

Construction Management Program Annual Report

Academic Year 2017–2018



August 30, 2018



College of Continuing
& Professional Studies

UNIVERSITY OF MINNESOTA

42.2

58.8

Construction Management Program Annual Report

Academic Year 2017–2018



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Introduction

Go Gophers—We Keep Digging!

Tunnels. Buildings. Roads. Houses. Finance. Safety. Our alumni are digging up solid results all around the country. It is wonderful that, after our 20th anniversary last year, our program has achieved something of a national stature. We now have recruiters from across the country and industry spectrum tagging our students for work. Part of that is the economy and the labor force issues we all know so well. But I also believe it is our students and the quality of our program that is making a difference.

This Annual Report presents an overview of our students, alumni, faculty/staff, curriculum, career development, Advisory Board, and scholarship/development; the accomplishments of our programs and their quality initiatives; and our annual plan.

The highlights of this academic year 2017–18 are (in no particular order of importance):

1. Enrollment in the program continues to be very strong, as well as enrollment in classes.
2. Fifty-six scholarships awarded, thanks to the effort building our program endowment.
3. What we started as the Construction Management Study Abroad program in Costa Rica is now the Pura Vida Tour, open to all students in our degree programs in a truly interdisciplinary approach—a single cohort of unrelated disciplines working together for a learning experience.
4. And what did our students find in Costa Rica? They visited the orphanage in Palmares that was actually constructed from our proposal three years ago, almost exactly as planned and budgeted. This is a rare accomplishment where they could see the importance of this work.
5. Winning the JE Dunn Traveling Trophy for the 2017 Quiz Bowl for the fifth year in a row.
6. Continuation of the Hardhatter's Toastmasters Club, blending current students and alumni into this national organization—no easy feat to keep a club going in this format.
7. And perhaps the biggest accomplishment is hosting the Associated Schools of Construction annual international conference—the first time ever in Minnesota, and the first time it was hosted by a joint venture of seven schools in the Construct*ium league. It was an enormous success, professionally managed by our Conferences group within the college, where industry had a larger role, and we opened our program to all of our collegiate peers.

Our mission statements

For the College

Providing high-quality continuing education and lifelong learning opportunities for professional development, personal enrichment, career transitions, and academic growth

For the Construction Management program

Preparing future construction leaders to sustainably manage the built environment



A. Peter Hilger, AIA
Faculty Director, Construction Management Program

Students

Enrollment

Registrations in Construction Management program courses remained strong throughout AY 2017–18. There was a total of 916 class registrations over the three academic semesters (fall 2017, spring 2018, summer 2018). Although this was a decrease from AY 2016–17, it is similar to registrations in AY 2015–16. There were 220 registrations (24%) from other colleges within the University, 9% were from the College of Design, 7% from the College of Liberal Arts, 4% from the College of Science and Engineering, and 4% from other colleges (source: UM Data Warehouse).

During Academic Year 2017–18, 202 students were enrolled in one or more credentials of the program: 86 students were studying for the major, 66 in the pre-major, 42 in the minor, 19 in one of the certificate programs and 8 studying Construction Management in the Inter-College program. There were 71 new admits to these programs during the academic year. Enrollment in the major continues to grow with 30 new students during 2017–18, including 18 who converted from pre-major or major status. Enrollment in the pre-major stands at 41 at the end of AY 2017–18 (source: UM Reports).

Graduation Statistics

Since the program's inception in AY 1997–98, the program has graduated 398 major and 96 certificate students, for a total of 494 graduates. Another 16 have completed the Inter-College program with a track in Construction Management. The overall GPA is 3.1 in the major and 3.4 in the certificate, and the average terms taken to complete the degree are 3.9 and 6.5, respectively.

Graduates	AY 13–14	AY 14–15	AY 15–16	AY 16–17	AY 17–18	All years to date
CMGT Major	28	24	22	37	29	398
Average GPA	3.0	3.2	3.3	3.2	3.2	3.1
Average terms to complete *	6.8	7.6	6.5	6.1	6.9	6.5
CMGT Certificate	4	5	11	10	6	96
Average GPA	3.3	3.6	3.2	3.4	3.3	3.4
Average terms to complete *	6.8	3.4	3.6	3.8	3.5	3.9

Source: UM Reports – Official Degrees Granted

*NB. CCAPS offers classes during fall, spring, and summer, therefore three terms represent one year.

Student Outreach

Information Sessions and Outreach

For AY 2017–18:

- Eight visits to seven different community colleges
 - Anoka-Ramsey Community College
 - Century College
 - Inver Hills Community College
 - Minneapolis Community and Technical College
 - North Hennepin Community College
 - Rochester Community and Technical College
 - Saint Paul College
- Ten Transfer Thursdays held in collaboration with the Office of Admissions
- One college-wide information sessions
- Two Construction Management-specific information sessions
- Major/Minor Expo for specific University of Minnesota students
- Program information provided to companies participating at the Construction Management Career Fair for continuing education opportunities for their employees

Advising Summary and Statistics

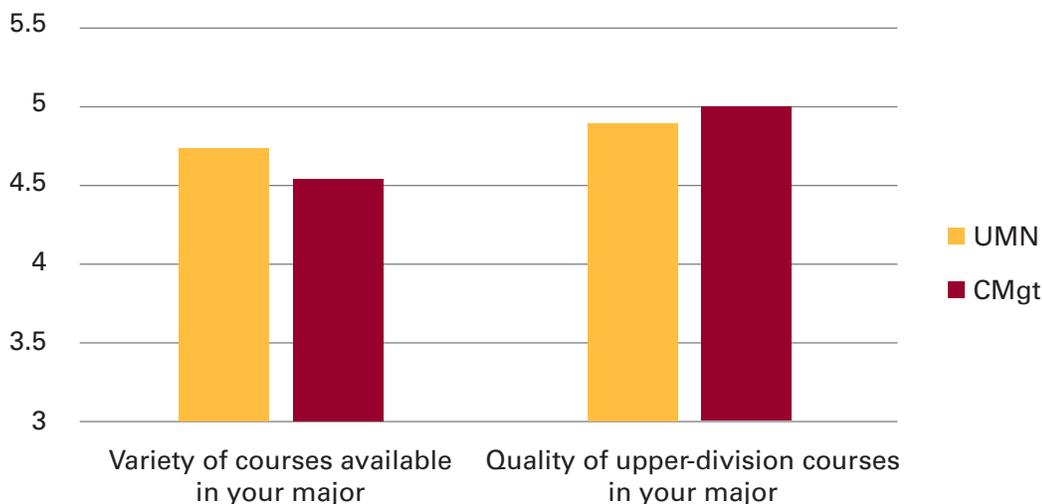
Advising is a critical factor in student success, and the Student Experience in the Research University (SERU) survey results demonstrate very high satisfaction with the Construction Management advising. In fact, our original ACCE and IFMA accreditation site visit report identified the advising program as a “strength.” As further evidence of this continuing strength, Megan Seltz received the Tate Award for Excellence in Undergraduate Advising, a well-deserved honor.

For AY 2017–18, the advising staff completed 250 individual appointments, 25 walk-in meetings, 300 phone inquiries, and 3,500+ email inquiries. The advising staff is responsible for guiding all degree and certificate students and assisting minor students as required. Further, advisors regularly communicate with colleagues in other programs and colleges to make them aware of our program as part of recruitment efforts.

Student Experience in the Research University Survey

The SERU survey is a comprehensive national evaluation offered in alternate years to all degree-seeking University of Minnesota undergraduate students. The University of Minnesota has participated in every survey since 2009. The items provide an extensive snapshot of the student experience, tapping into diverse domains of interest to a variety of campus stakeholders. Results of the SERU survey are used to assess many elements of the Construction Management program. See Appendix A, the Quality Improvement Plan, for a summary of the SERU survey results. Data from the 2017 survey were not available at the time of writing, results are taken from the 2015 survey.

Satisfaction: Courses in Major Mean Response, Scale 1–6



SERU Survey Results 2015

Construction and Facility Management Student Association

The Construction and Facility Management Student Association’s (CFMSA) primary goals are to provide students studying Construction or Facility Management with access to networking opportunities within their prospective industries, to strengthen bonds among students in the major, and to connect students to local, professional organizations in the fields they desire to go into. CFMSA had 46 paid members for the 2017–2018 academic year, led by student board members. The board members were:

- Meir Avila, President
- Diego Debout, Vice President

Planning for the school year began in June 2017 and continued throughout the summer, with various board members gathering once or twice a month. Throughout the school year the board continued to meet on the first Tuesday of each month.

EVENTS:

- Career Fair Prep Workshop
- Built Environment Career Fair Information sessions
- Construction site tours
- Social events

Working toward the group’s goal of connecting students to relevant local organizations, CFMSA collaborated with the Construction Management Alumni Association on events, and activities were often open to members of the other group. Most events had an informal networking happy hour afterward.

Additionally, CFMSA created a new website for the student association. One of the key features of the site is the

calendar, which shows upcoming CFMSA events, as well as different conferences, workshops and activities hosted by other professional associations in the area. Members sported custom CFMSA visors in maroon and gold at all events.

One of the major undertakings for the school year was to gather enough charter members to form a CFMSA chapter of Toastmasters. As the spring semester neared its end, a group of students met every other week to practice speaking in front of other people—including giving speeches, presenting to an audience, and engaging with individuals through eye contact and body language. Once summer began, the group changed to meeting monthly, with the goal of having enough (20) members by fall to charter an official chapter of Toastmasters—the Hardhatter’s Toastmaster Club #05573652.

Goals for the upcoming school year include membership growth, increased collaboration with the Construction Management Alumni Association, and continued interaction with companies and professionals in the Twin Cities.

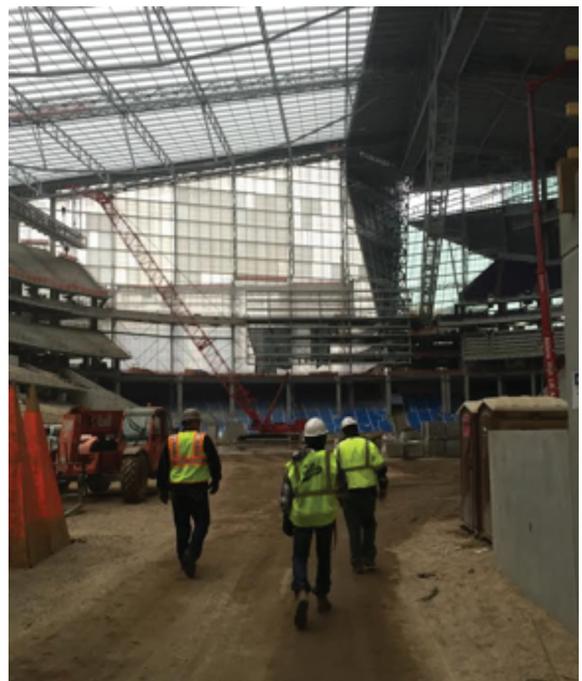
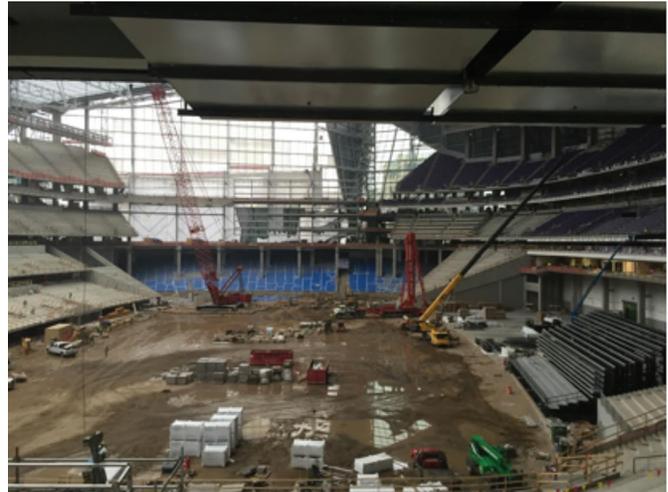
Alumni Club

The Construction Management and Facilities Management Alumni Association is the official network for University of Minnesota Construction Management and Facilities Management graduates.

Our Mission:

1. To foster alumni relationships that enhance the quality of the construction management and facilities management education program.
2. To serve as the catalyst for innovation and change within our industry.
3. To cultivate authentic and genuine thought leadership in our world.
4. To build a sustainable organization to serve our program at the University of Minnesota, including our stakeholders, faculty, and students and alumni.

Together, we stand united to support excellence in construction and facilities management education at the University of Minnesota.



As of August 2018, 494 alumni have graduated from the major and certificate programs. The Construction Management Alumni Association (CMAA) was initiated in summer 2014 by two alumni. The CMAA has continued to be loosely organized, with many alumni meeting informally for several site tours and happy hours over the past year. But the club came together in fall 2015 and 2016 to host a tailgating event at the U of M Homecoming game. This will be an annual event each fall to reconnect alums and celebrate the U of M Gophers! Currently, 2016 graduate David Krueger serves as CMAA president.

Megan Seltz, our program Academic Advisor, continues her role at the epicenter of student activity—past, present, and future—so the connection between students and alumni is bridged through Megan. She helps coordinate the activities of the club and serves as the liaison to the club and its Board. Further, she helps coordinate events between the CFMSA student group and the alumni. The alumni club is fully operational with activities including website development, a program schedule, a LinkedIn presence, and even Gopher apparel for sale.

A significant initiative between the Alumni Club, the Student Group, and Construct*ium is the formation of a Mentorship Group. Alumni Trevor Johnson and Brett Newlin have teamed to develop the mentorship program for our existing students on behalf of this Construct*ium initiative. The initial trial proved quite successful, so the program will continue for the upcoming academic year. It is thought that this mentorship program will eventually be expanded to the other programs within the Construct*ium league.

Student Focus Group

The Student Focus group meetings are typically held every two years on odd-numbered years. A request was put out to meet to discuss the program; however, we did not have any students RSVP to attend the event so it was canceled. We do accept program commentary from any student at any time of the year.

This year we received the following unsolicited testimonial from a recent graduate:

Good morning!

I'd like to express my gratitude for all you've done to help this ex-carpenter and older non-traditional student attain a college degree. At this point it's now been 25 years in the making and completely worth the journey it took to get here. I've accepted the position as a project manager here at U-Construction offered to me last week and now with the degree I actually feel that I'm accomplishing the goals I set for myself when I began this entire journey here at the U. What you do is invaluable and I want to take this opportunity to say THANK-YOU for making it a less intimidating process. I also want to say thank-you for your advice on what classes I should have been taking and what to expect from them. This may seem like a small thing to you and I know is part of your job, but in retrospect I could not have done as well as I did without your guidance and knowledge keeping me from overloading myself trying to achieve my goals. So, THANK-YOU, THANK-YOU, THANK-YOU and keep doing the excellent work!

BJ

Faculty and Staff

Adjunct Faculty

Adjunct faculty have been the backbone of the program since its inception in 1997, and faculty are repeatedly mentioned by students in surveys and program reviews as one of the strong points of the program. Biographies of our faculty can be found [here](#).

AY 2017–18 saw several changes to our faculty roster. Long-time faculty Jupe Hale and Paul Backer stepped back from teaching due to other commitments, and several new faces joined the faculty group to develop coursework in environmental health and safety: Jean Cranston, Mike Maurer, and Vickie Schleuning. Other new faculty were Jason Cook, teaching Materials and Structures, and Chris Mavis, teaching Surveying. Interest in teaching within the program remains very high, and turnover is low.

Construction Management Faculty – Summer 2018

Faculty List	Semester Hired
A. Peter Hilger, AIA, Faculty Director	Fall 1997
Mark Adamson	Fall 2010
William J. Bartolic, III	Spring 2016
Debra Becker	Fall 2009
Brian Bowen	Fall 2014
David Campbell	Summer 2011
John Chapman	Summer 2012
Jason Cook	Spring 2018
Jean Cranston	Spring 2018
Bradley Creager	Summer 2008
Dwight Elthon, LEED AP	Spring 2004
David J. Franke	Fall 2015
David Galetka	Fall 2013
Stephen Hauser	Spring 2003
Jay Hietpas	Spring 2013
Scott Holm	Spring 2012
Nirmal Jain, PE	Spring 2010
Ann M. Johnson, PE	Spring 2001
Heather Kossila AIA, LEED AP, CM-Lean	Spring 2014
Ethan Laubach	Fall 2014
Klaus Lemke	Spring 2014
Robert Linder, PE	Spring 2016
Deborah Mackay	Fall 2009
Mike Maurer	Summer 2018
Chris Mavis	Spring 2018
Cullen O'Neill	Summer 2014

Justine Pliska	Spring 2013
Vickie Schleuning	Summer 2018
Kenneth Styrlund, PE, LEED AP	Fall 2003
Jody Tableporter	Fall 2015
Clayton Talbot	Spring 2015
Steven Taylor	Fall 2012

Faculty Awards and Outreach Activities

Construction Management program faculty are established and respected members of their fields. In addition to their teaching activities, they receive professional recognition and awards, and they serve on local and statewide boards. The following is a summary of some of their achievements during 2016–17.

Congratulations to all of our faculty!

Faculty Awards, Honors and Achievements: 2017–18

- **Heather Kossila** became a licensed remote pilot to capture existing and as-built conditions and create 3D point clouds to analyze for QA/QC, prefabrication of complex shaped finishes, use for calculating quantities like cut and fill, and also use for future renovations or changes during construction, like core drilling PT concrete slabs and locating lost sleeves.

Faculty Outreach Activities: 2016–17

- **Peter Hilger** and **Nirmal Jain** were invited to conduct customized week-long training sessions for the National Oceanic and Atmospheric Administration's (NOAA) Kansas City program office, with a focus on facilities maintenance. The University of Minnesota was selected because of its continuing education focus.
- **Peter Hilger** assumed the Presidency of the Construction History Society of America (CHSA) for a period of two years.

Staff

The program staff is a critical component of our success, the depth of which is a differentiator between our program and the typical college program. Without this staffing, we would be unable to achieve our mission and goals or recruit new students to the program and your workforce. The staff for the program are as follows.

Staff List	Role
Ms. Mary Nichols	Dean, College of Continuing and Professional Studies
Mr. Robert Stine	Associate Dean, CCAPS Degree and Credit Programs
Ms. Michelle Koker	Director, CCAPS Degree and Credit Programs
Mr. A. Peter Hilger	Faculty Director, Internship Advisor, FM Program Coordinator
Ms. Megan Seltz	CMGT Senior Academic Advisor, Alumni/CFMSA Liaison
Mr. Willie Wong	Transfer Admissions Coordinator
Ms. Elizabeth Hruska	Ass't Director/Career Advisor, U of M Career and Internship Services
Mr. Michael Matejcek	Associate Program Director, CCAPS Degree and Credit Programs
Ms. Lynn Cross	Program Associate, CCAPS Degree and Credit Programs
Mr. Geoff Couling	Administrative Specialist, CCAPS Degree and Credit Programs
Mr. Steven Wandler	Writing Specialist
Ms. Jessica Haensch	Scholarship/Financial Aid Coordinator, CCAPS
Ms. Sheila Flatz	Marketing/Brand Consultant, CCAPS
Ms. Kelli Billstein	Communications Specialist

Curriculum and Coursework

The Core Curriculum

The Construction Management curriculum is aligned and constantly monitored to provide graduates with the best education and experiential learning for a career in professional construction management.

The program consists of a foundation of 31 credits of required core coursework, on which students build their degree, based on their desired career path in one of four tracks: Commercial Construction, Facility Management, Highway/Heavy-Civil Works, or Residential Construction.

Students can study for three credentials: the full Major, a Minor, or a Certificate. Students can also be admitted with pre-major status, depending on the level of coursework completed. Pre-major status allows the student to leverage financial aid and program academic advising support while they complete their major prerequisites.

Pre-Major Admission Criteria

- A minimum of 30 transferable semester credits
- A 2.0 or better cumulative grade point average, 2.5 for transfer students

Major-Status Admission Criteria

- A minimum of 45 transferable semester credits
- A 2.5 or better cumulative grade point average
- Completion of prerequisite courses with a grade of C- or better (or in progress):
 1. Calculus I or Intro to Calculus
 2. Physics I with lab
 3. CMGT 3011 - Construction plan reading

Preparatory Coursework	
ACCT 2050	Introduction to Financial Reporting
CMGT 3001	Introduction to Construction
Electives in the following categories	
Technical Writing	
Public Speaking or Interpersonal Communication	
Economics	
Introduction to Management	
Environmental Science	

Required Major Coursework	
ABUS 4013W	Legal, Ethical, and Risk Issues for Managers
ABUS 4101	Accounting and Finance for Managers
ABUS 4701	Introduction to Marketing
CMGT 4011	Construction Documents and Contracts
CMGT 4021	Construction Planning and Scheduling
CMGT 4022	Construction Estimating
CMGT 4031	Construction Safety and Loss Control
CMGT 4041W	Specifications & Technical Writing for Construction Pro.
CMGT 4196	Construction Management Internship
CMGT 4471	Sustainability for Construction Managers
CMGT 4861	Construction Management Capstone

The Four Tracks

Commercial Construction

This track is focused on commercial, industrial, and institutional buildings. It is the most generalized construction management track for the student hoping to enter the broader construction field as a contractor, subcontractor, or staff member on the owner's side. This track comprises 19 credits, including Building Energy Systems, Building Envelope Design, and Materials and Structures I and II. The Commercial track courses can all be completed with evening coursework.

Commercial Construction Coursework	
Preparatory	
CMGT 2019	AutoCAD for Construction Managers
Required	
CEGE 3202	Surveying and Mapping
CMGT 4201	Construction Accounting
CMGT 4542	Building Energy Systems
CMGT 4544	Materials and Structures I
CMGT 4545	Materials and Structures II
CMGT 4562	Building Envelope Design and Construction
+ 6 Credits Technical Electives	

Facility Management

This track covers the complete building life cycle, from design inception and construction to maintenance, recommissioning, and demolition, with the objective of serving on the owner's side to develop, construct, and maintain buildings for the long term. Comprises 19 credits in Facility Programming and Design, Management and Human Resources, Real Estate Development and Finance, Facility Operations and Maintenance, Facility Cost Accounting and Finance, and Facility Quality Assessment and Commissioning, as well as 6 credits of technical electives. This track is accredited by the International Facility Management Association (IFMA) Foundation. The Facility Management track can be completed with evening coursework.

