

DEPARTMENT OF TECHNOLOGY

B.S. DEGREE IN CONSTRUCTION MANAGEMENT

ACADEMIC QUALITY PLANNING PROCESS & OUTCOME ASSESSMENT



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Academic Quality Planning Process & Outcome Assessment

B.S. Degree: Construction Management

Illinois State University

The academic Quality Improvement Plan (QIP) for the Construction Management (CM) program is comprised of three integrated elements: (a) **Strategic Plan**, (b) **Assessment Plan**, and (c) **Assessment Implementation Plan**. The plan is designed to comply with Illinois State University (ISU) requirements and the American Council for Construction Education *Document 103 Standards and Criteria for Accreditation of Postsecondary Construction Education Degree Program*, specifically Section 9 Academic Quality Planning Process and Outcome Assessment (See Appendix I). The QIP is posted on the ISU University Assessment Services webpage at <http://assessment.illinoisstate.edu/program/cast/>. The annual performance results are published in the Department of Technology Annual Assessment Report available on the departmental website at <http://tec.illinoisstate.edu/about/>.

CM Program Mission

Our mission is to be a “first choice” provider and center for construction education.

CM Program Strategic Plan Overview

The CM Strategic Plan is aligned with *Educate Connect Elevate 2018 - 2023*, which is the ISU strategic plan, and the goals of the Department of Technology and College of Applied Science and Technology. The four Program Goals that comprise the Strategic Plan are the foundation of our annual Plan of Work (PoW), a management document designed to assure that the resources are in place and effectively deployed for the successful operation of the CM Program. The Program Goals provide direction for operational actions to maintain adequate resources and a contemporary curriculum aligned with industry needs. The goals that comprise the Strategic Plan are reviewed annually by faculty as part of the PoW process and shared with the Industry Advisory Board for input and validation.

At the beginning of each academic year, activities for attaining the Program Goals are identified and assigned to faculty. The implementation status of the PoW is subsequently reviewed at most CM faculty meetings. As such, the Strategic Plan as operationalized through the PoW, is constantly reviewed to assess the internal and external factors that influence the operation of the Program. Further, the Strategic Plan, PoW, and Annual PoW Report are shared with the IAB and other constituents to maintain a broad understanding of the directions and needs of the construction industry.

An assessment of the Strategic Plan (*Goals Report and Plan of Work*) is developed by the CM Program Coordinator in conjunction with the faculty and submitted to the Department of Technology Chair annually at the beginning of the academic year. The submission includes the *Plan of Work* for the coming year as well as a summary *Goals Report* on work completed during the previous academic year. The follow-up assessment of program goal data flows first to the Chairperson or Assistant Chairperson, who is responsible for documenting and reporting the results in the Department of Technology Annual Assessment Report. As appropriate, results may be further disseminated to the CM faculty and/or Advisory Committees for further action aimed at program improvement. An example of the annual assessment of the CM Strategic Plan and *Goals Report* is presented in Appendix IX.

CM Program Strategic Plan and Program Goals

1. *Student Learning Outcomes:* Continually improve the curriculum and provide students with high quality educational experiences that will develop technical and managerial knowledge and skills necessary for successful leadership roles in the building construction industry.

The following Student Learning Outcomes (SLOs) support this Program Goal and will be elaborated upon subsequently in the assessment implementation section. Course learning objectives support each SLOs and are indicated accordingly in the syllabus. Further, syllabi are presented in a consistent format as per the University Curriculum Committee template as adapted by CM Faculty (See Appendix II for an example syllabus format).

Upon completion of the CM Program, students will be able to:

- 1) Create written communications appropriate to the construction discipline.
- 2) Create oral presentations appropriate to the construction discipline.
- 3) Create a construction project safety plan.
- 4) Create construction project cost estimates.
- 5) Create construction project schedules.
- 6) Analyze professional decisions based on ethical principles.
- 7) Analyze methods, materials, and equipment used to construct projects.
- 8) Apply electronic-based technology to manage the construction process.
- 9) Apply basic surveying techniques for construction layout and control.
- 10) Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.
- 11) Understand construction accounting and cost control.
- 12) Understand construction quality assurance and control.
- 13) Understand construction project control processes.
- 14) Understand the legal implications of contract, common, and regulatory law to manage a construction project.
- 15) Understand the basic principles of sustainable construction.
- 16) Understand the basic principles of structural behavior.
- 17) Understand the basic principles of mechanical, electrical and special systems.

Performance Indicators: One or more of the five performance indicators identified below are utilized to measure and evaluate program success in meeting the SLOs listed under goal #1.

