

Section 4

Assessment Report for the Construction Management Program

Executive Summary

The annual assessment report provides the opportunity to review the state of the construction management program at Roger Williams University. His annual report covers the academic year beginning in August 2012 and ending in July 2013 (AY 12-13). Its focus is on the academic assessment through the year. Based on a review of the course reports as well as surveys and discussion with students and recent graduates, it is evident that the state of the program is strong.

The program faculty met on May 16, 2013 to review the AY 12-13 academic year and to discuss changes for next year. At this meeting we reviewed all published program outcomes and the metrics we are using to measure each. Reports were also made on our internship program, the CM club, Sigma Lambda Chi (SLC) student association, RWU US Green Building (USGBC) Student Group, Capstone project, Senior exit surveys, Alumni Survey and the AC exam. The meeting agenda, and the reports made are attached to this assessment report.

Overall this was a strong year for the Construction Management program. Some of the hi-lights of the year are as follows:

- Our third annual Alumni and Senior Banquet was held in May. At this event our Capstone Project winners were announced and our graduating senior class (photo below) were introduced to our program alumni.



- For the second year in a row CM Seniors scored above the national average on the AC Exam. This year's pass rate was 67%.
- The student population dropped with the fall 2012 enrollment at 106 students less than the fall 2011 enrollment of 120. Freshman enrollment, however, remains steady with the same enrollment as last year, which was up from 2010.
- Our three student competition teams swept the ASC Region 1 competition this year and for the first time we competed at the Region 6/7 Open competition. Our Integrated Project Delivery team won 3rd place. Our team's activities were financially supported by the Rhode Island AGC and the Construction Industries of Rhode Island.



- The CM Professional Advisory Board (CMPAB) awarded its third endowed scholarship to Perry Cyr.
- Dr. Amine Ghanem joined the faculty starting with the spring 2013 semester. He replaced Professor Anthony Branca who completed his Visiting Professor term at the end of the fall semester.

1. Introduction

The Construction Management program was reaccredited by the ACCE in spring 2005. The First Year Interim Report was submitted in AY 2005-2006 and the Third Year Interim Report was submitted in AY 2007-2008. One published ACCE concern was outcomes assessment. In October 2006 the SECCM published a comprehensive Assessment Plan that detailed the assessment process for the school and each program. The Construction Management program has submitted annual assessment reports in compliance with this plan for AY 2005-2006, AY 2006-2007, AY 2007-2008, AY 2008-2009, 2009-2010, 2010-2011, and 2011-2012. This report will address the 2012-2013 academic year.

Each year the program faculty reviews the instruments used to gather assessment data making the necessary adjustments to streamline the effort and to attain better information. Next, program faculty members use these data to measure our success in meeting our defined objectives and outcomes as they have been described in the SECCM Assessment Plan. Successes, failures and metric adjustments are discussed on an annual basis. Programmatic adjustments made in previous years are also assessed on an annual basis as well as changes that are implemented for the following year.

The generation of formal reports (written for the first time in AY 2006-2007) for the Internship program, Construction Management Student Club, the Associate Constructor exam, Capstone Project, Sigma Lambda Chi and the USGBC was continued this year. Beginning last year, CM Alumni were surveyed at our Senior Alumni Banquet. This was continued this year, along with a push to interview all 2008 alumni.

These reports, along with inputs from course transcripts, exit surveys, alumni surveys, capstone juror reports, student competition performance, course binders and advisory board communications were used to perform this annual assessment. The program faculty met on May 16th 2013 to discuss the above reports and to conduct this annual assessment. The agenda for this assessment meeting is included at Tab E. At this meeting program performance for AY 2012-2013 was assessed and adjustments in outcomes and metrics were made for coming year. Faculty also discussed ways to strengthen the Construction Management Student Club, the Internship and Externship programs, CM Capstone Project, and the Associate Constructor exam. CM Program Marketing was also discussed as a special topic. All of the above topics are addressed further within the body of this report.