Facility Management Coursework	
Preparatory	
CMGT 3024W	Facility Programming and Design
ABUS 4104	Management & Human Resource Practices
Required	
ABUS 4217	Real Estate Development and Finance
CMGT 4211	Facility Cost Accounting and Finance
CMGT 4213	Facility Operations and Maintenance Intensive
CMGT 4215	Facility Quality Assessment and Commissioning
CMGT 4542	Building Energy Systems
CMGT 4562	Building Envelope Design and Construction
+ 6 Credits Technical Electives	

Highway/Heavy-Civil Works

This track benefits students interested in careers in the transportation and highway/heavy-civil works project areas by tailoring the elective offerings toward civil engineering construction. It comprises 16 credits, including Transportation Engineering, Surveying, Highway Design, Construction Accounting, and Materials and Structures. Note that some classes are offered only during the daytime.

Highway Heavy and Civil Works Coursework	
Preparatory	
CMGT 2019	AutoCAD for Construction Managers
Required	
CEGE 3201	Transportation Engineering
CEGE 3202	Surveying and Mapping
CEGE 4201	Highway Design
CMGT 4201	Construction Accounting
CMGT 4545	Materials and Structures II
+ 9 Credits Technical Electives	

Residential Construction

This track enables students to specialize in residential single or multifamily projects and expand their building science basis specifically into housing applications, while maintaining a strong management orientation. It comprises 22 credits, including Systems Approach to Residential Construction, Advanced Residential Building Science, and Building Testing and Diagnostics. Note that some classes are offered only during the daytime.

Residential Construction Coursework	
Preparatory	
CMGT 2019	AutoCAD for Construction Managers
CMGT 4544	Materials and Structures I
Required	
CMGT 4201	Construction Accounting
CMGT 4545	Materials and Structures II
BBE 4413	Systems Approach to Residential Construction
BBE 4414	Advanced Residential Building Science with Lab
BBE 4416	Building Testing and Diagnostics
+ 3 Credits Technical Electives	

A Fifth Track in the Works

Environmental Health and Safety

Led by faculty member and University of Minnesota Building official Scott Holm, we are in the early stages of developing a new program, an 18-credit track designed for professionals who are currently in or pursuing leadership roles in the safety professions. This track focuses on the management and prevention of accidents, illnesses, fires, explosions, and other events that harm people, property, and the environment. This program will also assist the student in preparation to apply for and take the examination leading to the Construction Health and Safety Technician (CHST) Certification.

Environmental Health and Safety Coursework	
Preparatory	
CMGT 4031	Construction Safety and Loss Control
CMGT 4542	Building Energy Systems
Required (working titles follow)	
CMGT 4xxx	Introduction of Environmental Health and Safety
CMGT 4xxx	Principles of Industrial Hygiene
CMGT 4xxx	Health and Safety Planning and Management
CMGT 4xxx	Principles of Fire and Life Safety
CMGT 4xxx	Principles of Environmental Health
+ 3 Credits Technical Electives	

We have convened a panel of subject matter experts to help us frame the program outcomes and content:

- Mr. Scott Holm, Faculty, Building Inspector, University of Minnesota, as Chair of the committee
- Mr. Scott McKown, Minnesota State Building Codes office (DOLI)
- Ms. Vickie Schleunig, Management Consultant
- Mr. Rodger Schaeffbauer, Retired, Wayzata Public Schools
- Mr. Bob Williams, Safety Officer, Adolfson & Peterson Construction
- Ms. Jennifer Hume-Jorgenson, Safety Officer, Mortenson Construction
- Mr. Bryan Thayer, Safety Officer, APi Group

Program Accreditation

ACCE Accreditation

The Construction Management program was fully accredited by the American Council for Construction Education (ACCE) in February 2014 for a five-year cycle through February 2019. Since 2014, ACCE has moved to an outcomes-based assessment/accreditation model. To meet this new standard, the Construction Management program has converted the program and course outcomes to assess core industry competencies. Student attainment in these areas is being tracked to provide at least three years of data for the next reaccreditation cycle in 2018 (see Outcomes below). The fourth year progress report was submitted and accepted at the February 2018 ACCE Board meeting. The program remains in good standing; however, ACCE was notified that we will be pursuing ABET accreditation starting in 2019, and our present ACCE accreditation was extended for one year to enable this to be accomplished.

IFMA/FMAC Accreditation

The program has been accredited by the International Facility Management Association (IFMA) since April 2012. Reaccreditation will take place in 2018.

Enrollment in the Facility Management track is as follows:

PROGRAM	AY 2013–14	AY 2014–15	AY 2015–16	AY 2016–17	AY 2017–18
FM Major	4	6	7	6	3
FM Minor	0	2	3	2	1
FM Certificate	2	5	6	6	1
FM Premajor	4	3	NA	NA	NA

Source: UM reports: Major/Minor Roster

The first two FM Certificate students graduated in fall 2014. Since its inception, the program has graduated eight students in the certificate program, one student from the minor track, and seven students in the Facility Management major track. This program does not have the level of enrollment we anticipated five years into the program, and new initiatives are being undertaken to spread the word about the program and boost enrollment. A strategic plan for the program will be developed.

IFMA accreditation is now overseen by the Facility Management Accreditation Commission (FMAC) an independent spin-off of IFMA, currently chaired by CMGT program Faculty Director, Peter Hilger.

Certifications in the Program

CMGT 403I - OSHA 30-Hour Certificate

Since fall 2004 the Construction Safety & Loss Control class has included OSHA certification as part of the course learning objectives. The 30-hour certification has been offered since fall 2009.

In AY 2017–18, 45 students completed the OSHA 30-hour certification requirements, 26 in fall 2017, and 19 in spring 2018.

CMGT 408I - Construction Site Management Stormwater Certification - University of Minnesota Erosion and Stormwater Management Program in partnership with MPCA and MnDOT.

Students taking CMGT 408I took the Construction Site Management Stormwater Certification as part of their course assessments. This credential is offered through the University of Minnesota Erosion and Stormwater Management Program in partnership with MPCA and MnDOT. Twenty students took the exam in spring 2018 and all passed.

CMGT 486I - Standardized Industry Test Results – CMIT

Since 2013, students taking the capstone class, CMGT 486I, have been offered extra credit to take the Construction Management Association of America (CMAA) Construction Manager in Training (CMIT) certification exam.

These opportunities represent standardized industry proficiency tests and will continue to be offered along with other tests that are identified or which become available.

Topics Classes

From time to time the program offers classes designed to address a timely issue in the construction industry, to trial a new course to gauge the interest, or to coincide with a regional event. These are the Topics Classes. None were offered during AY 2017–18.

In addition, some previous Topics Classes have been developed into regular classes.

CMGT 4003, Managing in the BIM Environment, offered fall 2017.

Annual Course Reviews

Generally each course within the curriculum is reviewed every three years or, in the case of a new course or a new faculty member teaching an existing course, a review will follow the first semester offered. Further, special course reviews may occur if a course has been converted to a hybrid or fully online delivery model. During academic year 2017–18, we reviewed the following courses.

- CEGE 3202 – Surveying and Mapping
- CMGT 4022 – Construction Estimating
- CMGT 4031 – Construction Safety and Loss Control
- CMGT 4041W – Specifications and Technical Writing for Construction Professionals
- CMGT 4081 – Managing Erosion and Sediment Control on Construction Sites
- CMGT 4213 – Facility Operations and Maintenance Intensive
- CMGT 4562 – Building Envelope Design and Construction
- CMGT 4861 – Construction Management Capstone

Course and Curriculum Changes - 2017–18

To better align with the new Outcomes standards for both ACCE and FMAC accreditation as well as reduce curricular content overlap, a major curriculum change was implemented. The Statics course was eliminated, since it was also partially covered in our Structures course and because it would no longer be supported by the hosting program Bio-Based Engineering (BBE). We created two four-credit, back-to-back courses: CMGT 4544 Structures and Materials I, and CMGT 4545 Structures and Materials II, incorporating the all-important Statics component primarily in the first course. This pair of courses has been successfully implemented and is now a regular part of our curriculum.

One of the most significant changes planned involves Calculus. While not a CMGT course, it has always been a course required for graduation, but by its nature proved to be a high barrier for many students, especially nontraditional students. In an unusual move, the Construction Management program spearheaded the development of a special math course that would blend students from the College of Design and Construction Management in a focus of math topics around the built environment. Hosted by the University math program, MATH 1042 Math for Design focuses on specific math principles, including some calculus principles, that are most relevant for students pursuing a design focus, particularly geometry and trigonometry. Not intending to dilute the relevancy of math thinking, we believe that students will better understand the math concepts they will need to use when they are placed within the context they are studying. Only a few programs at the University have been successful at developing such a discipline-specific math course. Further, as a result of the College taking on the course design, our own Mark Kayser, an instructional designer by day and a former Math Education graduate, has been selected to develop and teach the course. The course was first offered fall 2017, and at the time of this writing, the following unsolicited comment was received: “you guys got the best possible instructor for this course!”

Special topics courses can only be offered twice, per University guidelines, before they must be created as permanent courses subject to the review of the campus-wide curriculum review committee. Three previous topics classes have now been converted into permanent classes that will be continued to be offered along their planned two-year cycles:

- CMGT 4000: The Construction Industry Through Time and Tomorrow (Bowen/Hilger)
- CMGT 4001: Innovative Contracting (Heitpas)
- CMGT 4003: Managing in the BIM Environment (Kossila)

The capstone course, CMGT 486I, offered each spring, was expanded beginning spring 2014 to include separate sections for project-based study abroad in Costa Rica, a dedicated Facility Management capstone project, the Construct*ium Pentathlon Pursuit competition, and other competitions such as the NAHB or Race-to-Zero competitions. Started spring 2017, the capstone is now taught as a two-credit seminar with a one-credit lab, reflecting the project options available for student choice.

To better align with student needs for an upper-division course, we have converted the CMGT 202I Facility Programming and Design course (Pliska) into a 302I-level course, as well as converting to Writing Intensive. The course rigor is being commensurately expanded to meet this new level, and the course will be offered in the new format fall 2017.

Liberal Education Requirements

The College of Continuing and Professional Studies' Bachelor of Applied Science majors follow the University of Minnesota's Liberal Education (LE) requirements.

The LE requirements are split into two sections: the **Diversified Core**, the “why” and “how” of different academic disciplines, and the Designated Theme, topics central to an understanding of contemporary life. Each section is subdivided into several areas, and the University maintains a list of courses approved to fulfill one of the LE areas (see https://onestop.umn.edu/degree_planning/lib_ed/). Students are required to satisfy all seven core requirements and four of the five designated themes.

University of Minnesota - Liberal Education Requirements	
Diversified Core	Required credits
Arts/Humanities	3 credits
Biological Science	4 credits; must include lab or field experience
Historical Perspective	3 credits
Literature	3 credits
Mathematical Thinking	3 credits
Physical Science	4 credits; must include lab or field experience
Social Sciences	3 credits
Designated Themes	Required credits
Civic Life and Ethics	3 credits
Diversity and Social Justice in the United States	3 credits
The Environment	3 credits
Global Perspectives	3 credits
Technology & Society	3 credits

The Writing Intensive Requirement

Writing intensive courses help students understand what it means to write in various disciplines and how writing can be made stronger and clearer so that they can communicate their views effectively.

Requirement

In addition to the first-year writing requirement, students must complete four writing intensive courses. Two of the writing intensive courses must be taken at the upper-division level, one of which must be taken in the student's major. Our initiative was to convert some of our key CMGT courses to Writing Intensive status, the rigorous review and approval of which is required by the Campus Writing Board.

Four courses in the CMGT program now have Writing Intensive designation: CMGT 3001W Introduction to Construction (WI spring 2017); CMGT 3024W Facility Programming and Design (WI fall 2017); CMGT 4041W Specifications and Technical Writing for Construction Professionals (WI spring 2012); and ABUS 4013W Legal, Ethical, and Risk Issues for Managers (WI spring 2016). Construction Management students can select from the following writing intensive classes or approved substitutions.

Lower Division	
PHYS 1101W	Introductory College Physics I
One other lower division writing intensive class	
Upper Division	
ABUS 4013W	Legal, Ethical, and Risk Issues for Managers
ABUS 4023W	Communicating for Results
CMGT 3001W	Introduction to Construction
CMGT 3024W	Facility Programming and Design
CMGT 4041W	Specifications and Technical Writing for Construction Professionals

Writing Enriched Curriculum

In addition to the Writing Intensive requirement, the Construction Management program is also part of the University-wide Writing Enriched Curriculum (WEC) initiative. Not willing to rely solely on the University resource, our College now has a part-time writing consultant, Mr. Steve Wandler, assisting with writing improvement across all college programs, including ours, with particular emphasis on assisting faculty in creating appropriate writing assignment and instruction and guiding the Writing Intensive conversion for many courses.

The University of Minnesota's pioneering WEC project, launched in 2007 with generous support from the Bush Foundation, provides a process for meaningfully infusing writing and writing instruction into all undergraduate curricula. The WEC project, supported by the Office of Undergraduate Education, enrolls five additional undergraduate units each year and will continue to do so until all undergraduate majors are engaged. CMGT WEC program information can be found at wec.umn.edu/construction-management and the program's 2015 Writing Plan update can be found at http://archive.undergrad.umn.edu/cwb/pdf/CMGT.WritingPlan3.Final_.web__o.pdf

Since the original acceptance of the Construction Management program into the sixth cohort in June 2011, the program has actively continued to develop the Writing Enriched Curriculum initiative. Accomplishments over the past year include:

- Publication of our construction-specific online writing style guide, *Writing for Construction Managers: A Guide To Content And Style*, launched softly in January 2015 and is now linked to every CMGT course Moodle site and, where applicable, to specific assignment guidelines. This website is reviewed annually for updates and shared with faculty around the country as a reference.
- The third and final grant of the Writing plan was approved by the Campus Writing Board and the Provost in July 2015. This phase will develop very focused learning modules around a “Teaching with Writing” theme targeted to new and existing faculty as a training tool. While we continue to focus our efforts on wiring across our curriculum, we have not undertaken any grants available. We have retained, as a College, writing specialist Mr. Steve Wandler to continue this important work.

Student Rating of Teaching Summary

In accordance with the University policy on the Evaluation of Teaching, at the end of each course, students are given the opportunity to give feedback on the course and the instructor via the Student Rating of Teaching (SRT) survey. The Construction Management program tracks the results of our SRTs each semester and uses the results during annual faculty reviews to make curricular and teaching decisions. Further, the information obtained from the SRT evaluations is useful for instructors by explaining how different groups respond to their teaching methods.

A new version of the SRT survey was introduced in 2015, featuring four new questions and a division between those questions that relate to instruction and those that relate to course content. Results from the course-related questions are shared with the University student body.

CMGT faculty consistently score highly in the SRT evaluations, especially question 4, “the instructor treated me with respect,” and question 1, “the instructor was well prepared for class.” There are areas for continuous improvement, however, especially in the area of feedback, a constant theme at faculty meetings and course reviews.

SRT Summary	AY 2015–16	AY 2016–17	AY 2017–18
Total Possible Responses	1033	1035	754
Actual Responses	698 (68%)	693 (67%)	455 (60%)
Average Rating (Out of 6)	5.4	5.1	5.1
Evaluation Questions (Mean of Responses out of 6)			
Instructor Questions			
1: The instructor was well prepared for class.	5.4	5.4	5.6
2: The instructor presented the subject matter clearly.	5.2	5.1	5.2
3: The instructor provided feedback intended to improve my performance.	5.0	5.0	5.2
4: The instructor treated me with respect.	5.6	5.6	5.7
5: I would recommend this instructor to other students.	5.2	5.1	5.3
Course Questions			
1: I have a deeper understanding of the subject matter as a result of this course.	5.2	5.2	5.2
2: My interest in the subject matter was stimulated by this course.	5.0	4.9	5.0
3: Instructional technology employed in this course was effective.	5.0	4.9	5.1
4: The grading standards for this course were clear.	4.9	5.0	5.1
5: I would recommend this course to other students.	5.0	5.0	5.0

Results of SRT survey for Construction Management courses (last three academic years).

Program Initiatives

Conversion to an Outcomes-Based Program

The Construction Management program has helped guide IFMA through their conversion to an outcomes-based accreditation. Using the criteria established by the Facility Management Accreditation Commission, as well as the final ACCE outcomes (amended and approved spring 2016), the University has worked to develop a hybrid set of program outcomes that marry the two accreditation standards into a common approach. The results are a set of program-level outcomes adopted in 2013, revised in 2016 to align with ACCE, informed by 32 measurable competencies, in a structure that is expandable as needs and competencies change over time. The outcomes and their attributed competencies are identified in the following chart, and we continue to work with these as our overall guide.

UNIVERSITY OF MINNESOTA CMgt/FMgt PROGRAM LEVEL OUTCOMES AND ASSOCIATED COMPETENCIES

FINAL PROGRAM OUTCOMES - "Graduates will be able to:"	UBDM SEQUENCE	BLOOMS TAXONOMY	MAPS TO		MANAGEMENT COMPETENCIES THAT INFORM THE OUTCOME: "the student can. . ."	SHORT TITLES
			ACCE*	FMAC		
1) Recognize, understand and effectively interact with stakeholder interests	1.1	Apply	1,2	7a	Demonstrate written, oral, aural, and graphic communication skill through repetitive assessment and evaluation of industry appropriate genre.	1.1 Communication
	1.2	CriT	9		Lead, manage and participate in teams including those of diverse composition	1.2 Teamwork
	1.3	Know	12		Identify the roles of individuals, companies and agencies involved in the project process	1.3 Stakeholders
	1.4	Apply		6a	Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)	1.4 HR.HSW
	1.5	Know			Recognize the contribution of the design disciplines' processes	1.5 Design Process
2) Demonstrate ethical behavior and decisionmaking	2.1	CriT	6	4a	Analyze professional decisions based on ethical principles	2.1 Ethical Principles
	2.2				NOT USED (FUTURE)	2.2 NOT USED
	2.3	Know		4a	Identify the skills needed to strategically lead process, organization, stakeholders and technologies in an ethically responsible way.	2.3 Leadership
3) Safely manage and control the project process	3.1				NOT USED (FUTURE)	3.1 NOT USED
	3.2	Know	16	2a	Identify construction project control processes	3.2 Project Control
	3.3	Know	15	2a	Compare construction quality assurance and control	3.3 QA/QC
	3.4	Apply	10	2a	Apply appropriate state-of-the-art electronic based technology to manage the project process	3.4 Software
	3.5	Know		2a	Implement project safety strategies and jobsite procedures	3.5 Safety Procedures
	3.6	Apply	3	2a	Create a construction project safety plan	3.6 Safety Plan
	3.7	CriT	4	2a	Assemble construction estimates using various techniques assessing quantities, productivity and costs.	3.7 Estimating
	3.8	Apply	5	2a	Apply scheduling techniques to project planning activities	3.8 Scheduling
	3.9	CriT		2a	Calculate necessary resource requirements throughout a project.	3.9 Scheduling Resources
4) Understand the built environment	4.1	CriT	7		Analyze construction documents for planning and management of construction processes	4.1 Documents
	4.2	CriT		3c	Assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long-term facility plan for the organization. (ways of applying)	4.2 Facility Condition
	4.3	CriT	8		Analyze methods, materials, and equipment used to construct projects	4.3 Methods
	4.4	Know	19		Understand the basic principles of structural behavior	4.4 Structures
	4.5	Know	20		Describe the basic principles of mechanical, electrical and plumbing systems	4.5 MEP
	4.6	Know		3b	As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)	4.6 FM Systems
	4.7	Apply	11		Apply basic surveying techniques for construction layout and control	4.7 Survey
	4.8	Apply	18	3h	Demonstrate awareness of environmental stewardship and sustainable principles applied to the project and the organization.	4.8 Sustainability
5) Manage the business processes	5.1	Apply			Demonstrate an understanding of business and management fundamentals as they relate to construction and facility activities	5.1 Business Mgmt
	5.2	Know		1a	Explain the history, international practices, corporate organization and roles of the Facility Management profession.	5.2 Industry History
	5.3	Apply		3a	Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)	5.3 FM Ops
	5.4	Know	17		Recognize the legal implications of contract, common and regulatory law to manage a project.	5.4 Law
	5.5	CriT			Evaluate disputes based upon case facts and contract content	5.5 Disputes
	5.6	Apply	13, 14	5a	Apply analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of construction and facility financial management.	5.6 Financial Mgmt
	5.7	Apply		5b	Demonstrate applications of corporate real estate finance, management and transactional execution.	5.7 Real Estate
	5.8	Apply		8a	Demonstrates the ability to understand and to apply computer applications for facility management problem solving.	8.1 FM Computer Apps
6) Manage building systems, facility operations, occupant services and maintenance operations	6.1	Apply		3d	Demonstrate a method to plan, measure and evaluate the facility's operational performance.	6.1 Ops Performance
	6.2	CriT		3e	Interpret, apply, and recommend quality improvement programs.	6.2 Quality Improvement
	6.3	Know		3f	Aligns facility management technology with organizational information technology. (ways of understanding)	6.3 FM Info Technology
	6.4	CriT		3g	Comprehend and prepare emergency preparedness and business continuity strategies.	6.4 Emergency prep

*Revised 09/15/2015 to reflect the final 20 ACCE competencies 04/11/16 for Abbreviations; 06/27/17 for ABET; 06/18/2018 for FMAC

COMPETENCY MEASUREMENT SCALE	BASIC DEFINITION (may be modified to fit specific course criteria)
"FAILS"	1 Student work fails to meet the competency, or demonstrate any knowledge, application or critical thinking around the competency
"DEVELOPING" or "APPROACHING"	2 Student work demonstrates rudimentary knowledge, application or critical thinking around the competency, is approaching comprehension, but does not quite demonstrate adequate proficiency expected of the student.
"PROFICIENT"	3 Student work demonstrates basic knowledge, application or critical thinking around the competency expected of the student
"EXEMPLARY"	4 Student work demonstrably exceeds the baseline knowledge, application or critical thinking around the competency

Course Assessment

Assessment data from several CMGT courses are entered into the University's assessment software, CampusLabs, to assist in providing metrics to the University's accrediting body, the Higher Learning Commission. The process to input data to CampusLabs is now semi-automated, with data gathered electronically from the University's online course delivery software, Moodle, to track results from specific assignments measuring the competencies identified for given outcomes. In addition to University-level reports, CampusLabs allows aggregated assessment data to be reported at course, program, and college levels as well. The Construction Management program is therefore using the CampusLabs tool to support assessment benchmarking and quality improvement with at least three years' worth of data by the next reaccreditation cycle in 2018. And we have heard that we are breaking ground for the University in this endeavor, led by our OES Director Ms. Christiane Reilly. However, we do expect a minor setback as the University converts to a new course management system starting spring 2018, at which time this data gathering will need to be adjusted.

