results, the average value of achievement of this program level outcome is 2.73.

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.

**Project Management**

PO3: Carryout construction project management related tasks

M1: *Major Course Level Outcome Assessments* - Faculty will be able to assess the students’ level of achievement of this program level outcome through the achievement of course level outcomes at end of the semester. At the beginning of the semester faculty sets the target level of achievement and collects the required data during the semester. At the end of the semester faculty assess the results for each course outcome. These results are compared with stated targets and based on the results each faculty proposes an action plan for the following semester. The courses, which contribute towards this program level outcome, are shown in mapping matrix of Program Level Outcomes with CM Courses. Refer to Appendix U.

Source of Evidence: Students’ performance on Assignments or Exams or Projects or Quizzes

Criteria: Students will demonstrate that they have mastered techniques for carrying out project management related tasks for construction projects by achieving target level of achievement set for the course level outcomes.

Findings: Refer to each course notebook which includes the details of each semester findings.

Action Plan: Refer to each course notebook which includes the details of implementation.

M2: *Capstone Evaluation by Industry Panel* - Industry panel members and faculty will be able to assess the graduating students’ level of achievement of this program level outcome through of capstone project evaluation. Industry panel members and faculty will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at end of the semester. The average value of capstone outcomes (Job Costing & Cash flow analysis, Safety Planning capability for a given project, Ability to
understand Financial, and Legal and Economic impacts of a project) will be considered for this program level outcome.

**Source of Evidence:** Capstone Evaluation Results.

**Criteria:** Industry panel members and faculty will rate that the graduating students’ level have mastered techniques for carrying out project management related tasks for construction projects by specifying at least 3.75 as the level of achievement for this program level outcome.

**Findings:** Based on Fall 2013 capstone outcome assessment results, the average value of achievement of this program level outcome is 3.75 [(3.4+4.0+3.87)/3].

**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.

**M3: Undergraduate Student Exit Survey** – Students will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) two week before their graduation.

**Source of Evidence:** Students Exit Survey Results.

**Criteria:** Students will demonstrate that they have mastered techniques for carrying out project management related tasks for construction projects by specifying at least 4.25 as their level of achievement for this program level outcome.

**Findings:** Based on Fall 2013 graduating student exit survey results, the average value of achievement of this program level outcome is 4.38.

**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.

**M4: Alumni Survey** - Alumni will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Survey Results.
Criteria: Alumni will demonstrate that they have mastered techniques for carrying out project management related tasks for construction projects by specifying at least 4.0 as their level of achievement for this program level outcome.

Findings: Based on 2012-2013 three year alumni survey results, the average value of achievement of this program level outcome is 3.99.

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.

M5: Alumni Employer Survey - Alumni Employer will specify the level of achievement of this program learning outcome on a scale from 1-4 (highest "4" being Very High and lowest "1" being Low) at frequency of three years.

Source of Evidence: Three years out Undergraduate Alumni Employer Survey Results.

Criteria: Alumni Employer will rate that Alumni have mastered techniques for carrying out project management related tasks for construction projects by specifying at least 3.0 as the level of achievement for this program level outcome.

Findings: Based on 2012-2013 three year alumni employer survey results, the average value of achievement of this program level outcome is 3.17.

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.

People Skills

PO4: Demonstrate people skills to function as a team player

M1: Major Course Level Outcome Assessments - Faculty will be able to assess the students’ level of achievement of this program level outcome through the achievement of course level outcomes at end of the semester. At the beginning of the semester faculty sets the target level of achievement and collects the required data during the semester. At the end of the semester faculty assess the results for each course outcome. These results are compared with stated targets and based on the results each faculty proposes an action plan for the following semester.
The courses, which contribute towards this program level outcome, are shown in mapping matrix of Program Level Outcomes with CM Courses. Refer to Appendix U.

**Source of Evidence:** Students’ performance on Assignments or Exams or Projects or Quizzes

**Criteria:** Students will demonstrate that they have mastered techniques for developing people skills to function as a team player for construction projects by achieving target level of achievement set for the course level outcomes.

**Findings:** Refer to each course notebook which includes the details of each semester findings.

**Action Plan:** Refer to each course notebook which includes the details of implementation.

**M3: Undergraduate Student Exit Survey** – Students will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) two week before their graduation.

**Source of Evidence:** Students Exit Survey Results.

**Criteria:** Students will demonstrate that they have mastered techniques for developing people skills to function as a team player for construction projects by specifying at least 4.25 as their level of achievement for this program level outcome.

**Findings:** Based on Fall 2013 graduating student exit survey results, the average value of achievement of this program level outcome is 4.15.