2. Analysis of Evaluation Instrument Data

Present

This assessment report considered both formal and informally gathered data. The formally gathered input information included transcript review, Senior Exit Survey results (Tab F), Senior Capstone Report (Tab G), Associate Constructor Report including exam performance (Tab H), CM Club, USGBC, and SLC reports (Tab I), and Internship Report (Tab J). Informal data included informal conversations between faculty and faculty, faculty and students and between faculty and industry. The Associated Schools of Construction student competition serves as an excellent assessment input – our student's work is formally assessed and scored by industry professionals.

Senior exit surveys were performed both objectively and subjectively. For the fifth time, the CM advisory board through the academic subcommittee coordinated our senior exit surveys. Two program alumni formed the panel, which met with all but graduating seniors. Seniors also filled out an objective survey. Both the written survey results and a report from the alumni panel can be found at Tab F.

For the third time, as recommended for the first time in our AY 2009-2010 assessment process, this year's two capstone projects were held in a competition format and with each focusing on a different project type. The projects were corporate sponsored and a SECCM alumnus coordinated each project. The capstone project winners were announced at our third annual CM Alumni and Senior banquet. Tab G provides additional detail on the Capstone Project.

Program faculty also gather input from professional associations such as AGC, ASC, CSI, ACCE and ASCE. At these meetings faculty stay abreast of changes in accreditation standards and construction education "best practices" as regularly reported at these venues. Both permanent and intern employers provided feedback to the faculty on student performance. Formal internship reports are particularly valuable. Professional Advisory Board members also provide valuable support and feedback to the faculty. Starting this year, Program faculty were invited to meet with the CMPAB before prior to each CMPAB meeting. (Tab K includes copies of our CMPAB meeting minutes)

Within each course assessment report students are provided the opportunity to evaluate their accomplishment of course objectives. This information is used by instructors to modify courses from semester to semester. Faculty provide formal course reports after each semester and a summary of each course is reviewed and discussed with other faculty from the program. This discussion facilitates adjustment in course coverage and adjustments in the overall program.

Adjustments for Next Year

As suggested last year, in conjunction with our Alumni and Senior Banquet 35 Alumni were surveyed. See Tab L for our Alumni Survey results. This is a good opportunity to survey out Alumni, but it is not the best venue to get thoughtful input so starting next year alumni will be surveyed via Survey Monkey in advance of the banquet. The names of those that respond will be entered into a raffle to be held at the banquet.

Additionally a survey of all 2008 graduates was sought. This class was chosen as they represent a class cohort 4 years after graduation. Only 9 surveys were returned. Our plan is to continue this effort next year and target our 2009 class. Concurrently, we will be making an effort to strengthen our alumni ties and database, and with a stronger connection we hope to get a better return.

3. Program Assessment

The program educational objectives were first presented in that format for the 2007-2008 academic year. These objectives are shown in the table below.

Table 4.3-1 RWU Construction Management Program Educational Objectives

Objectives – Three to Five Years After Graduation, We Expect Our Graduates To:
1. Demonstrate exemplary technical knowledge and skills while achieving success as a practicing constructor and leader, and always displaying the highest standards of ethical conduct.
2. Value the concept of life-long learning and continue to grow intellectually while keeping informed of new concepts and developments in the construction process.
3. Advance the construction management profession by becoming actively involved in professional associations and societies, serving in professional and community volunteer positions, and acting as a role model for the future generation of constructors and the Roger Williams University Construction Management students.

Assessment of CM Program Educational Objectives

An Alumni Survey was conducted at our Alumni and Senior Banquet on May 3rd. Thirty-five surveys were completed. As previously mentioned, though we get a strong return in terms of the number of respondents, the environment is not best for getting thoughtful feedback. It is our plan to run this survey on line ahead of the event next year.

1. Demonstrate exemplary technical knowledge and skills while achieving success as a practicing constructor and a leader, and always displaying the highest standards of ethical conduct.

In our alumni survey this objective scored highest, 3.89 out of 5, though this score is not as high as last year. Our graduates have consistently excelled in the different in-house management training programs many of the larger construction companies' conduct. Also, quite a few of our graduates were promoted ahead of peers to advanced leadership positions. One company representative, and CM Advisory Board member, noted RWU retention as the highest of any school they hire from.