Study Abroad 2017

In January 2018, Peter Hilger and Jane Delahanty led twelve Construction Management students, one Integrated Behavioral Health student, and one Health Services Management student on a two-week Learning Abroad trip to Costa Rica, organized in part by an alumnus of the program, Dustin Dresser. Dustin runs a tourist hostel and tour service catering to intern and service learning groups in Costa Rica, and he provided the local itinerary and accommodation. This was the fifth dedicated Learning Abroad trip sponsored and managed by the College of Continuing and Professional Studies. The trip was a great success, allowing the students to help prepare three detailed proposals for projects and constituents with real needs. Jane Delahanty, advisor to the HSM students, accompanied the group this year on a fact-finding effort for another CCAPS graduate program, Health Services Management, for a possible interprogram initiative within CCAPS. We also hope to integrate the Facility Management, Construction Management, and Health Systems Management programs into a joint project initiative, possibly involving a health care facility. This program is now firmly established and will be repeated annually with new projects, and it is now open to the broader University community as well as other students within the Construct*ium league (see below).

Students used the experience and its actual project (delivered in Spanish, in colones and in metric) as their capstone project. The capstone class will now have a new structure, consisting of a lecture series taken by all students and project work which will either be the study abroad trip, competition projects, or another local project used as part of the Construct*ium Capstone competition.

And the most thrilling visit was to the orphanage in Palmares, where the 2015 student team made a proposal to expand the orphanage with a classroom, some office space, and other open space improvements. Their actual, physical proposal, in Spanish, was used to enter the government lottery system for funding, which was achieved. The project was constructed substantially according to our proposal. This demonstrated the "real value" of the work our students do here for organizations in need.



The 2018 team visiting the recently completed addition to the orphanage in Palmares, as proposed by the 2015 team.
 For further information: <https://umabroad.umn.edu/programs/americas/costa-rica-puravida/>

ACE Mentorship Program

The ACE Mentorship program, a national program founded in the early 1990s, is geared toward mentoring high school students into the industry. It provides academic scholarships and is widely supported by local industry, most of whom are members of our Advisory Board. In support of this initiative and to broaden our program outreach, Peter Hilger, who serves on the Board of the Twin Cities ACE chapter, has drafted a model curriculum for the mentors across a twenty-week program, commencing fall 2015. We will continue to sponsor the final presentation of the school's work on the University of Minnesota campus, last hosted in March 2017.



Competing high school students in the ACE finals, University of Minnesota

Construction History Society of America Academic Collaboration

An international organization dedicated to the study of the history of construction, the University of Minnesota Construction Management program supports CHSA with time and talent. Serving on the American organizational board of this British-based group, Peter Hilger continues to organize a CHSA track at the American Institute of Architects (AIA) MN State Convention. Our construction history course, *The Construction Industry Through Time and Tomorrow*, is delivered to coincide with this event, taught by Mr. Brian Bowen, a Georgia Tech faculty member well-respected as an expert in this field.

In November 2017, Mr. Bowen, Mr. Seth Hausman, and Peter Hilger presented a session entitled *Ethics Past, Present and Future: Tales from the Grey Zone*, attended by over 400 people and taped for rebroadcast. Further, an annual forum event was held at the University of Maryland in May 2018.

Upper Midwest Collegiate Construction League: Construct*ium

The University of Minnesota Construction Management program led the initiative to form a collaborative organization not unlike collegiate sports leagues, consisting of the nine collegiate institutions in the upper midwest with programs in Construction Management: University of Wisconsin-Stout; Minnesota State University, Mankato; Minnesota State University Moorhead; North Dakota State University; South Dakota State University; Iowa State University; University of Northern Iowa; Dunwoody Institute of Technology; and the University of Minnesota. In 2015, the Minnesota Construction Association (MCA) moved forward by officially organizing the group, registering the trade name and domain, and launching a website. The MCA's Academic Outreach Committee is now officially known as Construct*ium, and a portion of the annual Career Fair proceeds are allocated to fund Construct*ium.

Over the past year, the online presence of Construct*ium continues to become more robust. Further, St. Cloud State University has also joined the League and started to participate in events.

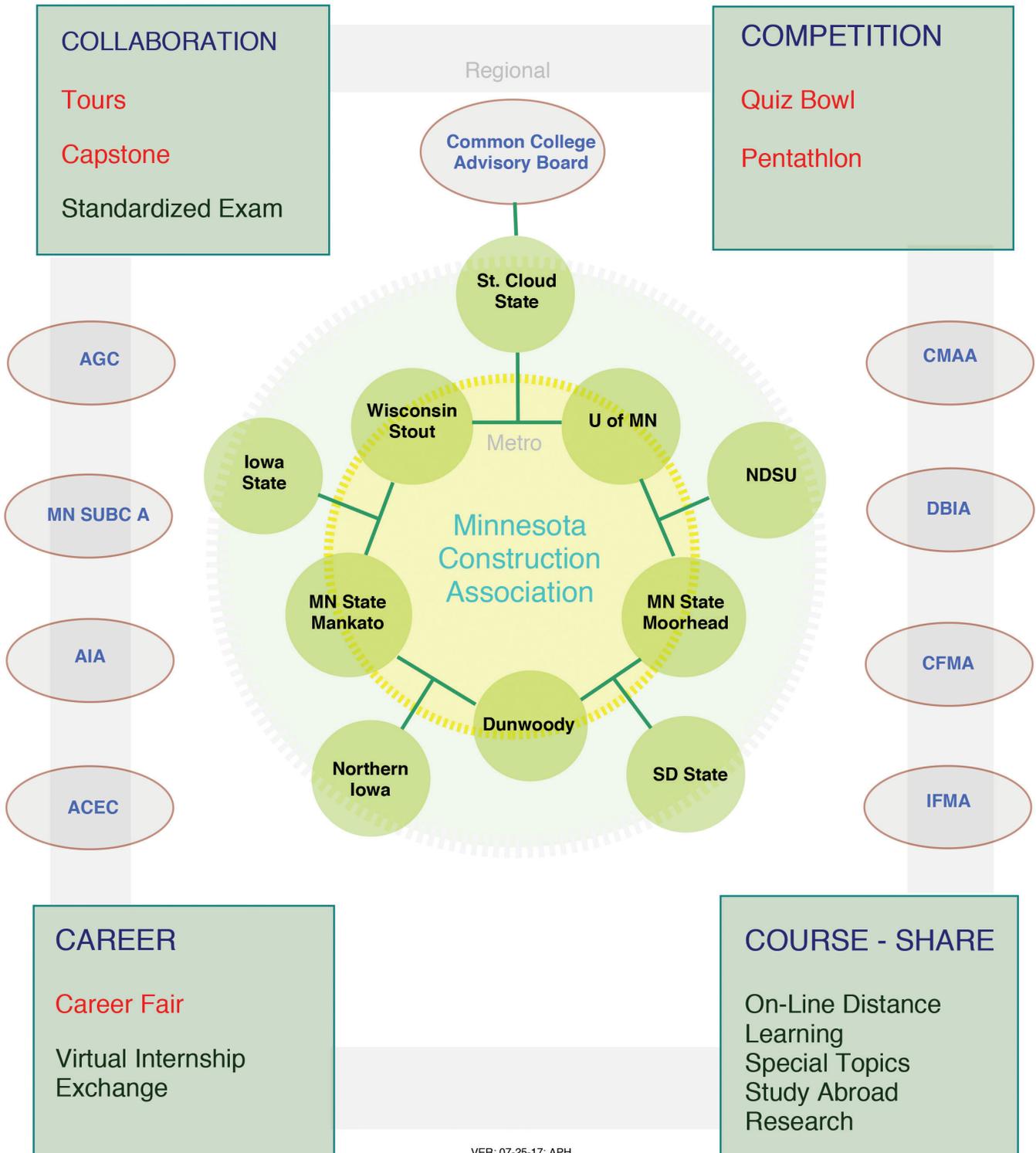
Construct*ium has initiated a collaboration with Toastmasters International to start clubs sponsored by the schools, beginning with Minnesota State Mankato and University of Minnesota. Though it took the better part of a year to get launched, the Hardhatter's Toastmaster Club #05573652 commenced February 2017, meeting several times per month. The initial roster was of 26 active students and alumni, as well as interested employees of companies not affiliated with the program, all participating in the formation of the club.

In addition, the professional mentorship program successfully completed its inaugural year with active participation from industry and U of M students. The program, managed by Construct*ium by U of M alumnus Trevor Johnson, is expected to be an annual initiative.

At their April 2015 meeting, the Associated Schools of Construction awarded Construct*ium the 2018 54th annual ASC Conference, the planning of which continues among seven of the nine schools, scheduled for April 18-21 on the U of M campus.



UPPER MIDWEST COLLEGIATE CONSTRUCTION LEAGUE



VER: 07-25-17: APH

International Outreach: ECUSTA

At the unusual request of a program alumnus, Ermias Mekonnen, the Construction Management program was invited to help guide the development of a similar construction management program at Ethiopian Catholic University of St. Thomas Aquinas (ECUSTA) in Addis Ababa, Ethiopia. A Memorandum of Understanding was drafted between the programs: the initial thrust is to develop a cooperative professional seminar in project management, in conjunction with CCAPS's Continuing Professional Education unit. Research continues with ECUSTA into the feasibility of this initial effort, though timing and design await their approval.

Construction Management Association of America (CMAA)

The Construction Management program is committed to supporting this national organization dedicated to construction management, providing time and talent for Peter Hilger to serve on the Twin City Chapter Board. Students are offered the opportunity to take the CMIT exam upon completion of the Project Management Capstone Course. Eleven students took the extra credit option to take this exam in 2017, and all passed. Peter Hilger is immediate Past President of the Twin City chapter. The University of Minnesota is researching a move to ABET accreditation, which is sponsored by the CMAA, for their next accreditation cycle.

Design Build Institute of America (DBIA)

The local chapter of the Design Build Institute of America has welcomed our students and faculty into its programs and courses. Ann Johnson continues to serve as the chapter liaison, and students have participated in some monthly program meetings and local construction site tours.

Quality Improvement Plan

The University of Minnesota's reputation as a premier learning institution is well established, nationally and internationally. The University's Construction Management program has also acquired an excellent reputation for itself through its commitment to practical, applied instruction. Our program is grounded in current industry practices and technologies. It offers a multidisciplinary approach to the real issues facing construction managers. The program's Quality Improvement Plan outlines our process for continuous assessment and improvement of the program goals, objectives, curriculum, faculty, and resources. The Quality Improvement Plan represents collaboration with our faculty, staff, program directors, and students. It is updated annually and posted on our website as part of our Annual Report.

The Quality Improvement Plan is provided in Appendix A.

Academic Quality Plan

The Program's Academic Quality Plan is used to measure the effectiveness of our program and how well we are meeting the program goals and mission. It lists all of our Student Learning Outcomes, along with the measurement tools we use to determine whether students are obtaining each. The Academic Quality Plan is updated annually and available to the public, as it is contained in our Annual Report.

The Academic Quality Plan is provided in Appendix B.

Special Events

Associated Schools of Construction Annual Conference

During April 18–21, 2018, the Graduate Minneapolis Hotel on the East Bank campus hosted over 200 people at this 54th annual convention, sponsored by a collaboration among the eight Construct*ium league schools. Wishing to change-up the way the conference is typically conducted, our planning team incorporated students on Wednesday, April 18, by showcasing the Pentathlon Competition and Construct*ium Leadership event to which attendees were invited. Sigma Lambda Chi students from Minnesota, South Dakota, and Wisconsin were invited to an exclusive industry panel made up of top executives of major local companies.

Thursday, April 19, was Industry Day, featuring a “reverse” career fair, where companies could meet with faculty from around the country to discuss internships and other collaborative programs. Thirty-four industry sponsors participated. And the program as a whole, managed by the College of Continuing and Professional Studies conference planning group, made a modest profit that was shared equally among the partner Construct*ium schools and the ASC.

The word on the street after the conference was this was one of the best conferences in recent memory. And it certainly showcased the University of Minnesota, who took the lead on the conference hosting and organizing. And one sponsor, the Construction Management Association of America, took such an interest in the event and the Construct*ium league that discussions continue as of this writing to extend the model, created here, on a national level among CMAA chapters.



The pennants of the Construct*ium League Schools



Peter Hilger addressing the ASC Conference Attendees



Not that it was all serious business: Stevie Ray's Improv Comedy Troupe entertained the attendees by bringing Peter Hilger on stage to “act”... sort of!

Career Fair

This event was rebranded in 2016 as the Built Environment Career Fair and expanded to include students from architecture, engineering, and interior design. It was held on October 6, 2017, in Coffman Union Great Hall, and was sponsored by the Construction Management Student Association, Construct*ium, and Career and Internship Services.

One-hundred-and-eighty students from the University of Minnesota and eight regional Universities with Construction Management programs attended. Fifty-eight employers participated.

The Career Fair is a successful event and attracts increasing numbers of employers each year. The employer feedback survey generates very positive comments, 40 out of 44 responding would recommend the event. The majority were planning to interview candidates for jobs or internships, and most had collected resumes for review. Half of those responding were planning to follow up with more than five candidates as a result of the fair.

Revenue from the event is returned to participating institutions in the form of a shared dividend paid to each program's student group.

Career Fair Statistics

Event Statistics	2013	2014	2015	2016	2017
Students, U of M	72	88	81	131	141
Students, Non-U of M	48	92	60	52	39
Total Students	120	180	141	183	180
Registered Employers	34	54	56	64	58
Universities Represented	6	8	9	7	9
Dividend Distributed	\$1,502.00	\$2,984.35	\$3,525.48	\$7,419.00	\$8,131.00



Images from the Career Fair and Quiz Bowl Event

Quiz Bowl

In conjunction with the Career Fair, the University of Minnesota hosted the annual Intercollegiate Construction Management Quiz Bowl. Sponsorship was provided by the Minnesota Construction Association (MCA) and the University of Minnesota. The event featured eight teams from six regional institutions: Minnesota State University, Mankato; Minnesota State University Moorhead, University of Wisconsin, Stout; South Dakota State University; North Dakota State University; and the University of Minnesota.

For the fifth year in succession the JE Dunn trophy was won by the University of Minnesota. The Gophers won 11-8 against North Dakota State University.

Questions were provided and reviewed by faculty from competing schools. The event is judged by industry sponsors, this year by Geoff Benedict, Chad Bouley, Jeff Clark, Tansey Cregan, Connie Doman, Jeff Dzurick, Julie Esch, Brett Grendahl, Craig Hohensee, John Huyett, Greg Johnson, Trevor Johnson, Rachel Markos, Justine Pliska, Chuck Rauenhorst, and Dean Soderbeck.



Finals Competition between North Dakota State University (far left) and the University of Minnesota (far right), with the J.E. Dunn Trophy centered on the judging panel. (L to R) Jeff Dzurick, Rachel Markos, Greg Johnson and Chuck Rauenhorst.

2017 Quiz Bowl Finalists from University of Minnesota



Winning Team: Meir Avila, Levi Erickson, Matt Hawk.

The Pentathlon Soft Skills Competition

In addition to the Career Fair for the Built Environment, Construct*ium rolled out the third Spring Soft Skills event—the Pentathlon—consisting of five soft skills competitions, hosted at the Graduate Minneapolis Hotel in conjunction with the Associated Schools of Construction conference, open to visiting professors. The five competitions are Toastmasters Table Topics, Negotiation Skill, Pecha Kucha, Interviewing, and the Pursuit Competition. Forty-seven students from various construction management programs participated in this event, and the University fared very well.

The Pursuit Competition—First Place: Sponsored by Ryan Companies, the Pursuit is a capstone-level competition using one of their buildings and all relevant data to support a competition for any regional school that wishes to participate. Five schools—Wisconsin Stout, MN State Moorhead, South Dakota State, North Dakota State and the University of Minnesota—participated in this competition, each sending one team to compete. Judged by an industry panel, North Dakota State University took home the Ryan Companies Pursuit trophy for the first time.

The Pecha Kucha Competition: Modeled after a Japanese presentation style of 20 slides, 20 seconds each, timed, Luke Eichten took home top honors, while Andy Hillestad took second.

Final Four: The Golden Pen Award

The Golden Pen is an annual event now in its 12th year in the CMGT 4041W Specifications and Technical Writing for Construction Professionals course. Student teams compete by writing a design build proposal as representatives of the Gizmo Distribution Company, hoping to land one of four finalist spots for the opportunity to present their proposal before the “Building Committee” of industry constituents comprising contractors, developers, bankers, public relations personnel, and IT experts. This committee then selects a winning team, whose names are etched into a permanent trophy plaque.

Guest Speakers

During the academic year, program faculty invite professionals from varied areas of industry to attend class as guest lecturers and to judge student presentations or participate through videotaped lectures and interviews. This helps students gain a broader perspective of the field, providing value-added experience to the classroom. The following are some of the guest speakers hosted in Construction Management classes during the 2017–18 academic year. *Grateful thanks to our industry speakers!*



The University of Minnesota team Interstate Construction presenting their proposal for the Millwright Building, consisting of (L to R): Matt Hawk, TJ Petzold and Jake Tipka with (not pictured) Thomas Demoss and Kevin Crowley calling in from the Chicago office



Participating judges: Nate Semsch, Bill Bartolic, Paul Kolias, Rich Freyholtz, Julie Esch, and Mary McNellis, astride winners Doug Weis (holding plaque) and Jeff Burke, with other finalists for the competition.

CMGT Guest Speakers, Fall 2017–Summer 2018

Class	Speaker	Topic	Speaker Affiliation
ABUS 4013	Terrance Newby	Intellectual property law (video)	Maslon law firm
	Holly Robbins	Employment Law and HR (video)	Little Mendelson law firm
ABUS 4217	Robert Lux	Project Development (video)	Alatus LLC
	Jon Mowbray	Real Estate Dispute Resolution (video)	IBB Solicitors
	Brian Schaffer	City Planning (video)	Principal Planner, City of Minneapolis
	Pete Vorbrich	Real Estate Investment (video)	CFO at CarVal Investors
CMGT 3024W	Greg Goeke	Hiawatha Dept. of Public Works Project (video)	Dir. Property Services, City of Minneapolis
CMGT 4041W	Jeff Callinan	State Capitol Restoration Competition Discussion	JE Dunn Construction
	Julie Esch	Const. Messaging and RFP Response Tactics	Mortenson Construction
	Stephen Schemenauer	Legal Case Studies	Stinson Leonard Street Law Firm
	Nate Semsch	Final Four Judge	JL Sullivan Const. and Alum.
	Julie Esch	Final Four Judge	Mortenson Construction
	Richard Freyholtz	Final Four Judge	US Bank, IT Systems (Retired)
	Bill Bartolic	Final Four Judge	Retired
	Mary McNellis	Final Four Judge	Real Estate Developer
	CMGT 4213	FF&E Dealer	Guest Speaker
CMGT 4422	Dan Ilten	Guest Speaker	PCL Construction
CMGT 4562	Dwight Benoy	Exterior Wall Design	Inspec, Inc. Engineers/Architects (Chief Forensic Engineer)
	Gary Patrick	Low-slope Roof Design	Inspec, Inc. Engineers/Architects (Executive VP)
	Richard Stone	Flashing Details and Water Management	Sawtooth Ridge Woodcraft
CMGT 4861		Final Project Judge	A&P Construction
CMGT 4861	William Bartolic	Case Study and Judge	BCI Builders
	Chris Barrett	Judge (FM Capstone)	Allianz
	Greg Fry	Judge (FM Capstone)	Wings Financial
	Laura Magnuson	Judge (FM Capstone)	Cushman Wakefield
	Gen McJilton	Judge (Alumna)	Target Corporation
	Paris Otremba	HR Cases Studies	PCL Construction

Site Visits

Faculty also lead site visits and field trips to further enhance the student learning experience and bring sites into the classroom via site videos. The following are some of the sites that hosted visits by a Construction Management class during the 2016–17 academic year and site videos shown in class. With thanks to our industry partners.

Site Visits and Site Videos, Fall 2016 - Summer 2017			
Class	Semester	Site	Delivery Method
ABUS 4013W	Spring 2018	Eureka Mills Superfund Site	Video
CMGT 4022	Spring 2018	Super Bridge video	Video
CMGT 4081	Spring 2018	Pioneer Hall construction project	Site Visit
CMGT 4545	Spring 2018	Braun Intertec, Bloomington	Testing Lab Tour
		Ruttan Hall	Tour of Structural Components
		Raptor Center	Tour of Structural Components
CMGT 4213	Fall 2017	Target Center, Minneapolis	Building Tour

Career Development

Career and Internship Services

This University of Minnesota office provides a vital service to our students, assisting and preparing them in a variety of ways to make the right career choices. The mission of the Career and Internship Services is *to engage students in meaningful career development activities that help them maximize their life experience* by providing opportunities to build the skills required for success in life and career, and being a facilitator of information as well as a provider of skills related to job, internship, and graduate school planning.

Website: careerhelp.umn.edu

Their service further extends to maintaining close collaboration with our program and our industry contacts, planning career events, guiding students on their searches for jobs or internships, and maintaining a platform—GoldPASS (goldpass.umn.edu)—a free job hosting and search site where employers and students/alumni can connect with mutual employment opportunities.

The Career and Internship Services program and its dedicated advisor, Ms. Elizabeth Hruska, were identified as a “strength of the program” in the program’s ACCE accreditation site visit report. Ms. Hruska was also the recipient of the highest University honor for advising, the Tate Award, in 2012.

Client Satisfaction Survey Results

In 2017–18, Construction Management students had 95 contacts with Career and Internship Services including appointments, career fair visits, and workshops. In the service evaluation conducted after fall semester, 100% of respondents who met individually with the career counselor serving Construction Management (N=18) indicated they would recommend Career and Internship Services to other students in their field.

Graduation Satisfaction Survey Results

Each year, our students are offered a survey to measure their satisfaction with Career and Internship Services. We track this information to determine whether positive trends are happening with our student placement and job satisfaction. Results of from the 2016–17 career and placement services survey are available at: www.careerhelp.umn.edu/sites/careerhelp.umn.edu/files/grad_survey_final_report_16-17.pdf.

Please note that data is published six months after closing of the survey, and therefore the data provided is not necessarily reflective of the most current academic year.

Results for Construction Management graduates are as follows: 94% of CMGT graduates (31 out of 33) completed the survey; 90% of those who responded are working full- or part-time following graduation; 89% of them in a job closely related to their major. Of those who responded, 95% reported being somewhat or very satisfied with their position. The mean income of respondents was \$60,000, with a range of \$37,000 to \$86,000.