**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.

**M4: Alumni Survey** - Alumni will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Survey Results.

**Criteria:** Alumni will demonstrate that they have mastered techniques for developing people skills to function as a team player for construction projects by specifying at least 4.0 as their level of achievement for this program level outcome.
**Findings:** Based on 2012-2013 three year alumni survey results, the average value of achievement of this program level outcome is 4.29.

**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.

**M5: Alumni Employer Survey** - Alumni Employer will specify the level of achievement of this program learning outcome on a scale from 1-4 (highest "4" being Very High and lowest "1" being Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Employer Survey Results.

**Criteria:** Alumni Employer will rate that Alumni have mastered techniques for developing people skills to function as a team player for construction projects by specifying at least 3.0 as the level of achievement for this program level outcome.

**Findings:** Based on 2012-2013 three year alumni employer survey results, the average value of achievement of this program level outcome is 3.17.

**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.

**M6: Participation in competition teams, industry events and chapter meetings** – This is assessed through the participation of students in competition teams, professional chapter meetings and industry events.

**Source of Evidence:** Number of students’ competition teams and active professional students chapters meetings.

**Criteria:** Students will participate in at least two competition teams.

**Findings:** Students have participated in five competitions. 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.
Communication Ability

PO5: Demonstrate Communication ability with construction project team members.

M1: Major Course Level Outcome Assessments - Faculty will be able to assess the students’ level of achievement of this program level outcome through the achievement of course level outcomes at end of the semester. At the beginning of the semester faculty sets the target level of achievement and collects the required data during the semester. At the end of the semester faculty assess the results for each course outcome. These results are compared with stated targets and based on the results each faculty proposes an action plan for the following semester. The courses, which contribute towards this program level outcome, are shown in mapping matrix of Program Level Outcomes with CM Courses. Refer to Appendix U.

Source of Evidence: Students’ performance on Assignments or Exams or Projects or Quizzes

Criteria: Students will demonstrate that they have mastered techniques for developing communicating abilities with team members for construction projects by achieving target level of achievement set for the course level outcomes.

Findings: Refer to each course notebook which includes the details of each semester findings.

Action Plan: Refer to each course notebook which includes the details of implementation.

M2: Capstone Evaluation by Industry Panel - Industry panel members and faculty will be able to assess the graduating students’ level of achievement of this program level outcome through of capstone project evaluation. Industry panel members and faculty will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at end of the semester. The average value of capstone outcomes (Written Communication Skills and Oral Communication Skills) will be considered for this program level outcome.

Source of Evidence: Capstone Evaluation Results.

Criteria: Industry panel members and faculty will rate that the graduating students’ level have mastered techniques for developing communicating abilities with team members for construction projects by specifying at least 3.75 as the level of achievement for this program level outcome.

Findings: Based on Fall 2013 capstone outcome assessment results, the average value of achievement of this program level outcome is 3.93 [(3.93+3.93)/2].
**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.

**M3: Undergraduate Student Exit Survey** – Students will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) two week before their graduation.

**Source of Evidence:** Students Exit Survey Results.

**Criteria:** Students will demonstrate that they have mastered techniques for developing communicating abilities with team members for construction projects by specifying at least 4.25 as their level of achievement for this program level outcome.

**Findings:** Based on Fall 2013 graduating student exit survey results, the average value of achievement of this program level outcome is 4.31.

**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.

**M4: Alumni Survey** - Alumni will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Survey Results.

**Criteria:** Alumni will demonstrate that they have mastered techniques for developing communicating abilities with team members for construction projects by specifying at least 4.0 as their level of achievement for this program level outcome.

**Findings:** Based on 2012-2013 three year alumni survey results, the average value of achievement of this program level outcome is 4.29.

**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.
M5: *Alumni Employer Survey* - Alumni Employer will specify the level of achievement of this program learning outcome on a scale from 1-4 (highest "4" being Very High and lowest "1" being Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Employer Survey Results.

**Criteria:** Alumni Employer will rate that Alumni have mastered techniques for developing communicating abilities with team members for construction projects by specifying at least 3.0 as the level of achievement for this program level outcome.

**Findings:** Based on 2012-2013 three year alumni employer survey results, the average value of achievement of this program level outcome is 3.0.

**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.

M6: *Participation in competition teams, industry events and chapter meetings* – This is assessed through the participation of students in competition teams, professional chapter meetings and industry events.

**Source of Evidence:** Number of students’ competition teams and active professional students chapters meetings.

**Criteria:** Students will participate in at least two competition teams.

**Findings:** Students have participated in five competitions. 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.

**Demonstrate Capability to Pursue Advanced Degree Programs**

**PO6:** Demonstrate capability to pursue advanced degree programs

**M1: Major Course Level Outcome Assessments** - Faculty will be able to assess the students’ level of achievement of this program level outcome through the achievement of course level outcomes at end of the semester. At the beginning of the semester faculty sets the target level of achievement and collects the required data during the semester. At the end of the semester
faculty assess the results for each course outcome. These results are compared with stated targets and based on the results each faculty proposes an action plan for the following semester. The courses, which contribute towards this program level outcome, are shown in mapping matrix of Program Level Outcomes with CM Courses. Refer to Appendix U.