2. Value the concept of life long learning and continue to grow intellectually while keeping informed of new concepts and developments in the construction process.

Our alumni scored this objective at 3.78 out of 5. Conversations with graduates and employers display a strong commitment from our graduates to continuous learning. Graduate employers commented that our graduates display the ability to grasp new concepts and technologies well and also show a strong interest in teaching others.

3. Advance the construction management profession by becoming actively involved in professional associations and societies, serving in professional and community volunteer positions, and acting as a role model for the future generation of constructors and the Roger Williams University Construction Management students.

Our alumni scored this objective at 3.56 out of 5. Most of our graduates are members of professional associations. Alumni involvement on our CM Advisory Board and as members of our capstone review panel has grown. Four alumni joined the board as foundation members and other alumni participate as team mentors and guest speakers. The alumni subcommittee of our CM Advisory Board sponsored the third annual CM Alumni and Senior banquet on May 3rd.



The event was organized by CM alumni and culminated a day filled with CM alumni program involvement. Alumni participated both as capstone project judges and volunteered to meet with all graduating seniors as part of the senior “exit survey” process.



Steven Eustis, an active CM program supporter and CM Advisory Board member was honored at this event.



Elsch Maisoh and Andrew Tamblin were recognized as the top SECCM graduate and Construction Management graduate respectfully.



Employers report that our graduates have demonstrated a willingness to become involved in community and professional organizations. Graduates have joined Habitat for Humanity, ACE Mentoring, United Way and Rebuilding MA to name a few. Our graduates have become active in AGC's young constructor program in MA, RI and CT. Graduates have also displayed a willingness to mentor others both outside and within their companies.

To better identify the interrelationship between the program educational objectives and the program outcomes, Table 4.3-1, is presented below.

Table 4.3-2 Program Educational Objectives linked to Construction Management Program Outcomes

= Weak Relationship
 = Moderate Relationship
 = Strong Relationship

a – i Outcomes	Technical knowledge, success as a practicing constructor and leader, display the highest standards of ethical conduct	Lifelong learning	Advance the construction management profession, service, role model, assist SECCM
a. an ability to apply knowledge of mathematics and science to typical Construction Management tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. effective research and problem solving skills applied to typical Construction Management tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. an ability to plan, organize and control a construction project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. an ability to lead and/or function as a member of a team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. an understanding of professional and ethical responsibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. an ability to communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. the broad education necessary to understand the impact of construction in a global, economic, environmental, and societal context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. a recognition of the need for, and an ability to engage in lifelong learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. a knowledge of contemporary issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Program graduates continue to stay involved with the construction management program as members of the advisory board, mentors to our competition teams, guest speakers and employers of our most recent graduates. All of these graduates speak highly of the education they received at Roger Williams University and, given the overall success they have had in their careers, it is evident that our graduates are attaining our program objectives.

Based on the anecdotal information collected from our graduates' employers as well as the feedback received from the graduates themselves, the program faculty members believe that the Program Educational Objectives are being satisfied. As alumni involvement grows the program continues to seek more and better ways to engage and learn about our program.

Assessment of CM Program Outcomes

In our assessment plan metrics were defined to assess each program outcome on an annual basis. The tables below outline each program outcome, defined metrics, and a summarization with comments as to whether or not the identified metric was met. The outcomes and metrics as defined in the table are what the faculty evaluated for the AY 11-12 academic year. However, as each outcome was evaluated, program faculty examine the outcomes and metrics and made adjustments to better

evaluate program performance. The newly defined outcomes and metrics are located in at Appendix A and will be utilized for the AY 12-13 academic year.