Internships

Internships are an integral part of the Construction Management program and an important step in career-building for our students, many of whom receive offers of employment following their internship. Degree-seeking students are required to complete at least three credits of internship, equal to 360 hours of employment. Under the guidance of the faculty advisor, Peter Hilger, constant networking with industry contacts seeking to hire interns is maintained using an employer database that contains over 500 contacts.

Students are required to locate their own internships, but support is provided by the program and Career and Internship Services in the form of a virtual career fair every spring. Students prepare a professional resume with advice from Career and Internship Services, and a PDF of all resumes from students seeking internships is distributed electronically to our industry contacts. Since its inception in fall 2010, this virtual fair has had a significant impact on student hiring and networking.

In addition, employers seeking interns or employees are directed to the University GoldPASS job posting website, and notification is shared with students in the program. The following chart shows our internship hires for the past five years, along with the number of student candidates in the virtual career fair.

Internship Summary Data	AY 2013–2014	AY 2014–2015	AY 2015–2016	AY 2016–2017	AY 2017–2018
Fall Enrolled	9	7	12	6	13
Spring Enrolled	11	11	6	9	15
Summer Enrolled	16	14	31	33	19
Total	36	32	49	48	47

Virtual Career Fair	AY 2013–2014	AY 2014–2015	AY 2015–2016	AY 2016–2017	AY 2017–2018
Resumes	51	42	57*	44	31

*The Virtual Career Fair Resume PDF was distributed twice per year until 2016. The fall PDF has been discontinued to allow employers and students to focus on the CMGT Career Fair. The spring virtual career fair PDF is distributed in February each year.

In addition to the online curriculum requirements for the internship course, students are required to present on a narrowly focused research topic based on their internship experience. Presentations are given to peers and industry guests, and hosted at one of our industry Advisory Board constituents.

Since spring 2004, there has been a total of 481 internships with 252 firms, 27% of which hired more than one intern. The breadth of employers is one way to measure how well the program is perceived within the industry. Further, repeat hiring indicates a confidence in the value of our interns. Therefore, a higher percentage of student interns by firms hiring on multiple occasions indicates confidence in the program.

INTERNSHIP DENSITY ANALYSIS (Spring 2004–Summer 2018)	2013–14	2014–15	2015–16	2016–17	2017–18
Total internships to date	294	326	374	422	481
Total students	261	287	326	364	398
Total companies	157	174	194	222	252
Student with 2+ internships	28 (11%)	33 (11%)	42 (13%)	52 (14%)	72 (18%)
Companies hosting 1+ intern	38 (24%)	44 (25%)	51 (26%)	58 (26%)	68 (27%)
Companies hosting 3+ interns	19 (12%)	22 (13%)	28 (14%)	32 (14%)	37 (15%)
Companies hosting 6+ interns	8 (5%)	8 (5%)	9 (5%)	11 (5%)	15 (6%)
Internships in companies hosting 2+ interns	175 (59%)	196 (60%)	231 (62%)	258 (61%)	297 (62%)
Internships in companies hosting 6+ interns	97 (33%)	102 (31%)	116 (31%)	132 (31%)	158 (33%)
Top three hiring companies: Ryan, JE Dunn, McGough (& Opus in 2014)	63 (21%)	57 (17%)	64 (17%)	65 (15%)	65 (14%)
Retention rate (job offer) *	56 (58%)	67 (61%)	80 (65%)	89 (66%)	100 (68%)

**Since 2006; not all students report.*

Advisory Board

Overview

The Construction Management Program Advisory Board was highlighted during the 2012 ACCE accreditation visit as a “strength of the program.” Comprising a broad representation of local industry, it is engaged and committed to the success of the program.

Formed in the late 1990s to promote the development of the Construction Management program, the Board was restructured in 2010 into a chartered, self-governing body of industry and construction/facility association professionals. Its mission is to advise the program on the direction of the industry as a whole and provide advice directly to the program on the following seven strategic areas:

1. Periodic review of the Construction Management curriculum and accreditation
2. Review of any new Construction Management curricular or programmatic initiatives proposed by CCAPS
3. Identification of ways to integrate the larger industry community into the program by coordinating with student groups, faculty, and staff on such matters as friend-raising, scholarship/endowment development, academic outreach, public relations, and enrollment growth
4. Setting standards and policies for membership on the Board
5. Serving as a resource on issues brought to the Board by CCAPS or other collegiate or private and public stakeholders
6. Identification of potential faculty, particularly adjunct faculty
7. Facilitation of industry activities in support of students and learning

Members are corporations or organizations, not individuals, who hold voting seats on the Board on a three-year renewable basis. There are presently 40 seats chartered, with additional ex officio members consisting of University staff and representatives of departments and colleges. Alumni represent part of the seats held, and the Construction Management Student Association president holds an annual seat on the Board representing active students.

There are four standing committees designated in the charter: an Executive Committee, Academic Committee, Development Committee, and Student Activities and Outreach Committee. Ad hoc committees may be formed at any time to explore specific issues or initiatives.

Annual Board Meetings

November 2, 2017: Fall Board meeting. The Board discussed the skills shortage, the use of new technology on site, P3 partnerships. A new program track in Environmental Health and Safety was announced. The change in accreditation from ACCE to ABET at the end of the current accreditation cycle was shared with the Board. A recap of the Career Fair was given. The meeting also welcomed visiting guest Professor Tai Shuangliang, Harbin Institute of Technology, who shared his perspective of the construction industry in China. There were 32 attendees. Minutes available on request.

April 12, 2018: Spring Board meeting. The economic outlook was discussed. The need to attract good employees was raised, especially women and minority groups. Increasing use of technology. Update on student/alumni group activity. Discussion of accreditation switch from ACCE to ABET. ASC conference details shared with Board. There were 25 attendees. Minutes available on request.

Special Board Meetings

None required

Advisory Board Membership

Board membership in Fall 2018 stood at 36 voting members.

Member Organization	First Represented	Current Representative (Primary/Alternate)
Adolfson & Peterson	2002	John Huyett, Mark Liska
AGC MN - Associated General Contractors Minnesota Chapter	2005	Merry Beckmann
American Engineering Testing, Inc.	2010	Rob Flickinger, Mike McCarthy
Ames Construction	2011	Jerry Volz
APi Construction Company	2010	Reid 'Huck' Finn, Bob Miller
AWC - Association of Women Contractors	2007	Laura Karow
BATC - Builders Association of the Twin Cities	2013	David Siegel
Braun Intertec	2002	Dan Martin
C. S. McCrossan	2015	Jim Helgestad, Katy Maus
CFMA - Construction Financial Management Association	2012	Mike Michelsen
CPMI	2002	Paul Oberhaus
Doran Companies	2011	Paul Kolia*
Egan Company	2007	Reid Romer
Empirehouse, Inc.	2002	Mike Gilbert
Habitat for Humanity	2013	Chad Bouley
HGA Architects and Engineers	2013	Joe Tarlizzo, Dale Wenkus
IFMA - International Facilities Management Association	2010	Laura Magnuson
Inside Edge Commercial Interior Services	2015	Lisa Bien-Sinz
JE Dunn Construction	2003	Ken Styrlund, Brent Marlow
Knutson Construction Co.	2003	Ryan Rydberg, Katya Pilling
Kraus-Anderson Construction Co.	2002	Patrick Mulcahey*

MCA - Minnesota Construction Association	2010	Gregg Johnson, Corinna Hastings
McGough Companies	2004	Dan McKay, Tim McGough
Meyer Borgman Johnson	2013	Cullen O'Neill, Murphy Curran
MN Department of Transportation	2010	Tom Ravn
Mortenson Construction	2002	Joe Pritzkow, Barry Morgan
MSA - Minnesota Subcontractors Association	2010	David Bruneau, Tony Grazzini
North Hennepin Community College	2002	Richard Krohn, Renae Fry
PCL Construction Services, Inc.	2005	John Jensvold
Pulte Homes	2013	Mike Barden, Graham Epperson
RJM Construction	2013	Brian Recker*
Ryan Companies US, Inc.	2002	Ben Terry, Mike Cairl
Target Corporation	2002	Gen McJilton*
Watson-Forsberg	2010	Dale Forsberg
Weis Builders, Inc.	2002	Brian Filiatrault*, Chris Krieg
Xcel Energy	2015	Jesse Seering

*Alumnus **Faculty member

Student Scholarships and Fundraising

Scholarship Awards

The University of Minnesota’s Construction Management Program has its collegiate home in the College of Continuing and Professional Studies. The CCAPS Scholarship Committee administers all scholarships and approves student scholarship awards on behalf of the College three times each year in fall, spring, and summer.

Construction Management students have four sources of tuition support at the University of Minnesota:

1. U-wide scholarships and financial aid (including federal and state aid), a subset of which are “cooperative” scholarships that support students in two or more colleges
2. College of Continuing and Professional Studies scholarships
3. Construction Management-only CCAPS scholarships
4. Scholarships administered by industry associations

ACADEMIC YEAR	Number of Scholarships Awarded	Number of Student Recipients	Total Dollars Awarded to Students
2017–2018	56	32	\$76,950
2016–2017	36	22	\$41,300
2015–2016	25	15	\$31,100
2014–2015	29	16	\$33,571
2013–2014	26	12	\$27,550

In Academic Year 2017–18, a total of 32 Construction Management students received 56 scholarships amounting to a total of \$76,950.

Of those, five different CCAPS scholarships provided 27 awards to 16 students totaling \$49,950.

Twenty-nine awards to 18 students totaling \$27,000 were provided from CCAPS Construction Management-specific scholarship funds. CCAPS Construction Management scholarships have been awarded since 2011. The current funds are:

- APi Group Inc. Scholarship
- CFMA Scholarship (Construction Financial Management Association)
- Construction and Facilities Management Scholarship
- Hilger Leadership Award
- JE Dunn Construction Scholarship
- McGough Construction Scholarship
- MSP-IFMA Scholarship (Minneapolis/Saint Paul Chapter of the International Facility Management Association)
- PCL Construction Management Scholarship

In addition, the Minnesota Builder’s Exchange (MBEX) provided tuition support to the University of Minnesota, Construction Management students for the 2017–18 academic year.

Fundraising FY 2017–18 (July 1, 2017–June 30, 2018)

The University of Minnesota College of Continuing and Professional Studies Construction Management Program received a total of \$5,500 in charitable gifts during FY 2017–18.

FISCAL YEAR	Total dollars raised	Corporate donors & dollars	Individual donors & dollars	Total donors
FY 2017–18	\$5,550	0 / \$0	5 / \$5,550	5
FY 2016–17	\$66,780	2 / \$52,500	8 / \$14,280	10
FY 2015–16	\$17,855	8 / \$9,815	5 / \$8,040	13
FY 2014–15	\$205,150	2 / \$100,000	7 / \$105,150	9
FY 2013–14	\$107,560	6 / \$104,280	5 / \$3,280	11

Fundraising for the Construction Management Program: last five years.

APPENDICES 2018

APPENDIX A

University of Minnesota Construction Management Program

Quality Improvement Plan

For Academic Year 2017–2018

The University of Minnesota's reputation as a premier learning institution is well established, both nationally and internationally. The University's Construction Management program has also acquired an excellent reputation through our commitment to practical, applied instruction. Our program is grounded in current industry practices and technologies. It offers a multidisciplinary approach to the real issues facing construction managers. The program's Quality Improvement Plan outlines our process for continuous assessment and improvement of the program goals, objectives, curriculum, faculty, and resources.

Overall Program Review

Our staff meets more or less continually to review the overall program goals, objectives, and student learning outcomes. We strive to prepare our students to be future leaders in the industry. Our review includes:

1. An assessment of the program to confirm adherence to American Council for Construction Education (ACCE) outcome based standards under which we were accredited, and progress on adapting to the new standards adopted in 2015
2. An assessment of the program to confirm adherence to Facility Management Accreditation Commission (FMAC) outcome based standards under which we were accredited, and progress on adapting to the new standards adopted in 2017
3. A review of current industry trends and needs (at every Advisory Board meeting)
4. Feedback from the Advisory Board (at every Advisory Board meeting)
5. Feedback from faculty (once per semester as a group, then at every course review meeting)
6. Input and requests from current students (constantly received and discussed among staff)
7. Student focus group findings (once every two years)
8. Input from employers (at every Advisory Board meeting, and informally at every Career Fair)
9. Course review data from College of Continuing and Professional Studies Online and Educational Services (OES) unit (at every course review, and regularly with Faculty Director)
10. Graduation survey results (University-wide, every year)
11. Student ratings of teaching (SRTs) (every semester course offering)
12. Industry publications and research (as they occur - rare as we are not a research institution)
13. Review of new textbook content and options (staff review for currency, faculty review for relevance)
14. Review of appropriate software developments and updates (every semester)

Our assessment of the Construction Management program is continuous, and broad components are shown in Figure 1 below. The tools that are used to evaluate elements of the program are listed below in Table 1.

College of Continuing & Professional Studies

UNIVERSITY OF MINNESOTA Construction Management Program Quality Assessment Cycle

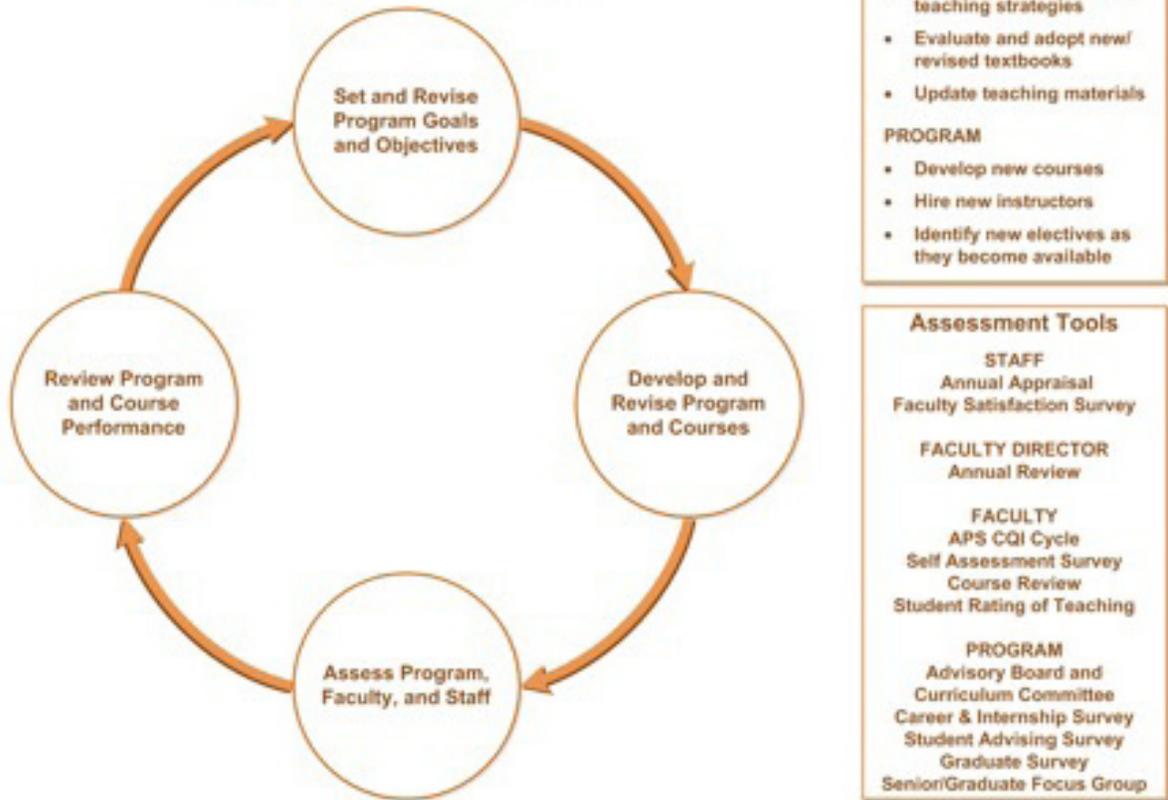


Figure A1. Quality Assessment Cycle

We want our degree program to prepare our students to excel in industry as competent and valuable project team members. We want our curriculum to reflect current technology and industry practices. Our faculty should be accomplished practitioners, working (or having worked) in industry and providing insight to our students into current practices and tools. And our teaching methods should be the most up to date and effective.

Recommended changes and additions are incorporated into the program Annual Plan, Academic Quality Plan, and individual courses, and these are presented to the Advisory Board for review and comment. This review process uses the ongoing input and feedback we get from students, faculty, our advisory board, and the college through the assessment methods outlined in the Academic Quality Plan. The overall program is designed to prepare students for work as construction managers. Program courses and course content evolve over time and are enhanced, added, or removed based on industry input. Specific degree requirement changes are presented to and approved by our college's Academic Council.

Table A1. Program Assessment Tools

Assessment Tool	Frequency	Action	Documentation and Assessment of Effectiveness	Direct or Indirect Assessment	Appendix Reference
1. Overall program assessment					
Comparison to ACCE/FMAC standards	Semi-annually	Department review	Required changes are proposed to and approved by Academic Council.	Direct	none
Student Experience in the Research University (SERU) survey	Biennially or when University implements	Department review	Incorporated into the Annual Report; response as needed.	Direct	A
Advisory Board and curriculum committee meetings	2x/year	Courses modified, added, or removed	Proposals submitted to CCAPS Academic Council; review semiannually by Advisory Board members, and subject to University Curriculum Review committee final approval	Indirect	none
Student focus groups (by broad invitation)	Solicited every odd year (since we are a two-year advanced standing program)	Minutes taken to record suggestions	Minutes are filed and suggestions are considered for overall program quality improvements. Annual review of progress.	Direct	none

2. Courses					
Faculty self-assessment	Each term after a class is taught (online)	Department review, objectives revised, teaching methods and exercises revised, new content and activities incorporated, textbook changed	Formal review process documents that faculty goals were achieved, and courses are updated as suggested.	Direct	B
OES course review	After each course is taught	Review is provided to each instructor	OES follows up with each instructor to document changes made. Incorporates their own "Quality Matters" review of every course.	Indirect	B
APS course review document	Every three years for established courses; after each new course is taught for the first time	Course objectives, activities, assessments may be revised, recorded, and filed in course review document	Course review form filed and reviewed after next course delivery with instructor and program directors. Follow-up review after course is taught again to document that changes were made and assess their effectiveness.	Direct	B
Student Ratings of Teaching (SRT)	After each course section is delivered	Plan developed to address student concerns about faculty or course	Annual review of SRTs by program director. Documentation of SRTs for each faculty and each course are filed and assessed each semester. Student rating of teaching values assessed to determine if trends are positive. If trends are negative, the course and faculty review schedules are accelerated. Faculty progress monitored, and faculty are replaced if improvements are documented.	Direct	D

3. Students					
Academic Quality Plan	Annually	Varies for each outcome listed	See Academic Quality Plan	Direct/ Indirect	See separate document
Student placement and career services	Annually	Improvements or changes made based on student responses	Placement numbers tracked from year to year. Both student satisfaction and student placement should increase each year.	Direct	C
Student Rating of Teaching (SRTs)	After each course section is delivered	Plan developed to address student concerns about faculty or course	Assessment incorporated into course review. Annual review of SRTs by program director. Documentation of SRTs for each faculty and each course are filed and assessed each semester. Student rating of teaching values assessed to determine if trends are positive. If trends are negative, the review schedule is accelerated. Faculty replaced if improvements are not made.	Direct	D

4. Faculty					
Student Ratings of Teaching (SRT)	After each course section is delivered	Plan developed to address student concerns about faculty or course	Assessment incorporated into course review. Annual review of SRTs by program director Documentation of SRTs for each faculty and each course are filed and assessed each semester. Student rating of teaching values assessed to determine if trends are positive. If trends are negative, the review schedule is accelerated. Faculty replaced if improvements are not made.	Direct	D
Faculty self-assessment review	Each term after a class is taught	Department Review	Formal review process documents that faculty goals were achieved, and courses are updated as suggested.	Direct	B
Student Experience in the Research University (SERU) Survey	Biennially or when University implements	Department Review	Incorporated into the Annual Report; response as needed.	Direct	D
Performance review	Every three years for adjunct, after first time teaching for new faculty, and annually for full time faculty	Teaching methods revised Goals set for next year Employee development plan documented and agreed to by college and employee	Formal review process documents goals that were achieved and allows faculty and supervisors to set new goals. Student rating of teaching values assessed to determine if trends are positive. If trends are negative, the review schedule is accelerated. Faculty replaced if improvements are not made.	Direct	D
5. Staff					
Performance Review	Annually	Employee development plan documented and agreed to by college and employee	Formal review process documents goals that were achieved and allows staff and supervisors to set new goals	Direct	D
6. Advising					
University Advising Survey	Annually	Advising methods and processes revised	Numerical results tabulated and assessed for positive results and trends	Direct	E
Student Experience in the Research University (SERU) survey	Biennially or when University implements	Department Review	Incorporated into the Annual Report; response as needed.	Direct	E

Quality Improvement Plan (QIP)

Sub-Appendices

QIP Sub-Appendix A1: Overall Program

QIP Sub-Appendix A2: Courses

QIP Sub-Appendix A3: Students

QIP Sub-Appendix A4: Faculty

QIP Sub-Appendix A5: Advising

QIP Sub-Appendix A1: Overall Program

Student Experience in the Research University Survey

The Student Experience in the Research University (SERU) survey is a comprehensive national survey administered to all undergraduates at the University of Minnesota-Twin Cities (UMNTC). The University of Minnesota has participated in the survey in 2009, 2010, 2012, 2013, 2014, 2015, and 2017 (no SERU survey taken in 2016). The data are used to provide UMNTC staff, faculty, and administrators with unique insights into students' experiences. Student surveys can be a powerful and cost-effective way to gain insight into the student experience. This survey is given to all undergraduates each year and is used to gather information about student engagement in activities that have been empirically shown to influence student learning and positive educational outcomes, both inside and outside of the classroom. A benefit of the SERU is that item responses provide actionable information for faculty, staff, and administrators. The responses can also serve as indicators of academic program and institutional effectiveness. SERU results can be viewed across institutions as a way for a college or university to make peer comparisons.

The survey is administered to all degree-seeking University of Minnesota undergraduate students. The items provide a comprehensive snapshot of the student experience, tapping into diverse domains of interest to a variety of campus stakeholders. Some of the items are designed to gather information on academic and civic engagement, student learning and development, student services, and globalization. Students also respond to items that provide insight into their academic and personal development, perceived campus climate for diversity, overall satisfaction, and evaluation of the major (if applicable). Since the survey asks students about their background, beliefs, motivations, and perspectives, it imparts additional understanding into academic and co-curricular engagement (or disengagement). The diversity in responses reveals the student experience through a variety of lenses.