**Source of Evidence:** Students’ performance on Assignments or Exams or Projects or Quizzes

**Criteria:** Students will demonstrate that they have mastered techniques for developing capabilities for pursuing advanced degree programs by achieving target level of achievement set for the course level outcomes.

**Findings:** Refer to each course notebook which includes the details of each semester findings.

**Action Plan:** Refer to each course notebook which includes the details of implementation.

**M3:** Undergraduate Student Exit Survey – Students will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) two week before their graduation.

**Source of Evidence:** Students Exit Survey Results.

**Criteria:** Students will demonstrate that they have mastered techniques for developing capabilities for pursuing advanced degree programs by specifying at least 4.25 as their level of achievement for this program level outcome.

**Findings:** Based on Fall 2013 graduating student exit survey results, the average value of achievement of this program level outcome is 4.77.

**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.

**M4:** Alumni Survey - Alumni will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Survey Results.
Criteria: Alumni will demonstrate that they have mastered techniques for developing capabilities for pursuing advanced degree programs by specifying at least 4.0 as their level of achievement for this program level outcome.

Findings: Based on 2012-2013 three year alumni survey results, the average value of achievement of this program level outcome is 3.92.

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.

M5: Alumni Employer Survey - Alumni Employer will specify the level of achievement of this program learning outcome on a scale from 1-4 (highest "4" being Very High and lowest "1" being Low) at frequency of three years.

Source of Evidence: Three years out Undergraduate Alumni Employer Survey Results.

Criteria: Alumni Employer will rate that Alumni have mastered techniques for developing capabilities for pursuing advanced degree programs by specifying at least 3.0 as the level of achievement for this program level outcome.

Findings: Based on 2012-2013 three year alumni employer survey results, the average value of achievement of this program level outcome is 2.22.

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.

Analyze Ethical, Social, and Environmental responsibility of construction professionals

PO7: Analyze ethical, social and environmental responsibility of construction professionals

M1: Major Course Level Outcome Assessments - Faculty will be able to assess the students’ level of achievement of this program level outcome through the achievement of course level outcomes at end of the semester. At the beginning of the semester faculty sets the target level of achievement and collects the required data during the semester. At the end of the semester faculty assess the results for each course outcome. These results are compared with stated targets and based on the results each faculty proposes an action plan for the following semester.
The courses, which contribute towards this program level outcome, are shown in mapping matrix of Program Level Outcomes with CM Courses. Refer to Appendix U.

**Source of Evidence:** Students’ performance on Assignments or Exams or Projects or Quizzes

**Criteria:** Students will demonstrate that they have mastered techniques for analyzing ethical, social and environmental responsibility of construction professionals by achieving target level of achievement set for the course level outcomes.

**Findings:** Refer to each course notebook which includes the details of each semester findings.

**Action Plan:** Refer to each course notebook which includes the details of implementation.

**M3: Undergraduate Student Exit Survey** – Students will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) two week before their graduation.

**Source of Evidence:** Students Exit Survey Results.

**Criteria:** Students will demonstrate that they have mastered techniques for analyzing ethical, social and environmental responsibility of construction professionals by specifying at least 4.25 as their level of achievement for this program level outcome.

**Findings:** Based on Fall 2013 graduating student exit survey results, the average value of achievement of this program level outcome is 4.23.

**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.

**M4: Alumni Survey** - Alumni will specify the level of achievement of this program learning outcome on a scale from 1-5 (highest "5" being Very High and lowest "1" being Very Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Survey Results.

**Criteria:** Alumni will demonstrate that they have mastered techniques for analyzing ethical, social and environmental responsibility of construction professionals by specifying at least 4.0 as their level of achievement for this program level outcome.
**Findings:** Based on 2012-2013 three year alumni survey results, the average value of achievement of this program level outcome is 4.0.

**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.

**M5: Alumni Employer Survey** - Alumni Employer will specify the level of achievement of this program learning outcome on a scale from 1-4 (highest "5" being Very High and lowest "1" being Low) at frequency of three years.

**Source of Evidence:** Three years out Undergraduate Alumni Employer Survey Results.

**Criteria:** Alumni Employer will rate that Alumni have mastered techniques for analyzing ethical, social and environmental responsibility of construction professionals by specifying at least 3.0 as the level of achievement for this program level outcome.

**Findings:** Based on 2012-2013 three year alumni employer survey results, the average value of achievement of this program level outcome is 2.62.

**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.