- Average ISU CM student scores in direct assessment in the CM courses will be greater than or equal to 70% for the appropriate category.
- On the annual alumni follow-up study, CM graduate responses will average greater than or equal to 3.5 on a 5-point scale thereby indicating that students were well prepared in that skill or knowledge area.
- On follow-up studies of employer, responses will average greater than or equal to 3.5 on a 5-point scale thereby indicating that graduates are well prepared in that skill or knowledge area.
- Maintain accreditation by the American Council for Construction Education.

2. *Recruitment and Retention:* Recruit and graduate a diverse, high-quality cohort of individuals into the program to support the construction industry in economic development in Illinois and throughout the United States.

Performance Indicators

- Entering transfer students will have a minimum GPA of 2.5.
- Maintain and expand as appropriate articulation guidelines with Illinois community colleges.
- Retention and graduation rates for CM students will be consistent with ISU averages.

Appendix III presents an *Academic Program Profile* for CM. The profile is a statistical summary of admission demographics, enrollment, student performance, and other pertinent data compiled by the University Assessment Service and distributed annually to each program.

3. *Professional Development:* Provide students with educational experiences necessary skills to successfully function in professional leadership roles in the construction industry and provide service to the construction industry through applied research, consulting/workshops, and participation in professional organization.

Performance Indicators

- Maintain active student chapters of professional organizations that provide opportunities for student leadership and model professional leadership. Benchmark: Sponsoring at least 10 speaker and/or field trip events each semester.
- Field a minimum of three student teams annually in the construction competitions sponsored by professional organizations (e.g., ASC, ACI, MCAA).
- At a minimum, each tenured or tenure-track faculty member will annually contribute one professional presentation and/or publication.
- Each faculty will maintain participation and leadership in at least one appropriate organization, board, or committee relevant to construction interests in the community, state, and/or nation.
- Facilitate student participate in industry oriented activities such as Habitat for Humanity and Day of the Dozer.

4. *Internal and External Funding Support* – Through a combination of internal and external resources, maintain the funding necessary to support CM Program activities.

Performance Indicators

- Departmental budgeting resource allocation requests (RAP) are equitable as compared with other TEC Programs and are utilized to upgrade CM facilities and equipment as appropriate.
- Continue to build CM endowment and restricted agency accounts managed by the ISU Foundation.
- Build all CM scholarship endowments to yield a minimum annual payout of at least \$2,000.
- Annually host alumni event at ISU. Planned annual events include the CM Golf Outing (April).

Assessment Plan and Student Learning Outcomes

The student learning outcomes (SLOs) have been consistent for many years and were developed to align with the ACCE core content requirements. The twenty SLOs are listed under Program Goal #1 of the Strategic Plan. The SLOs are supported by course level learning objectives. The following measures are used to assess the SLOs:

1. Direct Assessment

- 1) **Student's work in related CM courses** (such as student's work for a class term project, class/homework assignment, test and quiz) is evaluated as a direct measure of all of the twenty SLOs. The table in the next page shows which SLO is directly measured in which CM or CM related course. Data will be collected by Student Learning Outcome (SLO) assessment committee. All full-time CM faculty members will serve as member of SLO assessment committee. Following are the specific roles of SLO assessment committee members:
 - Review assessment plan
 - Collect direct assessment data
 - Analyze data
 - Make suggestion for improvement
 - Attend ACCE mid-year conferences to keep updated with accreditation requirements

2. Indirect Assessment

- 1) An **Employer Survey** seeks data on how well graduates performed in terms of intended learning outcomes. Employer feedback is solicited annually and aggregated. Appendix IV presents an example of the employer follow-up survey.
- 2) The **Senior Exit Survey** solicits both quantitative and qualitative feedback about the extent to which learning outcomes were achieved. An example of the Senior Exit Survey is presented in Appendix V.
- 3) The University Assessment Services conducts the annual survey of **Alumni** one-year and five-years from graduation. This survey solicits graduate perceptions as to his/her success at achieving each of the CM SLOs as well as data regarding other institutional concerns. A sample of the survey questions related to learning outcomes is included in Appendix VI.

The data from these four measures is compiled by the CM Coordinator into a dashboard matrix that summarizes student progress toward achievement of the SLOs. The results are assessed by comparing average performance against the identified benchmarks. The matrix may include comments regarding the analysis and a plan for improvement if necessary. The dashboard and associated action plans are reviewed by the faculty and the Industry Advisory Board (IAB) and published on the Department webpage (About Us\Annual Assessment Results). Appendix IX presents an example of the Annual Assessment Results Dashboard.