There is also a customizable module available with which colleges and universities can create items that reflect topics and issues of particular interest to them. Finally, SERU items were created to gather information about a specific college student population: students who attend research institutions. Based on the unique context of research universities, a deliberate effort was made to capture the complexity of these institutions. Survey items are designed to allow for analysis at not only the institutional level, but also by college and even academic major. Since research universities are often complex organizations, the ability to identify specific areas within the institution can inform targeted self-improvement efforts, as well as provide evidence of quality at multifaceted levels.

Results of the SERU survey are used to assess many elements of the Construction Management program. Those elements are shown in the following section. (2017 data were not available at the time of writing, results from the 2015 survey are shown below.)

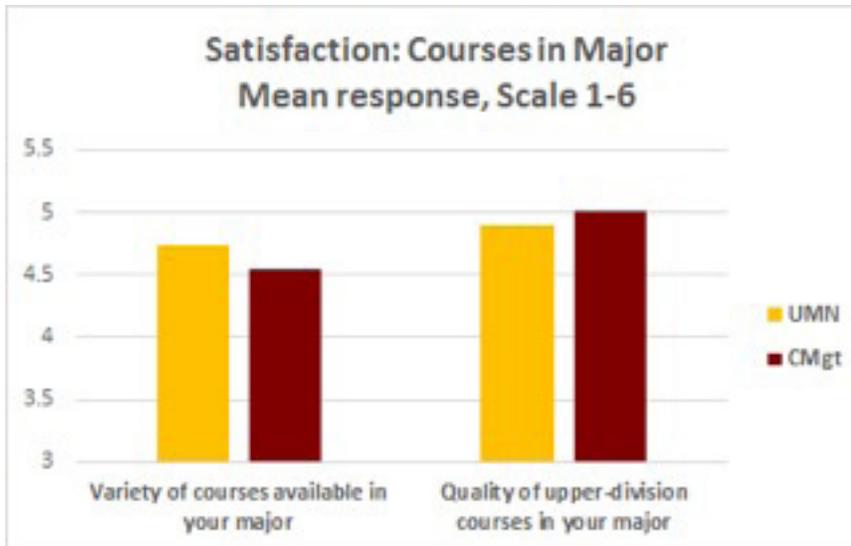


Figure A1.1. Student Satisfaction with Major

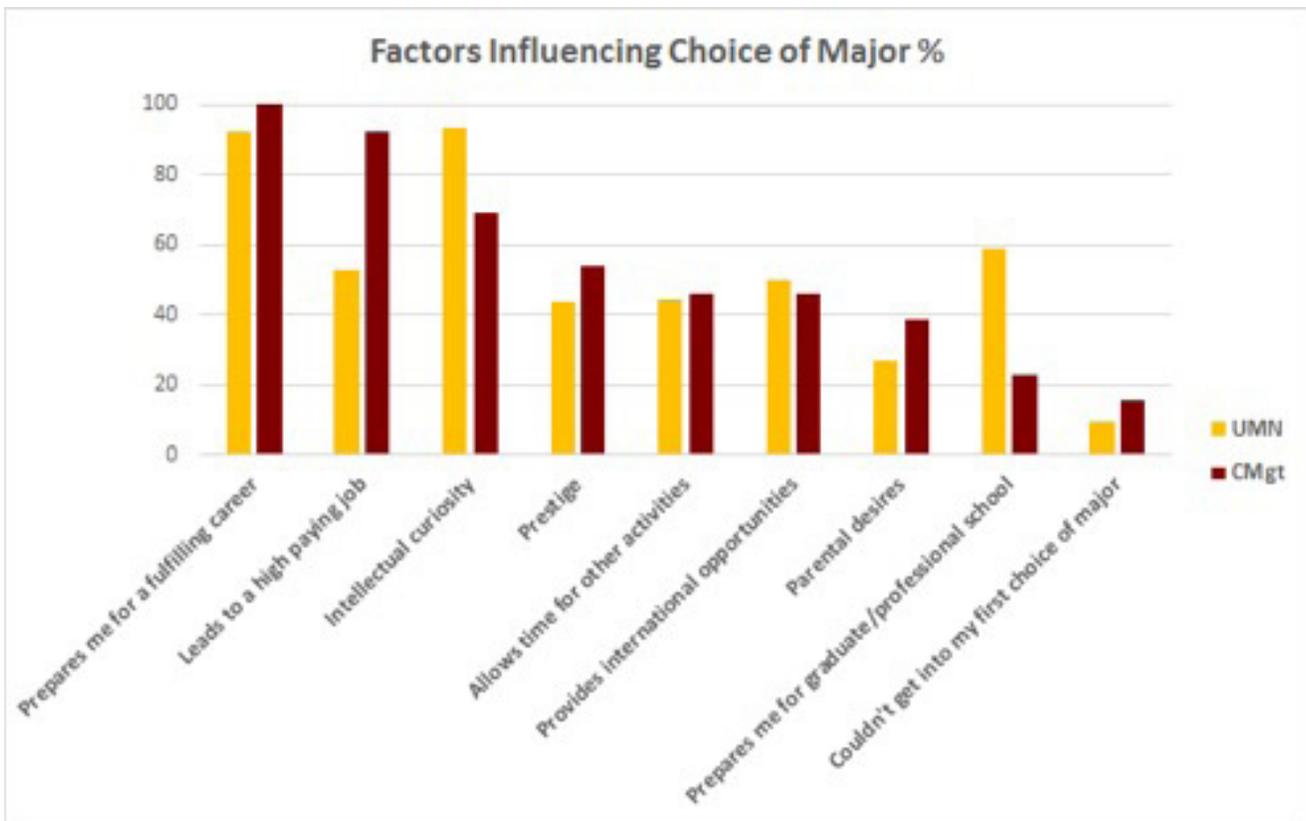


Figure A1.2. Factors Influencing Choice of Major

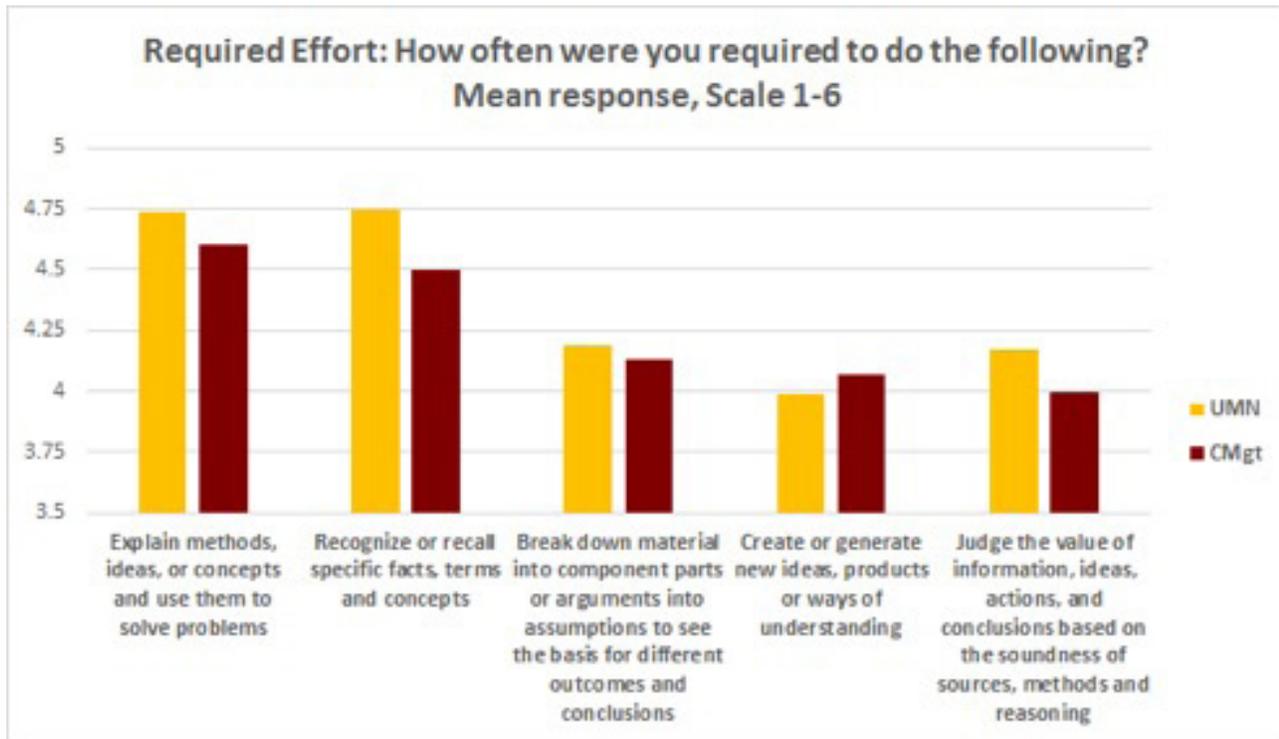


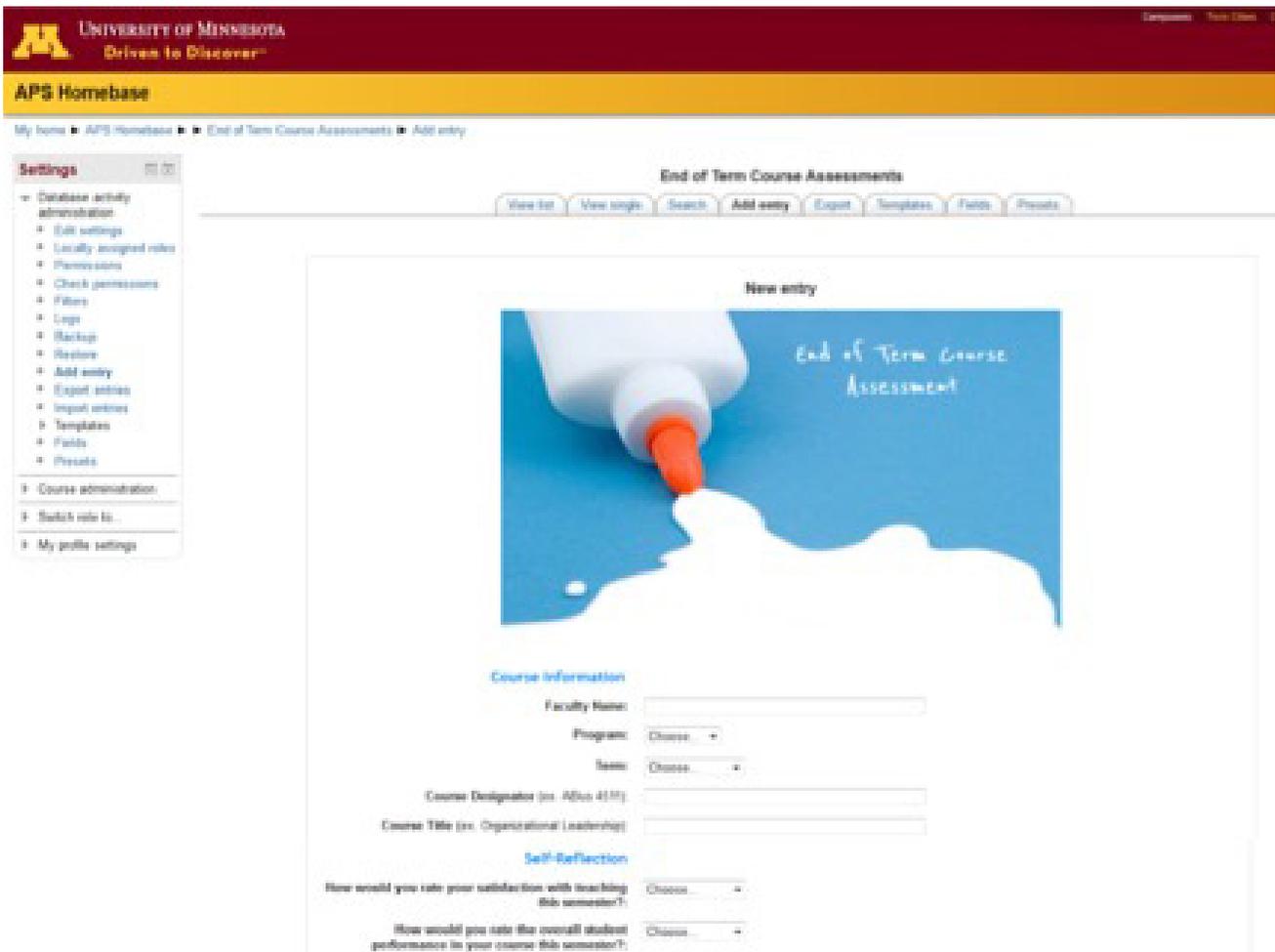
Figure A1.3. Required Effort

OIP Sub-Appendix A2: Courses

Courses are reviewed in a variety of ways each time they are taught.

1. End of Semester Course Assessment

First, at the end of each semester all faculty complete a Course Assessment in the *Homebase* faculty website for each class they taught. This gives faculty a space to reflect on the course and identify changes and improvements that they would like to see in future versions of the course. The assessment contains sections which request **faculty reflection** on the class and teaching strategies; **course content**, resources used, and developments in the subject area; **course design** and technology enhancements the faculty would like to see in the class companion Moodle site; and **professional development** and support needs which the faculty identifies. A feedback section allows the program director to open a dialogue with faculty on their course assessment. Course assessments and student work examples are included in course reviews every three years.



Course Designer (ex. ADU 455):

Course Title (ex. Organizational Leadership):

Self-Reflection

How would you rate your satisfaction with teaching this semester?

How would you rate the overall student performance in your course this semester?

What teaching strategy or learning activity went particularly well this semester?

Is there anything that you would like to change about your course?

Other (Self-reflection):

Course Content

What is the year of the textbook(s) you used this semester?

Would you like to upgrade to a new edition or change this book? Yes No

Do you use teacher materials or a textbook website from the publisher? Yes No

Do you use your library course page? Yes No

Are you interested in finding new resources for your course? Yes No

Are there emerging trends in the field that should be included in this course?

Course Design

Are you interested in any of the following course design options with an instructional designer? Course revisions Flipping your classroom Have OED design a banner for your course Redesign your course site

Are you interested in any of the following academic technology options? Flipgrid (a video-discussion board) VoiceThread (collaborative multimedia) Google Hangout for virtual office hours Camtasia Relay for recording voice-over-PowerPoint lectures WebEx for synchronous, online meetings Facilitating course activities using Moodle

Other (Course Design):

Professional Development

Which of the following API Faculty guidelines have you implemented? Administer the Student Ratings of Teaching evaluation (SRT) (face-to-face classes only) Applied the Google API syllabus Articulated course-level outcomes Mapped assignments to course and program-level outcomes

What faculty development events or initiatives have you participated in this semester? Attended Faculty Meeting Participated in Faculty Workshop Participated in Course Review

What professional development events or initiatives have you participated in to stay abreast in your field?

How can we better support you in your teaching?

Info. added by program administration

Link to SRT

Comments

Figure A2.1. End of Semester Course Assessment Survey (2017–2018)

2. Online and Educational Services (OES) Review

Second, the College of Continuing and Professional Studies Online and Educational Services (OES) provides a continuous review of all CMGT courses (online, blended, and face-to-face) against the following standards:

Online Course Review Standards,

Face-to-Face Course Companion Site Review Standards

Category	Content
Course Overview and Introduction	Syllabus Instructions Course purpose Uniformity with other courses Expectations and minimum skills required to succeed Faculty introduction Course calendar
Learning Objectives	Objectives are clearly identified Objectives are measurable Students are given information on how success will be measured
Assessment and Measurement	Course grading policies identified Grading rubrics are provided Assessment instruments are appropriate
Resources and Materials	Clearly explained Grouped appropriately Easily accessible Copyrighted correctly
Learner Engagement	Learning activities promote obtaining the objectives Learning activities are appropriate Clear standards are outlined for instructor response Clear standards are outlined for student participation
Course Technology	Technology supports the learning objectives Course outline is logical Students have access to technology needed
Technical Support	Technical support is provided as needed to students
Accessibility	Course meets ADA accessibility requirements Alternative delivery methods are provided as needed

Table A2.1 OES Assessment Factors

3. APS Course Review

Third, our program maintains a course review calendar (see Figure A2.2). Each course is reviewed every three years by the program director, faculty directors, and faculty.

CMgt Course Review Schedule 2015-18														
Course Name	Course Number	Current Instructor	Currently Offered	Fall 2015	Spring 2016	Summer 2016	Fall 2016	Spring 2017	Summer 2017	Fall 2017	Spring 2018	Summer 2018	Fall 2018	Spring 2019
Surveying & Mapping	CE 3202	Mavis	Su											
AutoCAD for Construction Managers	CMgt 2019	Johnson	Sp, F						X					X
Facility Programming and Design	CMgt 3024 (was 202)	Pliska	Sp			X								
Introduction to Construction	CMgt 3001-bl	Bartolic	Sp, F		X									
Introduction to Construction	CMgt 3001-ODL	Hausler	Sp, Su, F		X									
Construction Plan Reading	CMgt 3011	Kossila	Sp, Su, F			X								
Construction Industry Through Time & Tomorrow	CMgt 4000	Bowen	F even yrs											
Innovative Contracting	CMgt 4001	Heipas	F odd yrs						X					
Lean Construction	CMgt 4002-ODL	Lemke	Sp odd yrs											
Managing With BIM	CMgt 4003	Kossila	F even yrs											X
Building Codes Observations: Walking Inspection	CMgt 4004	Talbot	Sp odd yrs											
Construction Documents & Contracts	CMgt 4011	Hausler/Headrick	Sp, F		X									
Construction Planning & Scheduling	CMgt 4021	Styrlund/Galetka	Sp, F		X									
Construction Estimating	CMgt 4022-bl	Adamson	Sp, F									X		
Construction Safety & Loss Control	CMgt 4031	Laubach	Sp, F							X				
Specifications and Technical Writing for Construction	CMgt 4041W	Hilger	Sp											X
Building Codes for Construction Managers	CMgt 4073-ODL	Holm	Sp											
Managing Erosion and Sediment Control on Construct	CMgt 4081	Chapman	Sp							X				
Directed Study	CMgt 4193		As required											
Construction Management Internship	CMgt 4196	Hilger	Sp, Su, F											
Construction Accounting	CMgt 4201-ODL	Elthon	F					X						
Facility Cost Accounting and Finance	CMgt 4211-ODL	Taylor	F											
Facility Operations and Maintenance Intensive	CMgt 4213	Franke	F								X			
Facility Quality Assessment and Commissioning	CMgt 4215	Linder	Sp				X							
Advanced Construction Cost Estimating	CMgt 4422-bl	Elthon/Adamson	Sp				X							
Sustainability for Construction Managers	CMgt 4471-ODL	Gondeck-Becker	F											
Building Energy Systems	CMgt 4542	Jain	Sp								X			
Materials & Structures I	CMgt 4544	Hale	F											
Materials & Structures II	CMgt 4545	O'Neill	Sp											
Topics in Construction Management	CMgt 4550		As required											
Building Envelope Design & Construction	CMgt 4562	Campbell	F										X	
Construction Management Capstone	CMgt 4861	Hilger	Sp											X

Note on review timing: New classes, or classes with a new instructor will be reviewed as soon as possible after the first offering. Classes which only run in one semester will be reviewed as soon as possible thereafter. Only one class per instructor will be reviewed in any one semester. The schedule will be amended as required to accommodate new classes, faculty or student concerns.

Figure A2.2 Course Review Calendar

The following Figure A2.3 standard form is used to ensure that each course is being updated as needed. Courses are also reviewed in a similar way after they are offered for the first time.

Course:	Review Date:
Reviewers: Instructor, Faculty Director, APS Program Director, OES Instructional Designer	Notes By:
Full Course Review Portfolio Here	
REVIEW NOTES	ACTION ITEMS
Course Outcomes	
General Redesign elements (See also OES Design Meeting Minutes)	
The following are from the OES *Online Course Review	
Learning Outcomes	*These items to be addressed during redesign.
Learning Activities and Assessments	
Learning Environment	
Learning Resources	
Course Tools and Media	
Instructor role	
Scope of Revision	
Professional Development	
<ul style="list-style-type: none"> • See Faculty Development report • End of term course assessment participation 	
Other	
<ul style="list-style-type: none"> • Resume: on file • SRTs: Student Ratings of Teaching 	

Figure A2.3 Standard Course Review Form

OIP Sub-Appendix A3: Students

Career Services Graduate Outcome Survey

Each year, Career and Internship Services survey the cohort of graduating students to track their employment success immediately following graduation. Results are reported by college and program. We track this information to determine the trends in our students' work placement and job satisfaction. Results of past surveys are available at careerhelp.umn.edu/salarystat.

Survey results for Construction Management for the past five years are shown below with comparative data for the College of Continuing and Professional Studies (CCAPS) as a whole.