Outcome a: an ability to apply knowledge of mathematics and science to typical Construction Management tasks			
Metrics Associated with Outcome a:	Where Measured	Met	Comments
1. CM student pass rate of the AC exam meets or exceeds the national average	AC Exam	Yes	RWU 67%
2. All graduating seniors report that they have achieved proficiency in the ability to apply knowledge of mathematics and science to solve construction problems. Proficiency is defined as a mean and median score of 4 or above on a 5 point scale where 5 means proficiency achieved and 1 means proficiency not achieved.	Course Student Survey Student Exit Survey	Yes	
4. Faculty report adequate application of mathematics in construction coursework.	Course Assessment Report	No	Faculty will develop course strategies to be documented in course assessment reports
5. Alumni rate their preparation for the workplace proficient in the use of mathematics and science to solve construction management tasks. Proficiency is defined as a mean and median score of 4 or above on a 5 point scale where 5 means proficiency achieved and 1 means proficiency not achieved.	Alumni Survey Employer Survey	No	Alumni Survey = 3.67

Outcome b: effective research and problem solving skills applied to typical Construction Management tasks			
Metrics Associated with Outcome b:	Where Measured	Met	Comments
1. At least 50% of all CM courses will require research and problem solving skills.	Course Binders	Yes	
2. At least 10% of all Construction Management seniors will participate in a competition where their ability to research and solve problems and will be externally judged and assessed.	Student Competitions	Yes	
3. Graduating seniors report that they have achieved proficiency in the ability to solve construction problems. Proficiency is defined as a mean and median score of 4 or above on a 5 point scale where 5 means proficiency achieved and 1 means proficiency not achieved.	Student Exit Survey	Yes	Score 4.46
4. Alumni rate their preparation for the workplace proficient in the area of research and problem solving. Proficiency is defined as a mean and median score of 4 or above on a 5 point scale where 5 means proficiency achieved and 1 means proficiency not achieved.	Alumni Survey Employer Survey	No	Alumni Survey = 3.67

Outcome c: an ability to plan, to organize and to control a construction project			
Metrics Associated with Outcome c:	Where Measured	Met	Comments
1. 100% of Construction students participate in a Capstone Project Class that involves a semester long industry sponsored project that demonstrates their ability to successfully plan, organize and control a project.	Capstone Project Juror Evaluations Transcript Review	Yes	
2. Employment Interviewers rate applicants proficient for internship and permanent placement in the applicant's ability to plan, organize and control a construction project. Proficiency is defined as a mean and median score of 4 or above on a 5 point scale where 5 means proficiency achieved and 1 means proficiency not achieved.	Employer Interview Survey	Yes	Need to increase survey response rate
3. Employers rate proficient RWU Construction Management hires in their ability to plan, organize and control a construction project. Proficiency is defined as a mean and median score of 4 or above on a 5 point scale where 5 means proficiency achieved and 1 means proficiency not achieved.	Employer Survey	Yes	

Outcome d: an ability to lead and/or function as a member of a team			
Metrics Associated with Outcome d:	Where Measured	Met	Comments
1. 100% of students participate as a team member as they complete their Capstone project. Each team member brings different construction experiences to the project.	Transcripts Capstone Project juror evaluations Course Assessment Report	Yes	
2. 100% of all Construction students will participate in the university CORE sequence and University Senior Integrative Experience.	Transcripts	Yes	
3. At least 50% of construction courses will give students the opportunity to work on collaborative team projects.	Course Binders Course Assessment Report	Yes	
4. At least two student-led teams will participate in the Associated Schools of Construction Region 1 student competition	Student Competitions	Yes	
5. At least 75% of construction management students will have held a construction related summer position, internship or co-op, or construction management work study related position by the time of graduation.	Senior Exit Survey	Yes	100%

**Outcome e:
an understanding of professional and ethical responsibility**

Metrics Associated with Outcome e:	Where Measured	Met	Comments
1. 75% of graduating seniors will sit for the AC exam.	AC Examination	No	69% Taking the exam was made a graduation requirement starting with our 2012 entering class.
2. All students will develop and present a case that focuses on professional and ethical responsibility.	Course Binders	Yes	
3. At least 25% of all construction management classes will address, and students will demonstrate an understanding of professional and ethical responsibility.	Course Binders Course Student Surveys	Yes	