	Learning Outcome	Related Course	Direct Assessment	Indirect Assessment		
			Students Work Assessment	Employer Survey	Senior Exit Survey	ISU Alum Survey
			- Data collection every semester - Data analysis annually			- Data collection/analysis once in five years
			>= 70%	>= 75% "meets expectations" or above	>= 3.5 on 5 pt. scale	>= 3.5 on 5 pt. scale
1	Create written communications appropriate to the construction discipline.	TEC 217, 222, 224, 229, 292, 326, 394	TEC 394	X	X	X
2	Create oral presentations appropriate to the construction discipline.	TEC 222, 223, 292, 394	TEC 394	X	X	X
3	Create a construction project safety plan.	TEC 121, 224, 292, 394, HSC 272	HSC 272	X	X	X
4	Create construction project cost estimates .	TEC 123, 229, 394	TEC 229	X	X	X
5	Create construction project schedules .	TEC 325, 394	TEC 325	X	X	X
6	Analyze professional decisions based on ethical principles .	TEC 120, 123, 223, 226, 229, 325, 326, 327, 394	TEC 120, 123	X	X	X
7	Analyze methods, materials, and equipment used to construct projects.	TEC 120, 121, 223, 224, 292, 325, 327, 394	TEC 224, 292	X	X	X
8	Apply electronic-based technology to manage the construction process.	TEC 117, 217, 223, 229, 325, 326, 394	TEC 217	X	X	X
9	Apply basic surveying techniques for construction layout and control.	TEC 223	TEC 223	X	X	X
10	Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.	TEC 123, 226, 394	TEC 226, 229	X	X	X
11	Understand construction accounting and cost control .	TEC 326	TEC 326	X	X	X
12	Understand construction quality assurance and control.	TEC 292, 394	TEC 292	X	X	X
13	Understand construction project control processes .	TEC 224, 326, 325, 394	TEC 325	X	X	X
14	Understand the legal implications of contract , common, and regulatory law to manage a construction project.	TEC 120, 226, 394	TEC 226	X	X	X
15	Understand the basic principles of sustainable construction .	TEC 120, 121, 292, 329, 394	TEC 329	X	X	X
16	Understand the basic principles of structural behavior .	TEC 292, 327, 394	TEC 327	X	X	X
17	Understand the basic principles of mechanical, electrical and special systems.	TEC 222, 394	TEC 222	X	X	X

Assessment Implementation Plan

Assessment data on learning outcomes receives oversight in the following ways. Specific learning outcome assessment data initially go to the Program Coordinator who is responsible for (a) documenting and reporting the results, (b) evaluating if the results conform to performance indicators, and (c) deciding, in conjunction with program faculty and IAB as appropriate, whatever corrective action needs to be taken. Corrective actions are documented in the learning outcomes assessment dashboard and published in the department's Annual Assessment Results.

Implementation of the assessment plan for the CM program and the department is managed in a systematic manner. The Assistant Chair is responsible for the assessment implementation and utilizes the assistance of clerical staff to gather and report the data, which is saved on the faculty share. From here, program coordinators can access, evaluate, and report the data in the dashboard format. An **Annual Assessment Calendar** is used to coordinate assessment processes (See Appendix VIII). The Assistant Chairperson provides oversight at all steps of the process and is responsible for documenting and reporting the results in

the Department of Technology Annual Assessment Report. After each annual cycle, the assessment plan is reviewed and updated as needed.

Appendix I

American Council for Construction Education Document 103

Standards and Criteria for Accreditation of Postsecondary Construction Education Degree Programs

Standard 9: Academic Quality Planning Process and Outcome Assessment

INTENT

Students should be prepared—through educational programs, advising, and other academic and professional opportunities—to pursue a career in construction upon graduation. Students should have demonstrated knowledge and skills in creative problem solving; critical thinking; communications; and the effective management of personnel, materials, equipment, costs, and time to allow them to enter the construction profession. Outcomes assessment is a systematic process of gathering and interpreting information to discover if a program is meeting established objectives and then in using that information to enhance the program.

9.1 REQUIREMENTS

While ACCE recognizes the obligation of degree programs to use assessment terminology congruent with their institutions, it is necessary for ACCE Visiting Teams to have a consistent understanding of terminology used in the assessment process. With that purpose in mind, the ACCE will use the definitions in section 1.1.1 as the preferred terminology in assessment documentation. If degree programs cannot use this terminology because of institutional constraints, they shall provide a glossary of compatible terminology at the beginning of Section 9 in the self-study document.

9.1.1 Continuous Improvement

The educational unit shall have a Quality Improvement Plan (QIP) that shall serve as the basis for the continuous improvement of the degree program. The QIP shall have three major components: Strategic Plan for the educational unit, Assessment Plan for the degree program, Assessment Implementation Plan for the degree program

These documents shall be included in the Self-Study and made available for the Visiting Team's review and discussion.

9.1.2 Educational Unit Strategic Plan

- A. The educational unit responsible for the degree program shall have a comprehensive Strategic Plan that describes the systematic and sustained effort to enable the degree program to fulfill its mission.
- B. This Strategic Plan shall review the internal status of the degree program resources as well as the external factors that influence the operation of the degree program.
- C. The Strategic Plan shall be updated periodically and represent the collective input from all of the degree program constituencies.