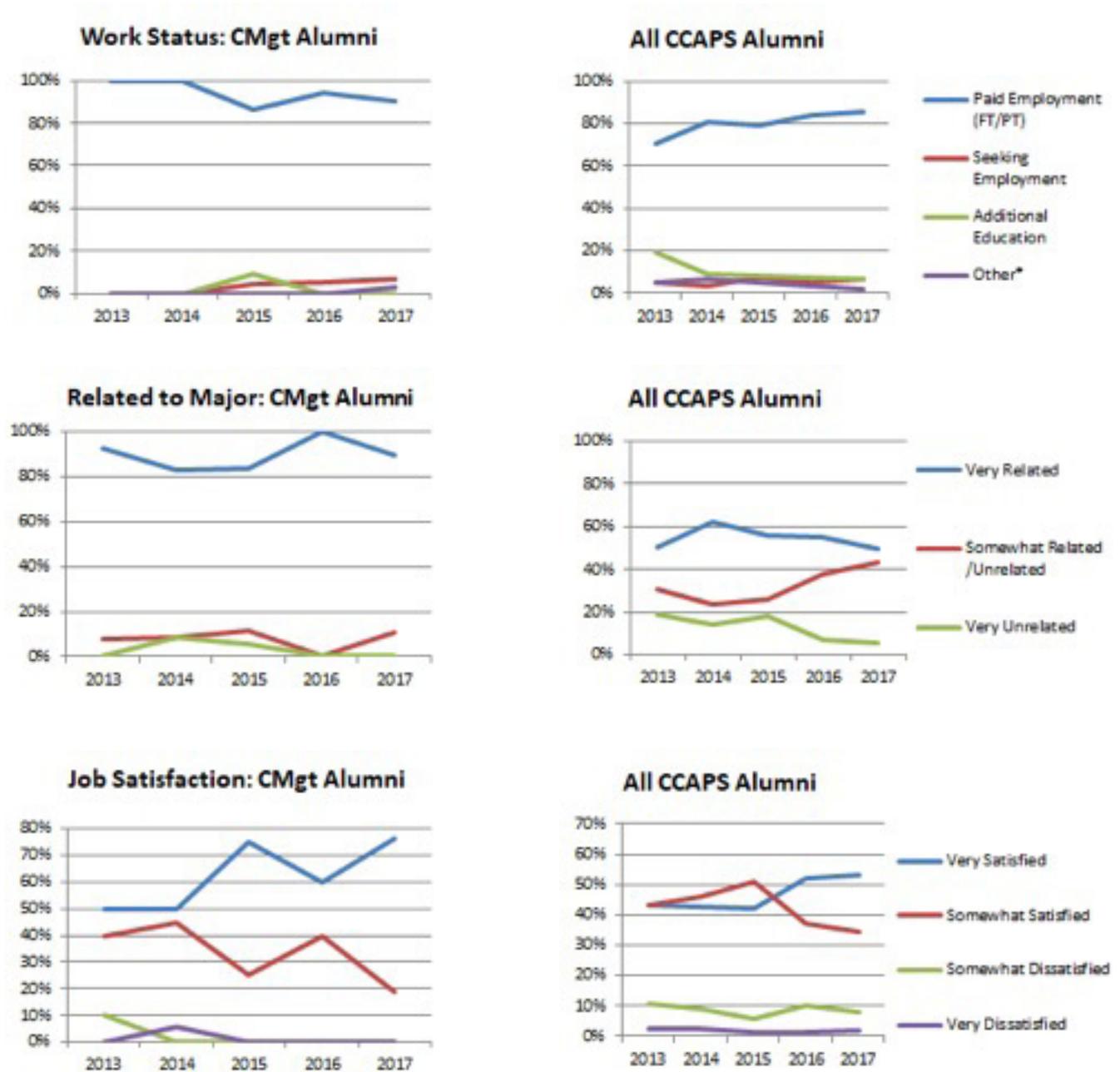


Figure A3.1. Graduate Survey Results for Construction Management and All CCAPS Alumni

QIP Sub-Appendix A4: Faculty

Faculty and staff are reviewed annually. Reviews include a self-assessment and an assessment by one or more supervisors. Faculty reviews include a review of Student Ratings of Teaching (SRT) from each semester, as well as an overview of teaching ratings over the faculty member's duration of service. Goals are set and reviewed as part of the performance assessment.

1. Student Rating of Teaching (SRT) Surveys

University policy requires that each course taught by an instructor be rated by students once each year: see Evaluation of Teaching policy. Evaluation is coordinated by the Office of Measurement Services (OMS) which prints and distributes the SRT forms, collects the completed data from departments, and provides summaries of the results to individual faculty and department heads/chairs (additional information is given here: <http://oms.umn.edu/srt/>). Construction Management courses are evaluated by students at the end of each semester using this survey.

The SRT form has been used since spring 2008. It was developed in 2006 by a University subcommittee charged by the Senate Committee on Educational Policy (SCEP) and the Senate Committee on Faculty Affairs (SCFA) with revising the existing Student Evaluation of Teaching (SET) form. The new SRT form was pilot tested in spring 2007 with approximately 50 courses and included specific teacher and student input. After further revision, the SRT was unanimously approved by the Faculty Senate in December 2007. The SRT incorporated new student release items. These questions were selected by the Student Senate to provide future students with information about the courses and were released with instructor permission.

The SRT form aimed to assess teaching more holistically, and produce results relevant to the classroom experience and linked to the University student-learning outcomes. The SRT has improved how teaching is assessed by students and helps instructors better understand how they can improve teaching. This form has a solid research base on student learning and instructional excellence.

In April 2014, the University Senate approved an updated version of the SRT form. The updated form is divided into two major sections with two supplemental questions:

- Section 1: Instructor Ratings – This section contains five questions for students to rate their instructor and an open-ended question: “What did the instructor do that most helped your learning?”
- Section 2: Course Ratings – This section contains five questions for students to rate their course and an open-ended question: “What suggestions do you have for improving this course?”
- Supplemental Questions:
 - Did you take this course because it was required or was an elective?
 - How would you rate the physical environment in which you take this class, especially the classroom facilities, including your ability to see, hear, concentrate and participate?

SRT forms are completed in class each semester, and returned to the Office of Measurement Services for analysis. Summary reports are sent to departmental heads including statistics for each question. Department chairs and committees use course evaluations during annual faculty reviews to make decisions on salary increases, promotions, and tenure.

Construction Management program tracks the results of our SRTs each semester, and the faculty director follows up with individual faculty to discuss assessments and trends. SRT results for all Construction Management courses for the last three years are posted below in Figure A4.1.

Evaluation Summary by Academic Year Previous 3 Academic Years (Fall, Spring, Summer)

Construction Management											
AY 2017-18					% of Student Responses						
* New SRT Form Responses *	Registered	Responses	Av. Rating	SCALE						Mean	Median
	772	468 (60.6%)	5.2 / 6	lowest	1	2	3	4	5		
				1	2	3	4	5	6		
Instructor Items	The instructor was well prepared for class.			0.4%	0.2%	1.3%	5.2%	27.3%	65.5%	5.6	6
	The instructor presented the subject matter clearly.			1.1%	1.9%	5.4%	10.1%	27.3%	54.3%	5.2	6
	The instructor provided feedback intended to improve my performance.			1.1%	2.1%	6.9%	9.7%	26.8%	53.4%	5.2	6
	The instructor treated me with respect.				0.2%	1.3%	1.9%	22.4%	74.2%	5.7	6
	I would recommend this instructor to other students			1.1%	2.4%	4.5%	8.6%	23.3%	60.2%	5.3	6
Course Items	I have a deeper understanding of the subject matter as a result of this course.			0.4%	2.6%	2.4%	12.5%	33.5%	48.6%	5.2	5
	My interest in the subject matter was stimulated by this course.			1.3%	3.9%	4.1%	21.0%	27.0%	42.8%	5.0	5
	Instructional technology employed in this course was effective.			0.4%	2.8%	6.5%	14.3%	31.3%	44.6%	5.1	5
	The grading standards for this course were clear.			1.1%	2.6%	4.1%	13.3%	33.3%	45.5%	5.1	5
	I would recommend this course to other students			2.1%	4.1%	4.4%	14.5%	30.0%	44.9%	5.0	5

AY 2016-17											
AY 2016-17					% of Student Responses						
* New SRT Form Responses *	Registered	Responses	Av. Rating	SCALE						Mean	Median
	1083	693 (64%)	5.1 / 6	lowest	1	2	3	4	5		
				1	2	3	4	5	6		
Instructor Items	The instructor was well prepared for class.			0.4%	1.9%	1.7%	8.0%	33.2%	54.7%	5.4	6
	The instructor presented the subject matter clearly.			1.3%	3.6%	4.1%	13.4%	30.8%	46.8%	5.1	5
	The instructor provided feedback intended to improve my performance.			1.5%	2.8%	6.7%	14.0%	28.8%	46.3%	5.0	5
	The instructor treated me with respect.			0.3%	1.0%	1.0%	5.0%	22.9%	69.8%	5.6	6
	I would recommend this instructor to other students			2.5%	3.6%	3.3%	12.2%	24.6%	53.8%	5.1	6
Course Items	I have a deeper understanding of the subject matter as a result of this course.			0.7%	1.8%	2.8%	14.6%	34.8%	45.3%	5.2	5
	My interest in the subject matter was stimulated by this course.			1.3%	2.9%	6.6%	19.4%	30.4%	39.4%	4.9	5
	Instructional technology employed in this course was effective.			4.0%	2.5%	3.6%	15.2%	33.8%	40.8%	4.9	5
	The grading standards for this course were clear.			1.9%	3.5%	5.6%	12.2%	31.9%	44.9%	5.0	5
	I would recommend this course to other students			2.0%	3.1%	4.7%	15.0%	31.6%	43.7%	5.0	5

AY 2015-16											
AY 2015-16					% of Student Responses						
* New SRT Form Responses *	Registered	Responses	Av. Rating	SCALE						Mean	Median
	1037	698 (67.3%)	5.1 / 6	lowest	1	2	3	4	5		
				1	2	3	4	5	6		
Instructor Items	The instructor was well prepared for class.			1.6%	1.4%	1.3%	6.5%	29.0%	60.2%	5.4	6
	The instructor presented the subject matter clearly.			1.6%	1.9%	5.2%	12.2%	29.1%	50.0%	5.2	5.5
	The instructor provided feedback intended to improve my performance.			3.0%	2.3%	5.3%	16.1%	24.8%	48.4%	5.0	5
	The instructor treated me with respect.			0.6%	0.7%	1.3%	3.8%	22.3%	71.3%	5.6	6
	I would recommend this instructor to other students			2.6%	2.6%	4.5%	8.7%	25.6%	56.1%	5.2	6
Course Items	I have a deeper understanding of the subject matter as a result of this course.			0.7%	2.9%	2.3%	11.4%	33.4%	49.2%	5.2	5
	My interest in the subject matter was stimulated by this course.			1.3%	4.1%	4.1%	17.7%	31.6%	41.2%	5.0	5
	Instructional technology employed in this course was effective.			1.9%	2.5%	5.2%	16.2%	35.4%	38.8%	5.0	5
	The grading standards for this course were clear.			3.5%	4.4%	6.5%	12.7%	30.9%	42.0%	4.9	5
	I would recommend this course to other students			3.0%	2.4%	4.8%	14.2%	31.7%	43.9%	5.0	5

Figure A4.1 SRT Results for Construction Management faculty for last three years

2. Student Experience in the Research University Survey

As noted above, the SERU survey is a comprehensive national survey administered to all undergraduates at the University of Minnesota-Twin Cities (UMNTC) every year. Results of the SERU survey are used to assess many elements of the Construction Management program. Those elements are shown in the following section. Students rank responses on a scale of 1–6. The most recent survey for which results are published is from 2015.

According to the survey, a majority of Construction Management students (69.3%) are satisfied or very satisfied with our faculty instruction: Figures A4.2 and A4.3.

Figure A4.2. Satisfaction with Instruction

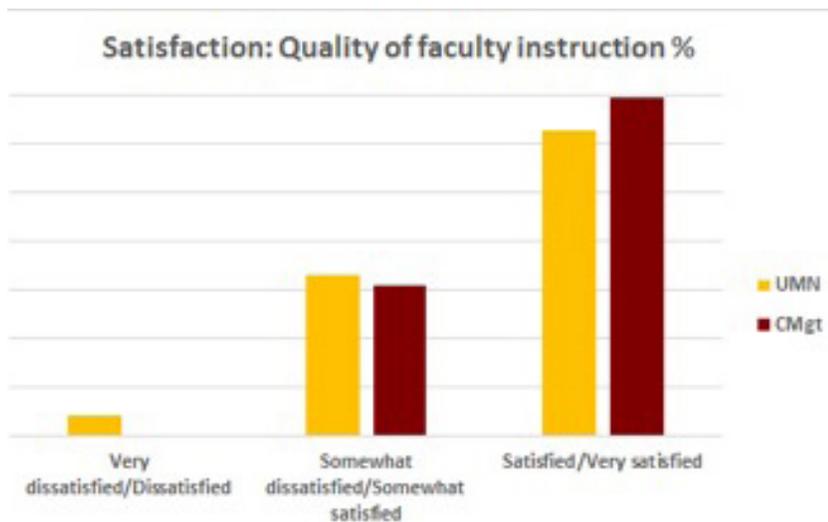
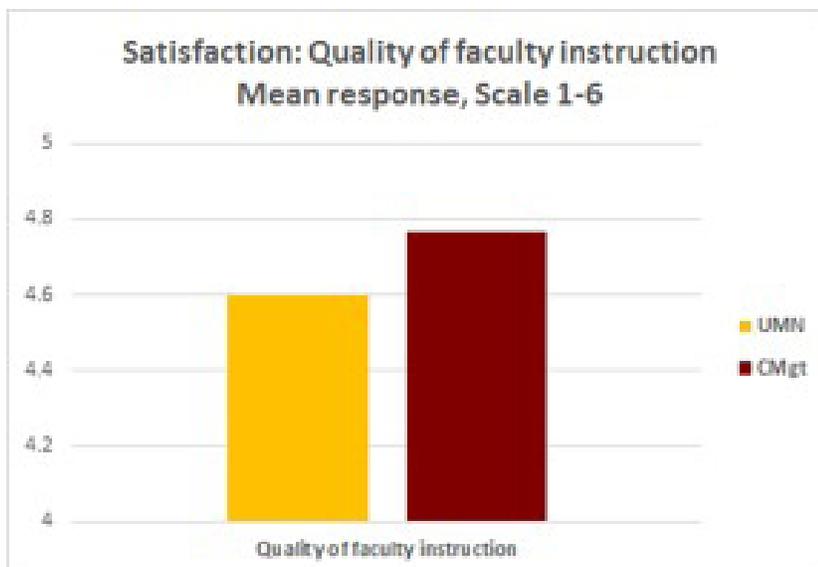


Figure A4.3. Mean CCAPS Satisfaction with Instruction



SERU results also cover the level of engagement our faculty have with students, as indicated by the survey results in Figures A4.4–A4.7.

Figure A4.4 Student-Faculty Engagement

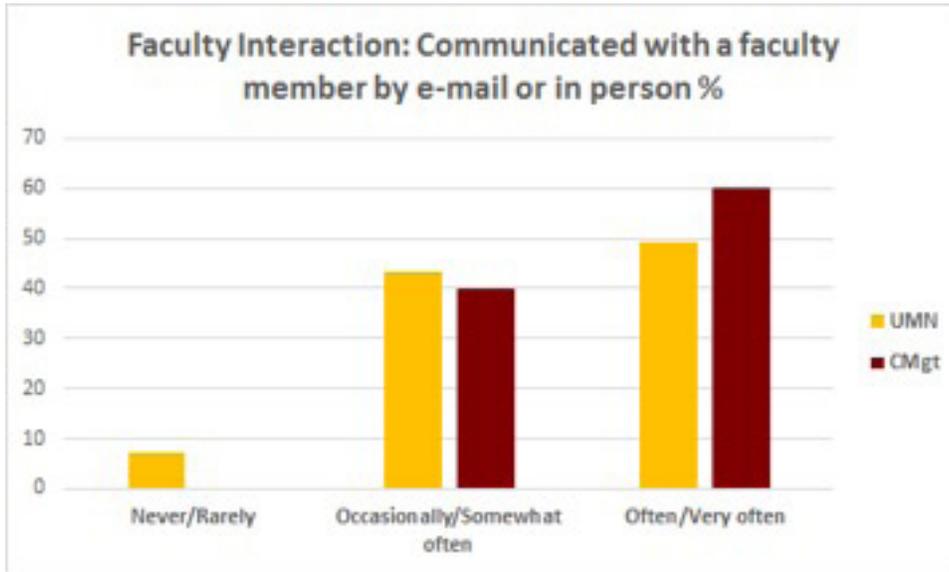


Figure A4.5 Student - Faculty Engagement in Class

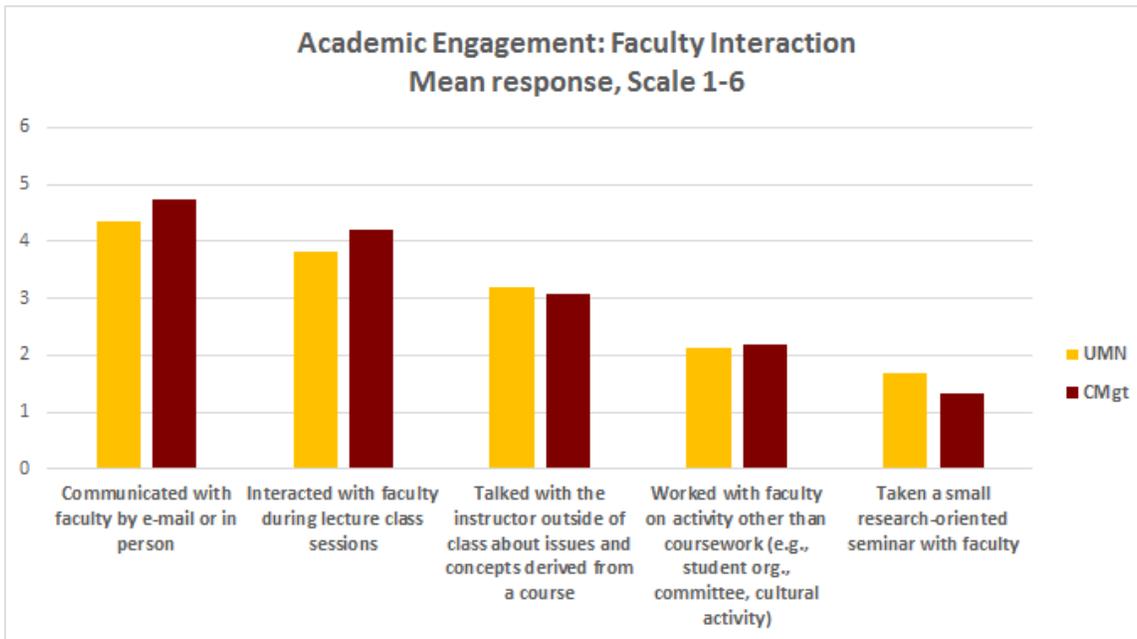


Figure A4.6 Student-Faculty Engagement Outside of Class

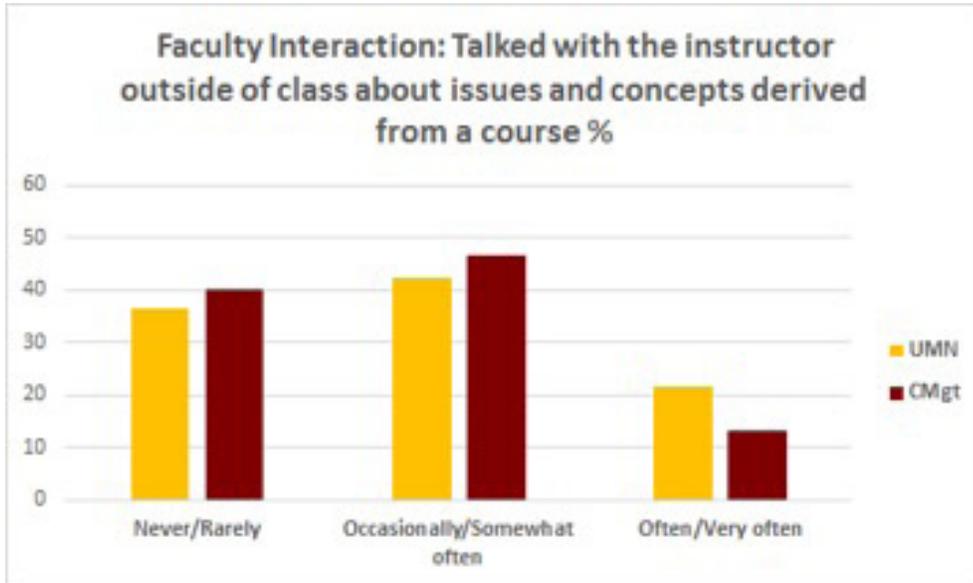


Figure A4.7 Student-Faculty Engagement Summary

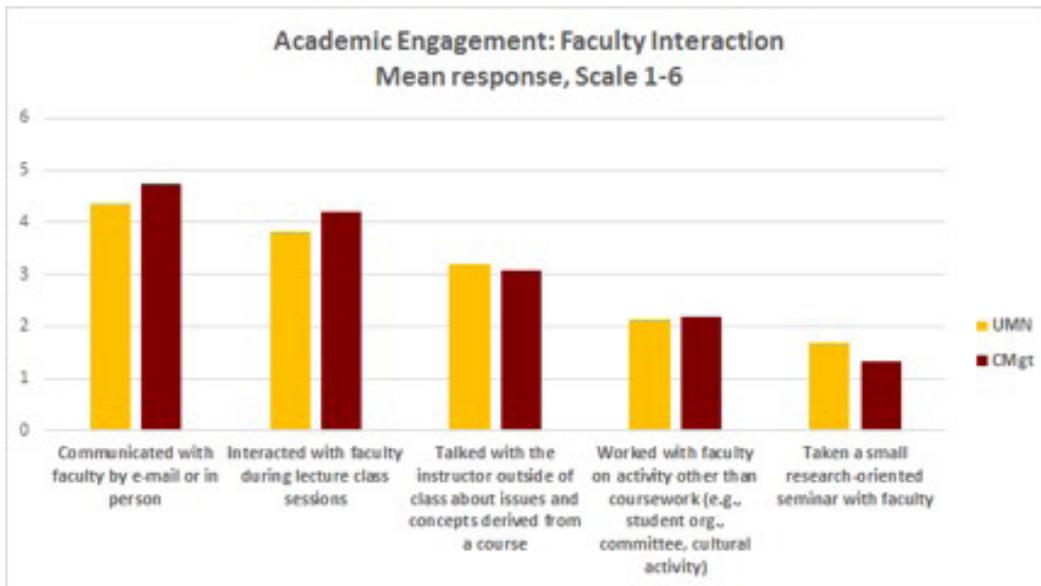
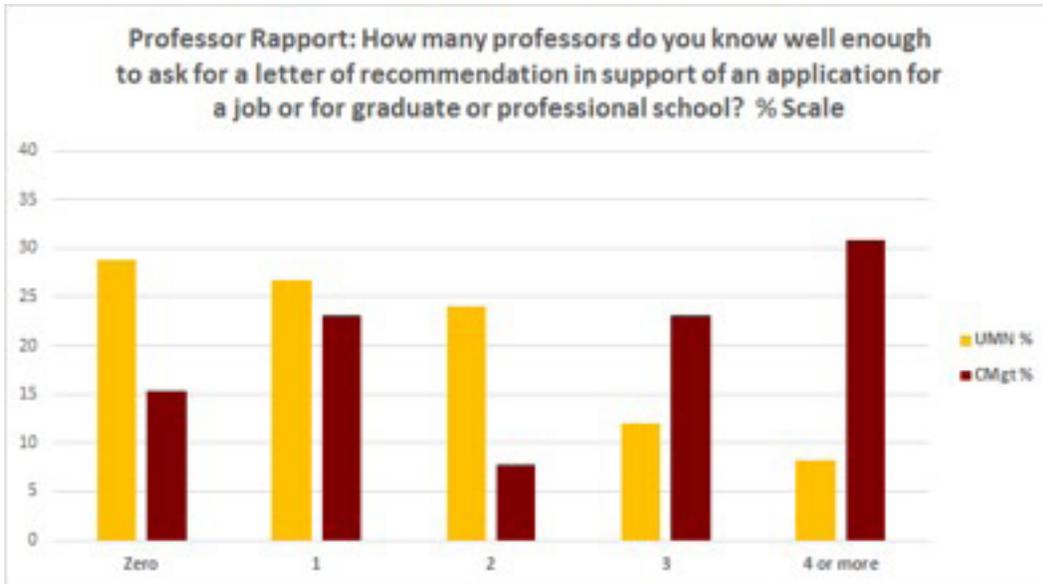


Figure A4.8 Student-Faculty Rapport



3. Performance Review

Each year, faculty directors and staff are reviewed by the program administration as required by the University of Minnesota. A revised Performance Review System was introduced across the University in 2014-15 to standardize performance assessment and goal setting.