Outcome f: an ability to communicate effectively			
Metrics Associated with Outcome f	Where Measured	Met	Comments
1. At least 85% of all mentors and potential employers agree that graduating seniors possess the ability to communicate effectively.	Capstone Jury Graduate employer survey	Yes	
2. 100% of seniors will have the opportunity in construction classes to make an oral presentation at least twice a semester in their senior year.	Course Binders Course Assessment Report	Yes	
3. 100% of all freshmen will have the opportunity to make an oral presentation in a construction class at least 2 times per year.	Course Binders Course Assessment Report	Yes	
4. 100% of graduates will produce an acceptable senior capstone oral report as evaluated by external and internal review.	Capstone Jury	Yes	
5. At least 90% of alumni report that their RWU education has prepared them proficiently in communication skills for the workplace. Proficiency is defined as a mean and median score of 4 or above on a 5 point scale where 5 means proficiency achieved and 1 means proficiency not achieved.	Alumni Survey	No	Alumni survey = 3.78

**Outcome g:
the broad education necessary to understand the impact of construction in a global,
economic, environmental, and societal context**

Metrics Associated with Outcome g	Where Measured	Met	Comments
1. 100% of construction students fulfill the Multidisciplinary Core Education component as well as the Core Concentration component of study to include the Core Senior Seminar.	Transcripts	Yes	
2. At least 25% of construction courses address this outcome.	Course Assessment Report Course Binders	Yes	
3. At least 1 guest speaker per semester will address the above outcome.	CM Club Report	Yes	
4. Graduating seniors rate themselves proficient with the broad education necessary to understand the impact of construction in a global, economic, environmental and societal context. Proficiency is defined as a mean and median score of 4 or above on a 5 point scale where 5 means proficiency achieved and 1 means proficiency not achieved.	Senior Exit Survey	Yes	Exit survey = 4.23

**Outcome h:
a recognition of the need for, and an ability to engage in lifelong learning**

Metrics Associated with Outcome h	Where Measured	Met	Comments
1. 75% of graduating seniors will sit for the AC exam.	AC Exam Results	No	69%
2. At least 50% of CM students will be active members in the CM club.	CM Club Report	No	CM Club bylaws to be prepared next year to improve club governance
3. Alumni indicate participation in professional training, professional societies or a graduate school since graduating from RWU. Adequate participation is defined as a mean and median score of 4 or above on a 5 point scale where 5 means participation achieved and 1 means participation not achieved.	Alumni Survey	No	Alumni Survey = 3.56
4. Graduating seniors rate their education as having increased their motivation to become lifelong learners. Proficiency is defined as a mean and median score of 4 or above on a 5 point scale where 5 means proficiency achieved and 1 means proficiency not achieved.	Senior Exit Survey	Yes	Exit Survey = 4.54

**Outcome i:
a knowledge of contemporary issues related to the construction industry**

Metrics Associated with Outcome i	Where Measured	Met	Comments
1. All (100%) of construction students will be exposed to contemporary issues through the Multidisciplinary Core Education component as well as the Senior multidisciplinary Core course	Course Binders	Yes	
2. At least 25% of construction courses will address this outcome.	Course Binders Course Assessment Report	Yes	
3. Graduating seniors will rate themselves proficient in knowledge of contemporary issues Proficiency is defined as a mean and median score of 4 or above on a 5 point scale where 5 means proficiency achieved and 1 means proficiency not achieved.	Construction Student Exit Survey	Yes	Exit survey = 4.19
4. All (100%) of construction students will be exposed to contemporary issues through the Senior Seminar class.	Course Binders	Yes	
5. All (100%) of construction students will participate in the Feinstein Service Learning Requirement of at least 5 hours in the surrounding community.	Transcripts	Yes	

4. Assessment of Previously Implemented Program Changes

The CM Masters program initiated during the 2007-2008 academic year deserves comment.