The review process is described below, and the form is shown below, Figure A4.9.

STEP 1: Self-review. February–March: Complete a self-review of 3–5 main responsibilities, using the CCAPS Annual Performance Review form and submit to supervisor.

STEP 2: Performance review meeting with Supervisors. March–April: Supervisors schedule a time to meet with each employee they supervise to discuss performance, goal accomplishments, new goals for the next year and professional development plans. Performance is evaluated on a 1–5 scale and prorated according to the proportion of the employee’s time spent on each responsibility.

STEP 3: Supervisors submit completed reviews to Unit Directors. Mid-April: Once all reviews are approved, supervisors will schedule a final meeting with each employee they supervise to share the final review form and both employee and supervisor will sign off on the review. The employee signature does not indicate approval, only that the review has been shared.

The CCAPS Annual Performance Review form is shown on the following pages.

Figure A4.9: Performance Review Form

CCAPS Annual Performance Review

Review Period: April 2017–March 2018

Employee Name:

Employee ID:

Job Code:

Job Class Title:

Department:

Supervisor:

List additional colleague(s) providing performance feedback on this individual:

Rating Scale

Level 5 - Exceptional

Performance frequently and significantly exceeded established expectations and standards for quality, quantity, and timeliness. Employee consistently took on stretch goals, cross-functional, or campus-wide assignments. Employee created and designed services or processes/procedures that saved on cost and/or significantly changed how work was done. Annual goals were exceeded and additional work was done.

Level 4 - Exceeds Expectations

Performance consistently exceeded expectations in all essential areas of responsibility and the quality of work overall was excellent. Performance enhanced the work of others. Employee explored and implemented improved methods of accomplishing desired outcomes. Annual goals were met or exceeded.

Level 3 - Meets Expectations

Performance consistently met expectations in all essential areas of responsibility and at times exceeded expectations. The quality of work overall was good. Annual goals were met.

Level 2 - Needs improvement

Performance did not consistently meet expectations in one or more essential areas of responsibility. One or more of the annual goals were not met.

Level 1 - Unsatisfactory

Performance was consistently below expectations in most essential areas of responsibility, and/or reasonable progress toward annual goals was not made. Significant improvement is needed in one or more important area.

Performance Factors Relevant to Position

Supervisors are asked to consider the following five factors as integral to the performance and overall ratings.

Communication: Demonstrates the ability to express thoughts (verbally and in writing) clearly and concisely, shows good active listening skills, and tailors message appropriately to the audience.

Teamwork: Builds working relationships to solve problems and achieve common goals. Offers assistance, support, and feedback to others.

Motivation: Shows initiative, anticipates needs, and takes actions. Is self-directed, takes appropriate action, and is efficient and resourceful in fulfilling responsibilities.

Accountability/Reliability: Takes ownership for own work. Accepts responsibility for mistakes and learns from them. Follows through on commitments, is dependable and trusted to work independently.

Adaptability/Flexibility: Handles multiple tasks and priorities. Demonstrates cooperation in responding effectively to new or changing situations and assignments.

Part I: Changes, Goals, Notes

Changes to your job responsibilities since last review

Goals from previous year

Goals for Professional Development

Anticipated Special Projects

Make notes of any questions or concerns.

Employee:

Supervisor:

Part 2: Performance during review period, including progress on key goals

Supervisor and employee list three to five major responsibilities/tasks relevant to the position. Summarize how you/your employee performed in terms of quantity, quality, and timeliness of work. If you identified specific goals, please incorporate progress into the summary. Consider and note factors beyond your/the employee's control and indicate areas needing growth, including core performance factors.

Responsibility 1 (%)

Employee Comments:

Supervisor Comments:

Rating:

Responsibility 2 (%)

Employee Comments:

Supervisor Comments:

Rating:

Responsibility 3 (%)

Employee Comments:

Supervisor Comments:

Rating:

Insert additional responsibilities with comments as needed.

Overall Rating:

(Weighted average - Multiply percent X rating and total all)

Part 3: Determine goals for the coming year

List key goals to be completed in the next performance review period.

Key goals for major responsibilities:

Goals for professional development/skill building:

Anticipated special projects:

Part 4: Signatures

Final Steps: After the employee and the supervisor have completed and discussed the previous sections, sign below in the spaces provided. If either of you has an additional comments, enter them in the text box above your signature line. (Note: The employee's signature doesn't indicate agreement with this performance review, only that he/she has had the opportunity to review it.)

The supervisor should then obtain the unit director's signature (if appropriate) and follow the unit's procedures for forwarding the completed review to the Dean's Office. Give one copy of the signed review to the employee and keep on one file in the unit.

Employee

Comments:

Employee's Signature:

Date:

Supervisor

Comments:

Supervisor's Signature:

Date:

Unit Director

Comments:

Unit Director's Signature:

Date:

OIP Sub-Appendix A5: Advising

1. CCAPS Satisfaction Survey

This survey is conducted every two years to measure and track service satisfaction among students/participants who have registered, enrolled, or attended CCAPS Degree/certificate programs, Continuing Professional Education, nondegree-seeking students and noncredit personal enrichment courses. The most recent survey took place in Fall 2017. It was sent to all students admitted to a CCAPS degree or certificate program.

Detailed Results

Results from the questions which relate to CCAPS academic advising are presented below. A total of 83 students responded to these questions. Overall 82% of students reported contacts with CCAPS academic advising to be very or extremely helpful, and 84% reported being very or extremely satisfied with the respectfulness of CCAPS academic advisors.

Overall, how helpful were your contacts with CCAPS academic advising in the past six months?

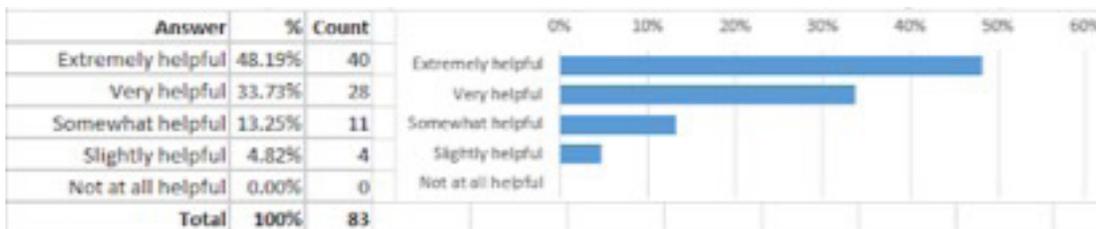


Figure A5.1: Advising Helpfulness

Based on all your experiences with CCAPS academic advising in the past six months, how satisfied were you with the respectfulness/courteousness of the advisors?

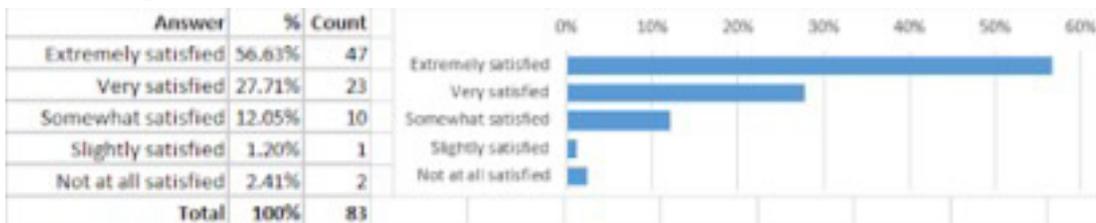


Figure A5.2: Advising Respectfulness

2. Student Experience in the Research University Survey

As noted above, the SERU survey is a comprehensive national survey administered every year to all undergraduates at the University of Minnesota-Twin Cities (UMNTC). Results of the most recent SERU survey in spring 2015 are shown below. Students rank responses on a score of 1-6, with a “1” counting as “Never” and a “6” counting as “Often.”

As indicated by Figure A5.3, the majority (69.2%) of our students are satisfied, or very satisfied with our academic advising.

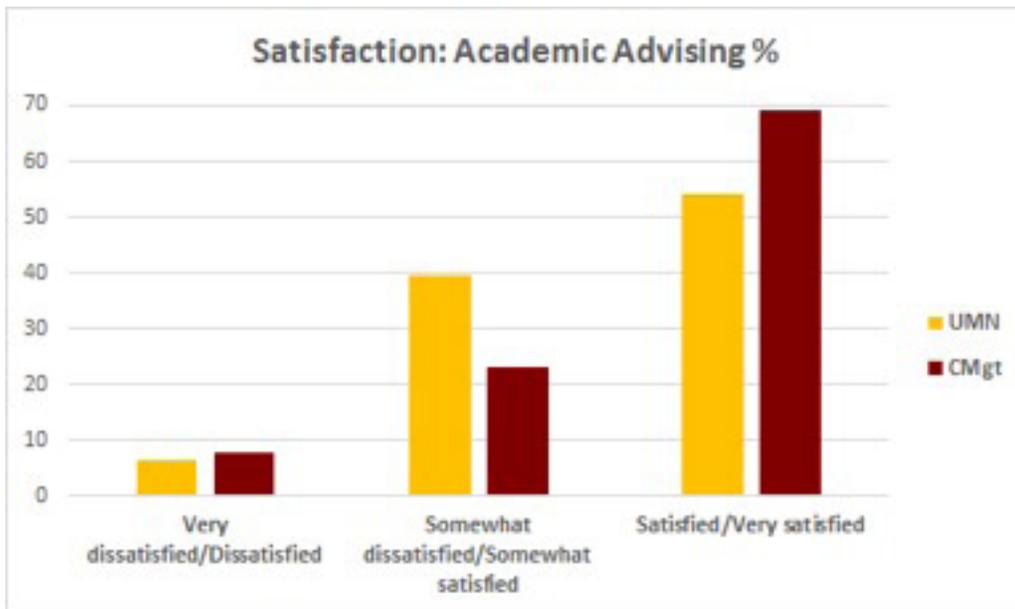


Figure A5.3: Satisfaction with Academic Advising (Departmental Staff)

The mean rating for CMGT Departmental Advising was 4.46 on the SERU six-point scale, compared to a University-wide rating of 4.43.

APPENDIX B

University of Minnesota Construction Management Program

Academic Quality Plan Assessment – 2017–18

Mission Statement

Preparing future construction leaders to sustainably manage the built environment.

Program Goals

The goals of our construction management program are as follows:

1. Graduate well-qualified major/minor/certificate students
2. Partner with the University of Minnesota College of Design (CDES), College of Science and Engineering (CSE), Sustainability Studies Management (SSM), and the Housing Studies program to serve the construction industry
3. Collaborate with other regional construction management programs to serve industry
4. Develop industry relationships to support student contact with industry mentors, internships, and employment
5. Contribute to the growth and improvement of the construction industry

Annual Plan

Our Construction Management Annual Plan (Appendix C) lists objectives for meeting each of the goals listed above.

Student Learning Outcomes and Metrics

Student Learning Outcomes are assessed continuously as part of our Construction Management Quality Improvement Plan (QIP) (Appendix A). We have developed six Program Learning Outcomes (PLO) informed by 35 Program Level Competencies (PLCs) that support the first goal of graduating well-qualified major, minor, and certificate students. As a major step in fully implementing the outcomes-based standards required by our accreditation organizations, ACCE and FMAC, course outcomes and competencies have been mapped across the curriculum, including the method of assessment. This is facilitated by integration of the Moodle (now Canvas) course management system into the University assessment monitoring tool, CampusLabs. Moodle stores assessment data collected at course level. CampusLabs summarises the results to allow program-level reporting across multiple years.

Table B1. Student Learning Outcomes and Measurement Results

Student Learning Outcome	Metric/Measure of success	How Achieved	Result 2017–18
1. Recognize, understand and effectively interact with stakeholder interests			
1.1	Students can demonstrate written, oral, aural, and graphic communication skill through repetitive assessment and evaluation of industry appropriate genre.	At least one assessment in 8 core courses will measure this competency,with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.	27 assessment points 85% ave.
1.2.	Students can lead, manage and participate in teams including those of diverse composition.	27 assessment points	
1.3	Students can identify the roles of individuals, companies and agencies involved in the project process.	At least one assessment in 4 core courses will measure this competency,with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.	
1.4	Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management.	At least two assessments in CMGT 4861- Capstone will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the course.	
1.5	Students can recognize the contribution of the design disciplines’ processes.	At least one assessment in 3 core courses will measure this competency,with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.	16 assessment points in 9 courses; 83% ave.
2. Demonstrate ethical behavior and decision-making			
2.1	The student can analyze professional decisions based upon ethical principles.	At least one assessment in 4 core courses will measure this competency,with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.	6 assessment points in 4 courses, 89% ave.
2.2	NOT USED (Reserved for future)		
2.3	The student can identify the skills needed to strategically lead process, organization, stakeholders and technologies in an ethically responsible way.	At least four discreet assessments in CMGT 486, Capstone, will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the course.	11 assessment points in 7 courses, 4 in Capstone; 84% ave.

3. Safely manage and control the project process				
3.1	NOT USED (reserved for future)			
3.2	Students can identify construction project control processes.	At least one assessment in 4 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		9 assessment points in 6 courses; 91% ave.
3.3	Students can compare construction quality assurance and control.	At least one assessment in 2 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		4 assessment points in two courses; 83% ave.
3.4	Apply appropriate state-of-the-art electronic based technology to manage the project process.	At least one assessment in 3 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		11 assessment points in 5 courses; 100% (verify data)
3.5	Students will implement project safety strategies and jobsite procedures.	At least one assessment in 3 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		
3.6	Students can create a construction project safety plan.	At least one assessment in CMGT 4031 - Safety and Loss Control, CO6 Injury Report, will measure this competency, with at least 80% of the students receiving a “proficient” rating.		No data available yet. Covered in CMGT 4031 only
3.7	Students can assemble construction estimates using various techniques assessing quantities, productivity and costs.	At least one assessment CMGT 4022 - Estimating will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the course.		3 assessment points in two classes
3.8	Apply scheduling techniques to project planning activities.	At least one assessment in CMGT 3001- Intro, and at least two assessments in CMGT 4021 - Planning and Scheduling will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		

3.9	Calculate necessary resource requirements throughout a project.	At least one assessment in CMGT 4021 - Planning and Scheduling will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		
4. Understand the built environment				
4.1	Students can analyze construction documents for planning and management of construction processes.	At least one assessment in 4 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		13 assessment points in 7 courses; 92% ave.
4.2	Students can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long-term facility plan for the organization.	At least one assessment in 4 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		11 assessment points in 7 courses; 80% ave.
4.3	Analyze methods, materials, and equipment used to construct projects.	At least one assessment in 3 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		10 assessment points in 5 courses; 52% (reevaluating data gathering)
4.4	Understand the basic principles of structural behavior.	At least six assessments in CMGT 4544 and 4545, the Structures sequence, will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the courses.		8 assessment points in 3 courses, including 4544 and 4545 (7). 76% ave.
4.5	Describe the basic principles of mechanical, electrical and plumbing systems.	At least four assessments in CMGT 4542 - Building Energy Systems will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the courses.		1 assessment point in 3001; rest in 4542, 85% ave.
4.6	As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them.	All assessments in this course coming from CMGT 4542, Building Energy Systems.		Data not compiled yet.

4.7	Apply basic surveying techniques for construction layout and control.	At least 90% of the students enrolled in CEGE 3202 - Surveying pass this course with a grade of “C” or better.	CEGE 3202 meets this competency AY2017–18: 18 of 19 students passed.
4.8	Demonstrate awareness of environmental stewardship and sustainable principles applied to the project and the organization.	At least one assessment in 3 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.	7 assessment points in 6 courses; 100% (verify data)
5. Manage the business processes			
5.1	Students can demonstrate an understanding of business and management fundamentals as they relate to construction and facility activities.	All assessments in this course coming from CMGT 4542 - Building Energy Systems.	Data not compiled yet.
5.2	Students can explain the history, international practices, corporate organization and roles of the Facility Management profession.	Assigned readings in course textbook within CMGT 3024W - Facility Programming and Design will cover this competency.	4 assessment points in 3 courses (ABUS 3024W; CMGT 4213, 4000); not measured
5.3	Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition.	At least one assessment in 2 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.	3 assessment points in 2 core courses, ABUS 4211 and CMGT 4861 Capstone; 87% ave.
5.4	Recognize the legal implications of contract, common and regulatory law to manage a project.	At least one assessment in 4 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.	16 assessment points in 6 courses; 91% ave.
5.5	Evaluate disputes based on case facts and contract content.	At least one assessment in 4 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.	11 assessment points in 5 courses; 93% ave.

5.6	Apply analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of construction and facility financial management.	At least one assessment in either of CMGT 4201 - Const. Accounting, or CMGT 4211 - FM Accounting, plus one assessment on Pay Applications in CMGT 4011, will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		9 assessment points in 7 courses; 76% ave.
5.7	Demonstrate applications of corporate real estate finance, management and transactional execution.	At least one assessment in 2 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		3 assessment points in 3 courses; 97% (verify data)
5.8	Demonstrates the ability to understand and to apply computer applications for facility management problem solving.			2 touchpoints in 2 courses; not assessed.
6. Manage building systems, facility operations, occupant services and maintenance operations				
6.1	The student can demonstrate a method to plan, measure and evaluate the facility’s operational performance.	At least one assessment in 2 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the curriculum.		3 assessment points in 2 courses; 100% ave. (verify data)
6.2	The student can interpret, apply, and recommend quality improvement programs.	At least one assessment in 1 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the course.		2 assessment points in 2 courses (CMGT 4213, 4215); data pending
6.3	The student aligns facility management technology with organizational information technology.	At least one assessment in 1 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the course.		1 assessment point in one core course (CMGT 4215); data pending
6.4	Comprehend and prepare emergency preparedness and business continuity strategies.	At least one assessment in 1 core courses will measure this competency, with at least 80% of the students receiving a “proficient” rating per the assessment rubric measured across the course. Capstone case study.		2 assessment points in two core courses (CMGT 4213, 4215); data pending

Table B2. Program Goal Metrics from 2014

Student Learning Outcome	2014 Metrics	Results	2018 Goal
1. Graduate well-qualified students			
	Students take the CMIT exam as part of the CMGT 4861 Construction Management Capstone course.	One student took the test and passed, as evidenced by CMIT certificates.	Increase number of students who take the CMIT test. Demonstrate a 70% passing rate.
	Program internship places students in jobs where they receive additional education and work experience. Employers will judge if students are “well prepared” by offering them permanent positions within their companies.	<p>Permanent job offers to interns is generally high. Information is reported via the internship evaluation survey.</p> <p>The ratio of job offers to survey respondents is: 2017: 9/10 2016: 11/14 2015: 14/15</p> <p>2017 Response rate: 18%</p>	<p>Continue to increase the number of internship opportunities for students.</p> <p>Increase percentage of returned internship surveys to 70%.</p> <p>Begin to analyze responses, and track for years forward.</p>
	Employers provide voluntary feedback regarding the program after every internship semester via the University of MN GoldPASS system.	See attached employer survey results obtained from GoldPASS (since Fall 2012) http://www.careerhelp.umn.edu/salarystat	Continue to monitor. Increase efforts to get 70% employer response.
	Students are hired into construction management jobs.	<p>Career and Internship survey 2017: 90% of CMGT graduates working in paid employment. 100% in a job somewhat or closely related to the major. 2016: 94% of CMGT graduates working in paid employment. 100% in a job closely related to the major. 2015: 86% of CMGT graduates working in paid employment, 94% in jobs somewhat or closely related to the major.</p>	Continue to track and show high rate of students working in construction field. Begin monitoring data, and demonstrate positive trends moving forward.

	Student written work meets industry standards for quality, clarity, format, and completeness.	Independent industry raters evaluate student work, giving scores for a variety of criteria. The work is rated on a scale of 0–2. Both objective and subjective assessments are obtained and recorded for program analysis. Last evaluated 2011, 2014.	Rating of upper-division writing metrics show improvement each year.
2. Partner with other University of MN colleges to serve industry			
	Students from other colleges enroll in our CMGT courses.	Registrations in CMGT/CEGE classes offered by the program by students in other colleges: By Academic Year (Fall, Spr, Sum) 2017: 220 (24%) 2016: 280 (27%) 2015: 298 (32%)	Increase number of students from other colleges enrolled in courses.
	Students complete the CMGT minor.	CMGT minor completion data is given below: By Academic Year (Fall, Spr, Sum) 2017: 14 2016: 4 2015: 4	Participate in the University-wide Minors Fair, Fall, every year
	Students complete the CMGT certificate.	CMGT certificate completion data is given below: By Academic Year (Fall, Spr, Sum) 2017: 7 2016: 10 2015: 11	Last metric: Target the number of certificate applications to 8 in 2016.
	Our college cosponsors events and outreach activities with other colleges.	The CMGT program collaborates with UMN Colleges of Science and Engineering, and College of Design to offer an intercollegiate career fair and an annual Quiz Bowl, each October since 2012. We assist with and participate in the Spring Pentathlon event, an intercollegiate Construct*ium event, annually in April.	Hold two intercollege events per year: Quiz Bowl/Career Fair in October; Pentathlon event in April

	<p>Advisory board members include representatives from other colleges.</p>	<p>The CMGT Advisory Board includes representatives from both the College of Science and Engineering and the College of Design.</p> <p>https://ccaps.umn.edu/construction-management-bachelors-degree/faculty-staff-advisory-board#advisory</p>	<p>Continue as is.</p>
	<p>CMGT faculty serve on advisory boards for other college departments.</p>	<p>CMGT faculty (Ann Johnson) serves on the Civil Engineering advisory board.</p>	<p>Continue as is.</p>
<p>3. Collaborate with regional CMGT programs to serve industry</p>			
	<p>Sponsor joint events with regional CMGT programs through Construct*ium.</p>	<p>CMGT attends the monthly meeting, held for the last two years, that includes representatives from all regional CMGT programs.</p> <p>CMGT staff and students have participated in three MCA golf scholarship fundraisers with representatives from other regional CMGT programs.</p> <p>Annual Quiz Bowl held each October including teams from four to six regional colleges.</p> <p>Annual Intercollegiate Career Fair held each October, with invited students from nine regional schools.</p> <p>Annual Pentathlon Soft Skills Competition, with invited students from nine regional schools</p> <p>In 2014 the CMGT program, in collaboration with midwest construction management programs, organized the Upper Midwest Collegiate Construction League (Construct*ium).</p>	<p>Continue participation in Construct*ium activities.</p>
	<p>UMN staff participate on regional CMGT boards.</p>	<p>Peter Hilger serves on the Advisory Board for Dakota Technical Community College, a two-year feeder program.</p>	<p>Continue membership on Dakota Tech Advisory Board.</p>

4. Develop industry relationships to support students			
	CMGT program maintains a database of 700+ employer contacts.	Database continued to be increased, updated and revised.	Maintain database, augment with new contacts annually.
	CMGT program maintains an active advisory board made up of representatives from all industry segments and potential employers.	Our Advisory Board has 41 active members. Membership and participation is monitored to ensure that those listed are regularly participating in board and committee meetings.	Increase membership to 45 active members.
	CMGT program requires an internship by all students. CMGT program assists students in obtaining internship positions by facilitating “virtual job fair.”	CMGT program emails all internship candidate resumes to our database of potential employers every Spring (Virtual Career Fair).	Continue, but increase number of potential employers by 5% per year

5. Contribute to growth and improvement of the construction industry			
	CMGT program sponsors outreach and informational activities aimed at industry professionals.	<p>CMGT program sponsored white paper discussion on Best Value in 2009, attended by over 50 industry professionals.</p> <p>http://cce.umn.edu/documents/DCP/BAS-in-CMGT-BVP-Paper.pdf</p> <p>Faculty Jain and Hilger have presented weeklong technical seminars on project management themes each of 2017 and 2018 for the National Oceanic and Atmospheric Administration (NOAA), Kansas City Office.</p> <p>Hilger is an editorial contributor for Construction Business Owner magazine.</p> <p>Hilger has published a white paper Communication, the Bedrock of Construction, for Construction Business Owner magazine.</p>	Identify one white paper opportunity.

	<p>CMGT program offers stormwater training program to construction professionals in need of certification.</p>	<p>CMGT 4081: Managing Erosion and Sediment Control on Construction Sites.</p> <p>Registration (with college): Spring 2018: 21 (20 CCAPS, 1 College of Design) Spring 2017: 7 (6 CCAPS, 1 Carlson School of Management) Spring 2016: 10 (6 CCAPS, 2 College of Science and Engineering, 2 College of Liberal Arts)</p>	<p>Increase number of enrolled students in CMGT 4081.</p>
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APPENDIX C

University of Minnesota Construction Management Program

Annual Plan* 2017-18

Mission Statement

Preparing future construction leaders to sustainably manage the built environment.

Program Goals

The goals of our construction management program are as follows:

1. Graduate well-qualified major/minor/certificate students
2. Partner with the University of Minnesota College of Design (CDES), College of Science and Engineering (CSE), Sustainability Studies Management (SSM) (formerly Bio-Based Engineering (BBE)), and the Housing Studies program to serve the construction industry
3. Collaborate with other regional construction management programs to serve industry
4. Develop industry relationships to support student contact with industry mentors, internships, and employment
5. Contribute to the growth and improvement of the construction industry

*updated yearly

Annual Plan (as of September 1, 2016)

Goal	Objectives	Frequency	Status/Results
1. Graduate well-qualified major/minor/certificate students.			
1a. Obtain/Maintain Program Accreditation			
	ACCE: Submit annual progress report	Annually, due December 1, 2017	Submitted and accepted by ACCE. Extension of accreditation received through 2019 while transitioning to ABET.
	Document data collection	Ongoing issue	Developing course data collection strategies around measurable student work and program/course outcomes. Awaiting University-wide software improvements to enable data collection. IN PROGRESS WITH CAMPUS LABS INITIATIVE
	Attend ACCE midyear meetings	Not attended in 2017/18 school year	Last attended February 2015. Shifting to ABET model January 2019. Not planning to attend ACCE. Hilger trained at ABET as a Site Team Visitor, 2018.
	Consider ABET Accreditation	One time	Decided to adopt ABET as next accreditation platform since it will also include Facility Management. Submit initial self study January 2019
	Update annual strategic plan	Annually at start of Fall semester	Peter Hilger is sole Faculty Director with a deep staff bench to support. No management change anticipated, and no action required by ACCE.
	Update and implement outcome assessment plan	Will take several years to fully implement across the curriculum.	Outcomes and competencies now fully adopted at the program level, integrated annually on a course by course basis during the review cycle. Developing Moodle collection strategies around measurable student work and program/course outcomes in every course. Leading University wide CampusLabs data collection for outcomes assessments. NO CHANGE
	Attend IFMA annual meetings	Annually in fall	Peter Hilger attends World Workplace, every fall (could not attend Fall 2018, but serves as FMAC co-chair)
	Maintain IFMA accreditation: file annual report and renewal	Annually in fall	Full accreditation achieved, prepare self-study and site visit for re-accreditation November, 2018
	Active participation on Facility Management Accreditation Commission (FMAC)	Annually	Peter Hilger appointed vice-chairman 2018, completed outcome standards, 2016/2017. Assisting to move accreditation to ABET. Has completed ABET Site Visitor Training, June 2018, and first Site Visitor to university in Virginia

1b. Review curriculum to reflect changes in industry and student needs			
	Update list of courses to be reviewed each year	Annually in June and January	Schedules for course reviews is done prior to every subsequent semester in order for the OES team to manage their resources.
	Conduct annual course reviews	As scheduled	Michael Matejcek coordinates for all courses.
	Review list of courses to develop as hybrid/in person class, and/or transfer to fully online (University limits Special Topics to two semester offerings)	This is an ongoing process as a function of demand and scheduling trends	Converting last of “trifecta” courses - Estimating - into an online section offered Fall semester, starting Fall 2019
	Assess delivery of ABUS 4013W - Legal, Ethical and Risk Issues (Business Law)	Now on a regular course review cycle in the ABUS program	Though no technical requirement to assess since it is an ABUS course, we continue to monitor the course quality for the benefit of our students.
	Convert several general Facility Management courses to the Applied Business platform (ABUS) in order to spur enrollment increases	Fall semester 2017	Converted CMGT 4211 Facility Cost Accounting to ABUS 4211 Facility Asset Management, Finance and Budgeting. (Fall, 2018)
	Develop specialized Math course to replace Calculus Requirement	2017	Class successfully launched Fall 2017, very successful response from students, expanded CDES registration for Fall 2018.
	Develop supplemental online resources in risk, delivery methods, ethics, vocabulary, and building techniques	Ongoing	No resources either staff or financial have been applied to this, no work anticipated for 2017-18, but is kept on the planning radar. (Low priority) NO CHANGE
	Develop Writing Style Guide for students	Annually in summer for subsequent year	Launched Spring 2015. NO CHANGE, though the website is continually updated with new information.
	Develop Teaching with Writing Guide for faculty	Summer 2018	Have re-applied for the Third Writing Plan based upon altered grant request to retain Teaching Assistant to assist with auditing specific courses for improvements in writing and teaching with the writing assignments, under the direction of our College staff Writing Consultant. To be considered November 2018

1c. Assess transfer of students to University of MN Liberal Education standards			
	The U of M's Liberal Education (LE) requirements were incorporated into the existing curriculum. We will assess student issues and concerns (if any) as we transition to this new criteria	Permanent	Liberal Education transition is complete and incorporated into all grad plans. Is now permanently in place. No need for further assessment (University requirement).
	The U of M's Liberal Education (LE) requirements were incorporated into the existing curriculum. We will assess student issues and concerns (if any) as we transition to this new criteria	Permanent	Liberal Education transition is complete and incorporated into all grad plans. Is now permanently in place. No need for further assessment (University requirement).
1d. Student assessment and advising			
	Develop system for collecting student ePortfolios	Evaluate Annually	No work to integrate this in our program has been done yet. Will implement with Campus Labs initiative, likely in 2019
	Distribute and monitor results of student advising survey	Annually	<ol style="list-style-type: none"> 1. Advising survey sent at end of each semester to graduating students. 2. College does a Satisfaction survey biennially including advising questions (NO CHANGE)
	Record number of meetings with students and track enrollment, graduation, attrition	Annually	Every meeting with student is recorded via notes in the A Plus system. Enrollment, grad rates and attrition tracked via University's PeopleSoft system.(NO CHANGE)
	Monitor students to track percent that complete required upper division course of study within two years.	Annually	<p>We have developed a standard procedure for monitoring graduation within 2 and 4 years. Since CCAPS admits and graduates students in any semester, the graduation rates are calculated using the number of terms to complete. Will be superceded by University initiative to track graduation rates launching Spring 2019.</p> <p>For CMGT Major students graduating during 2017-18, 48% (14/29) completed within two years (6 semesters) of entering the program.</p>

1e. Student Development			
	Support CFMSA financially and administratively	Attend meetings, fund expenses	Created staff liaison responsibility with Academic Advisor (Megan Seltz) to improve continuity of organization from year to year. Seltz/Hilger jointly manage.
	Plan and facilitate annual “Meet and Greet” event for students, faculty, advisory board, and alumni	Annually in September each year	Due to low attendance both program and college-wide, this event has been discontinued in 2017 after three years.
	Identify and support participation of CFMSA in one student competition each year	Annually	CFMSA is the host organization and participates in the Intercollegiate Quiz Bowl Event, held in conjunction with the Career Fair in October.
	Participate as a college and program in Homecoming	Annually in fall	First participated Fall, 2016, and again 2017, 2018.
	Host a Sigma Lambda Chi Student Chapter	Fall 2017	Chapter initiated, Fall 2017. Hosted SLC event for other schools at ASC conference, April 2018. Awarded Silver status April, 2018
	Host a Toastmasters Club with students and alumni participation	Ongoing	Hardhatter’s Toastmasters Club#05573652 initiated Spring 2017.
1f. Faculty Development			
	Provide faculty development workshops at two faculty meetings each year by Online and Educational Services (OES)	Ongoing Twice annually	Portion of each faculty meeting devoted to technical or learning support and development. (NO CHANGE)
	Develop Moodle/Canvas resources on Homebase and provide additional resources for faculty (such as Tuesday Teaching Tips)	Regularly updated	Regularly supported by ODL and updated. (NO CHANGE)
	Make seminars and resources available to our faculty through the Center for Teaching and Learning (CTL) or Office of Information Technology (OIT)	Regular notice of upcoming events	Ongoing (NO CHANGE)
	Avail individual consulting on course design and management to all faculty through ODL	Faculty are regularly notified by email and at each faculty meeting	Usually provided during the Moodle course updates prior to the start of a new semester Now happening with the CANVAS conversion for every course over an 18 month conversion period.

1g. Become active members of ASC and IFMA			
	Maintain ASC membership and facilitate student participation in competitions	Annually	Hosted 2018 ASC International Conference at U of MN as part of Construct*ium Offered participation to students in Region 4 competition as part of Capstone requirement - no takers.
	Participate in the IFMA annual chapter symposium and several local chapter meetings	Annually in Spring	Engaged with IFMA Education Committee locally. Appointed Justine Pliska, faculty, to be FM liaison to local IFMA chapter and industry at large.
2. Partner with the University College of Design, College of Science and Engineering, and Housing Studies program to serve the construction industry			
	Communicate information about career fair to CSE and CDES students and advisors; provide information about courses to advisors in CSE and CDES regarding our courses, and present at CSE and CDES advisor meetings each fall	Annually in fall semester	Held FM information presentation in Interior Design classes (Justine Pliska) Spring 2017. Collaborated with BBE, now SSM, for 2016/17 Race-to-Zero competition (second place finish). Coordinated offering of new Math class with CDES, jointly sponsored. Regularly communicate new course opportunities with advisor network. Regularly participate in student juries (CDES UGrad Studio - Hilger) and Grad student committees (Housing Studies - Hilger). Invited all CSE and CDES students to our Career Fair. Invited all CDES and CSE to Study Abroad program. NO BROWN BAG SESSIONS held due to no RSVPs (Discontinued); instead, we participate annually in the Minors" fair on campus.
	Monitor enrollments by students from CDES and CSE	Annually in May and December	Data is collected regarding school of origin in PeopleSoft.
	Assess first delivery of BIM course	First offered in fall 2014, repeated every two years	Registrations: Fall 2014: 17 Fall 2016: Offering postponed Fall 2017: 9
3. Collaborate with other regional CMGT programs to serve industry			
	Lead Construct*ium initiative	Ongoing	Awarded ASC Conference for 2018 and co-joined with Soft Skills Competition - very successful event..
	Participate in scheduled Construct*ium conference calls for regional CMGT programs	Always, when scheduled by MCA	Ongoing (NO CHANGE)

	Participate in Spring Soft Skills Event—the Pentathlon	Annually in April		Third time as a competition event, Spring 2018. U of MN wins third place in Pursuit competition and places in several other competitions.
	Support and organize annual Intercollegiate Quiz Bowl in October	Annually first Friday in October		Held October each year, sponsored by Construct*ium, organized by U of MN.
	Support and organize Intercollegiate Built Environment Career Fair in October	Annually first Friday in October		Engaged to finally partner up with CDEs on this event for Fall 2018, very successful event - 66 employers registered, over 200 students attended.
	Serve on NHCC Advisory Board and Public Works program committee	2-4 times/year		NHCC Board participation dropped, added Inver Hills Board (see below). Inver Hills program being dropped, merged to Dakota Tech. Now Hilger serves on Dakota Tech Advisory Board Hilger serves as curriculum advisor to American Public Works Assoc. educational training shift to U of MN 2017-18
	Serve on Dakota Tech CC Advisory Board	2-4 times/year		Program is being transferred to Dakota Tech. Serve at will when called.
	Facilitate student tour	Variable frequency		None organized 2018. This role has been transferred to our U of MN Alumni group in conjunction with the CFMSA

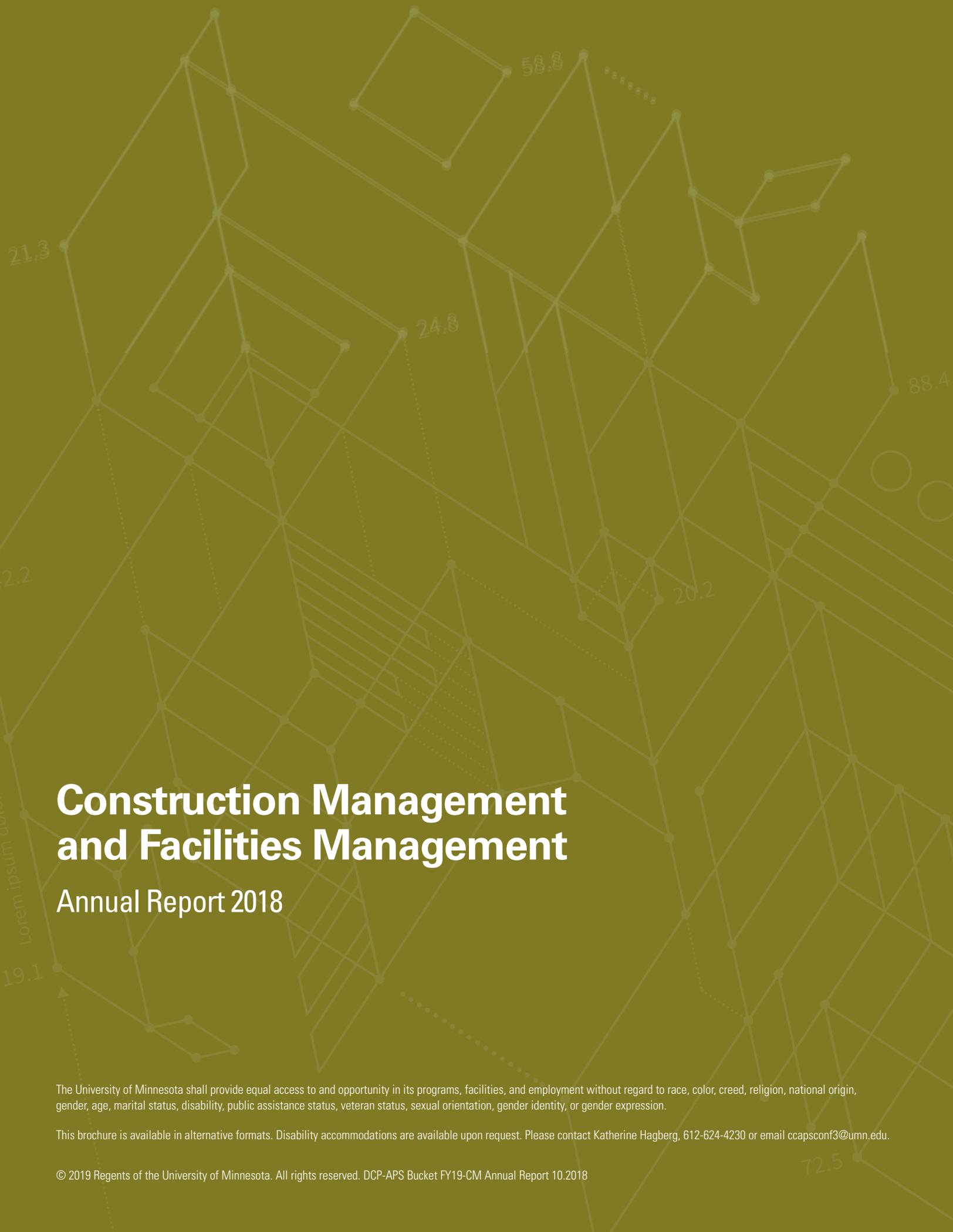
4. Develop industry relationships to support student contact with industry mentors, internships, and employment

4a. Develop internship opportunities for CMGT students

	Modify student preparation for internship program through webinar	Annually in Fall		Released and on website, also hosted preparation session for Career fair to CFMSA students.
	Conduct internship evaluations for both students and employers	Annually upon completion of Internship session in December, May, and August		Online survey through GoldPass. Limited response obtained.
	Plan and facilitate annual “Meet and Greet” event for students, faculty, advisory board, and alumni	Annually in Fall		Discontinued due to low participation
	Expand internship employer database	Regular employer contact		Contacts as of September 1, 2018: 706
	Distribute virtual career fair packet to prospective employers in employer database	Annually in February		February each year. Last issued February 2018
	Record and monitor the number of students and alumni using GoldPASS and Career and Internship Services	Annually, maintained by their office		During 2017-18 there were 95 Client visits to Career and Internship services from CMGT students.

4b. Expand development and endowment opportunities				
	Update program development plan	Review twice annually with Development Officer	Green	New College Engagement officer, Courtney Barette, hired January, 2018 with partial role for development. Active re-engagement of an updated development plan commenced, summer 2018
	Identify and meet with target funders as outlined in plan	At least annually	Yellow	Focused on raising funds for ASC - maintains contact with donors but not for academic purpose this year. Initiating regular contact program starting Fall 2018
4c. Increase Advisory Board activities and input to program				
	Meet with full Advisory Board 4 times/year (as recommended by ACCE)	Annually	Red	Still only meeting twice per year. Will hold this schedule and seek less formal engagement with Advisory Board during summer.
	Hold committee meetings	As needed	Green	None needed or held 2017-18.
	Advisory Board members to host internship presentations each semester	December, May and August	Green	Excellent response from AB members; rotate locations throughout year, now a regular event.
4d. Increase outreach and friend-raising activities				
	Review program-specific marketing/promotion plan	Annually	Green	Regular meetings with College Marketing lead; marketing and PR writer in Kelli Billstein increasing media exposure.
	Staff membership to actively participate in CM trade associations	Peter: CMAA, CHSA, AIA, ACE	Green	Peter: President of local CMAA chapter, 2014-16; President elect CHSA, Board member ACE.
	Maintain LinkedIn site	Regular updates	Green	Regular posting of news feeds and events by Lynn Cross, Kelli Billstein
	Maintain Facebook page	Regular updates	Green	Staff members Lynn Cross and Kelli Billstein updates CMGT facebook page Google+ Community and Twitter feeds regularly.
	Invite public to program events, such as internship presentations, Golden Pen competition, capstone presentations, quiz bowls	Per occurrence	Green	Internship presentations hosted by Advisory Board members. Quiz Bowl (October), Golden Pen and Capstone (Spring) judged by industry professionals.
	U of M Const and FM Alumni Club	Regular Occurrence	Green	Club now organized and with a separate Bank Account and Charter, and member list maintained by our staff advisor to the club, Megan Seltz.
	Alumni Database	Regular Occurrence	Green	Maintain a database of alumni using social media links and other sources. Coordinated by Megan Seltz.

5. Contribute to the growth and improvement of the construction industry			
	Show sustainable number of graduates from program	Ongoing	CMGT Major graduates in Academic Year 2017, including Facility Management track graduates. Fall 2017: 9 CMGT BASc (1 FM) Spring 2018: 21 CMGT BASc (0 FM) Summer 2018: 6 CMGT BASc (0 FM)
	Show sustainable number of enrollments in courses	Ongoing	Fall 2017: 430 Spring 2018: 467 Summer 2018: 38
	Monitor number of students completing minor and certificate each year to show sustainable numbers and growth.	Ongoing	Certificate and Minor graduates in AY 2017, including Facility Management track. Fall 2017: 1 Certs, 3 Minors Spr 2018: 5 Certs (1 FM), 11 Minors Sum 2018: 1 Certs, 0 Minors
	Monitor graduate survey to record placement and graduate satisfaction	Ongoing	Complete
	Sponsor one outreach event for industry in each academic year	Variable	Sponsored Construct*ium Spring Pentathlon Event and Tour. Hosted 2018 ASC Conference that included a record number of industry participants compared to other programs.
	Create courses that meet needs for industry licensing	Ongoing	OSHA 30 (CMGT 4031 - Construction Safety & Loss Control); Minnesota State Stormwater Site Management certificate (CMGT 4081 - Managing Erosion and Sediment Control on Construction Sites); CMIT Option (CMGT 4861 - Construction Management Capstone) FMP Option (CMGT 4861 - Construction Management Capstone)
	Create a new Environmental Health and Safety track within the program	Starting Fall, 2019	Developed a new track based upon industry needs and student feedback, to focus on EH&S issues in the built environment. New courses include: CMGT 4301 Introduction to Health & Safety CMGT 4302 Environmental Health Principles



Construction Management and Facilities Management

Annual Report 2018

The University of Minnesota shall provide equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression.

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