- AY0708-: Launched a Master of Science in Construction Management (MS in CM) program scheduled for the start with the fall 2009 semester. The program is designed to incorporate both on-line, classroom, and resident instruction. The program will be two years in length, 36 credits, with the students operating as a cohort. Unfortunately, current enrollment was not adequate to start the program in 2009. Due to tough economic times, corporate support did not materialize as planned, so starting in the fall 2010 the program temporarily moved away from the “corporate sponsored,” cohort model. Entrance requirements were also changed allowing students to enter the program with less than 3 years of work experience. The program officially started with a fall 2010 class of 12 students. Enrollment for the fall 2011 did not generate a full class necessitating the combination of the entering CM students with the 2010 cohort CM students and graduate architecture and historical preservation Masters students. Fall 2012 enrollment continued at less than a full class. The program is now available fully on line for those choosing this approach and a Marketing consulting firm has been hired to help promote the program. At the time of this writing Fall 2013 enrollment projections remain low.
- AY 1213-1: Replace PHYS 201 with PHYS 109. The Physics department encouraged this change suggesting that MATH 207, Applied Calculus for Business and Social Sciences, does not stress the theoretical foundations of calculus required for PHYS 201. PHYS 201 is noted as a prerequisite for ENGR 210 a course taken by the CM students, but the program faculty have been notified that PHYS 109 will be an acceptable prerequisite.
- AY 1213-2: Replace PLS 221 with either LS 220 or BUSN 305. Recently, PLS 221 has been increasingly taught off campus, in the evenings, and on line making it difficult for the CM student to take. Both PLS 221 and BUSN 305 offer course content very similar to PLS 221 and were found acceptable to the CM faculty. Listing both LS 220 and BUSN 305 as acceptable options will provide the CM student with better schedule flexibility and choice.
- AY 1213-3: Replace PLS 436 with a CM Elective. Currently, the CM program does not offer any CM elective courses. The CM students, faculty and accreditation visiting team members have encouraged the program to create an elective course. Removing PLS 436 Construction Law and replacing it with two elective courses CNST 540 Sustainable Construction or CNST 555 Advanced Construction Law provides some choice. As program enrollment grows additional electives will be offered. This change affords the undergraduate students in the CM Program the opportunity to sample the graduate CM Program.

5. Discussion of Recommended Program Changes

As mentioned in Section 2 a number of formal reports were made this year which were reviewed and discussed by the faculty:

Internship Program

All agree that one of the most important things a student can do is secure at least one internship position while a student. Internship positions provide valuable experience improving learning and also better a student's employment opportunity. Our program target is for at least 75% of our students to hold at least one internship by graduation. This year, for the first time, we exceeded that target with 100% of our seniors reporting having held at least one internship position while a student. One metric change for next year is to only consider "work eligible" students in our measure since recently a number of our CM students are not legally employable in the US.

Program faculty will continue to encourage students to seek an internship with a particular focus on our sophomore and junior classes. Susan Caizzi will be invited to both CNST 201 and CNST 321 classes to discuss the steps involved in landing an internship position.

Starting two years ago Dr. Celik, program internship coordinator, began the process of surveying both students and employers to seek ways to improve our internship program and to evaluate student performance. Our CMPAB assisted and an internship survey form was developed. Dr. Celik received good feedback on the student side, but less so on the employer side. One idea for next year is to engage the help of our new CMPAB foundation members.

See Tab J for Dr. Celik's complete Internship report.

CM Student Club activity: CM Club, Sigma Lambda Chi and USGC Student Chapter

See Dr. Celik's, Dr. Ghanem's, and the Club President reports under Tab I.

The CM club ran a spring and fall lecture series, managed elections for next year's officers, and helped select next year's competition teams. All club members were very supportive of fall and spring open house activities. The CM club also supported this year's three competition teams that all won first place. A copy of the Student Competition press release can be found at Tab M.

Planned next year is the creation of CM club bylaws. Speakers will be identified and scheduled early to better promote attendance. A logo design for a Tee Shirt was shared and will be used as part of a fundraising activity for next year. The club also plans a BBQ and some sports events to promote program camaraderie.

A team selection process for future years has been developed and was overviewed and approved by the faculty. It is included at Tab I.

SLC was an active participant in the Community Partnership Center project. SLC also helped industry professionals mentor high school students as part of the ACE Mentor Program and assisted in the renovation of a Coventry home as part of "Rebuilding Together". SLC won the International Highest Achievement Award. Plans for next year include an effort to reconnect with past SLC members and work with the program to create a more complete and active alumni database.

This year's USGBC group struggled with leadership and did not complete the work it normally does. A new leadership team has been established for next year with plans to bring in more guest speakers, send at least three students to Green Building Expo, attend Earth Day and secure at least one green building internship opportunity for one of the USGBC Student Group members.

Capstone Project

A complete report on the student Capstone Project experience can be found at Tab G.

Like last year, projects were run in a competition format; students were given a choice on project type; all projects were corporate sponsored and headed by alumni. Additionally, the competition winners were recognized at our first annual Student Alumni dinner at the Bristol Harbor Yacht club. Program alumni conducted senior exit surveys in parallel with capstone presentations. Students who passed the AC exam received a 5% course bonus.

As was suggested last year, to provide more preparation time projects were introduced at the end of the fall semester. Other course requirements, for example research paper guidelines, were also announced allowing students to take advantage of the winter intercession period. This year's projects were also close in size and scope. Feedback from students, faculty and industry was very favorable. Next year's projects will be run the same, and like last year only two projects will be scheduled since next year's class size is again small.

The addition of laptops in SE 125 was a big help providing team access to all the necessary software. One change for next year will be the scheduling of three workshop/progress review sessions during the course of the semester.

Senior Exit Survey

At Tab F are the results of our both our objective survey and qualitative survey conducted by two members of our Construction Management Professional Advisory Board (CMPAB). Noted strengths include the faculty, student camaraderie, team competitions, internships, and the support of the Career Center and most specifically Susan Caizzi.

Many ideas for improvement were mentioned – most noteworthy were the importance of including BIM, increased inclusion of field and volunteer project opportunities connecting students with industry professionals, and resolving the physical restrictions on technology seeking ways to provide unlimited, anywhere access to computational software.

Associate Constructor Exam and Review Course

Student participation and performance improved again this year with RWU for the second time in a row beating the national average with a pass rate of 67%. Students who did sit for and passed the exam received a 5% bonus in CNST 480 and their exam fee was reimbursed. The full AC Exam report is included at Tab H. Starting with the AY 12-13 catalog all CM students will be required to sit for the AC exam. As in the past, faculty will look for opportunities to include AC practice exam questions in their courses.

Other Topics

Bill Thumm, Hensel Phelps Construction Company, continues as the chair of our CMPAB. This year the CMPAB presented a third scholarship, conducted mock interviews, participated in senior exit surveys, supported student internship and externships, organized the Alumni and Senior banquet and supported student guest lecture and laboratory activities. Our CMPAB endowed scholarship continues to grow and has been funded to a level where starting next year, two scholarships may be provided. New this year is the addition of four foundation board members, program graduates with 3-5 years work experience. Program enrollment remains a major challenge and one the CMPAB plans to help the program overcome. Planned actions to meet this challenge include strengthening our alumni data base, improving our program web site and reaching out to targeted high schools. These actions will be taken with the support of Alumni, Admissions, and our CMPAB.

Revised Program Outcomes and Metrics

The following pages reflect the adjusted outcome d that will be used to assess the CM program starting in Academic Year 2013-2014. Indicated on each page is a brief note of the changes made.

Outcome d: an ability to lead and/or function as a member of a team			
Metrics Associated with Outcome d:	Where Measured	Met	Comments
1. 100% of students participate as a team member as they complete their Capstone project. Each team member brings different construction experiences to the project.	Transcripts Capstone Project juror evaluations Course Assessment Report		
2. 100% of all Construction students will participate in the university CORE sequence and University Senior Integrative Experience.	Transcripts		
3. At least 50% of construction courses will give students the opportunity to work on collaborative team projects.	Course Assessment Report		
4. At least two student-led teams will participate in the Associated Schools of Construction Region 1 student competition	Student Competitions		
5. At least 75% of work eligible construction management students will have held a construction related summer position, internship or co-op, or construction management work-study related position by the time of graduation.	Senior Exit Survey		

#5 added "work eligible" to account for the fact that a few CM students are not legally employable