9.1.3 Degree Program Assessment Plan

The degree program shall provide evidence of its effectiveness in preparing construction practitioners based on the results of surveys of the graduates, employers of the graduates, industry advisory board, exit interviews, comprehensive exams, capstone projects, or other systematically structured information.

The mission, goals, and objectives shall reflect both short-range and long-range considerations and shall be clear as to the educational and institutional results expected.

At a minimum, the degree program Assessment Plan shall include the following:

- A. Mission Statement of the degree program. The mission statement expresses the underlying purposes and values of the degree program.
- B. Degree Program Objectives. The Degree Program Objectives shall be clearly defined and stated in a manner that permits an assessment of achievement.
- C. Program Learning Outcomes. These Program Learning Outcomes shall meet or exceed the ACCE Student Learning Outcomes (section 3.2.2) and be regularly formulated, evaluated, and reviewed with the appropriate participation of faculty, students, industry advisory board, and other pertinent parties.
- D. Assessment tools. These tools shall measure degree program objectives and learning outcomes as stated in B and C above. The frequency for using the tools, and procedures for data collection also shall be stated.
- E. Performance criteria. These criteria shall be used to measure the achievement of the degree program objectives and learning outcomes as stated in B and C above.
- F. Evaluation methodology. This methodology shall be followed for data collection.

Degree programs shall comprehensively describe their assessment plan and document the results for review by the Visiting Team.

9.1.4 Assessment Implementation Plan

It shall be clearly evident that the degree program is making progress in achieving its mission, objectives, and learning outcomes, and that it takes the outcomes assessment results into consideration in degree program development.

- A. Educational units shall conduct a comprehensive assessment at the degree program level.
- B. The results of each assessment cycle shall be documented in a systematic manner.
- C. Evaluation of the degree program objectives and learning outcomes shall be compared to the stated performance criteria to determine whether stated objectives and learning outcomes were achieved and if there is a validated need for improvement in any areas.
- D. After each comprehensive assessment cycle, the entire process shall be reviewed and updated with plans for improvement including any revisions to the degree program's assessment plan.

Appendix II

University Curriculum Committee Syllabus Template As Adapted by CM Faculty

TEC 120 Introduction to Building Construction Course Syllabus – Spring 2017 Last Revised: January 9, 2017

Course: TEC 120
Section Number: 001
Class Days/ Times: Tuesday & Thursday
9:35 – 10:50 a.m.
Classroom: TUR 172
Course Credits: 3

Instructor: Dr. Rick Boser
Office: TUR 215 N
Office Hours: 9:30 -11:00A
Monday & Wednesday
Telephone: 309.438.3767
Email: raboser@ilstu.edu

Course Description

Introduction to the principles, practices, and materials used in residential and commercial construction.

Why Should You Care About Construction Material and Methods?

You live in a built environment. Through the activities of this course, you will get a better understanding of how buildings go together and why they are built the way they are. I love observing construction sites to see how the design and materials selected by the architect will be transformed into reality through the efforts of the building contractors. And it changes all the time as new materials, methods, and equipment enter the industry. Building is not static and you must continue to learn. For construction management (CM) majors, this is a foundation course. You will continuously refer back to this fundamental content as you learn how to estimate, schedule, and manage projects. CM minors with IED, RE, or Tech Ed majors will find the content broadens your understanding of your major area and hence expands career opportunities. For non-majors or minors taking this course as an elective, my goal is to give you a better understanding of the built environment that may yield dividends in the future as you become a home owner or assist in business related construction. I hope that by the end of the semester you will develop a deep appreciation for the wonderful world of construction.

TEC 120 Student Learning Outcomes

Upon completing this course the student will be able to:

1. Demonstrate an understanding of how building science principles impact the selection of construction materials and methods.
2. Apply sustainable design principles to the selection of construction materials and methods and thereby reduce consumption of non-renewable resources, minimize waste, and create healthy, productive environments.
3. Identify the composition, units of measurement, standard designations, sizes, and grades for building products typically used in light-frame and commercial building construction.
4. Summarize the benefits and limitations of the construction materials and methods used in the different phases of construction from the foundation to the completion of building enclosure.
5. Identify equipment used to install typical construction materials.
6. Explain how the building design is impacted by building codes and regulations.
7. Recognize ethical situations that may arise in the construction industry and ways to avoid or mitigate those situations.

Construction Management Program Goals

The following 17 Student Learning Outcomes (SLOs) are mandated by the *American Council of Construction Education* (ACCE) for accredited Bachelor Degree programs in construction. These 17 SLOs have also been adopted as the learning outcomes for the ISU CM program. The primary SLOs are bolded. Supporting SLOs, if any, are underlined.

1. Create written communications appropriate to the construction discipline.
2. Create oral presentations appropriate to the construction discipline.
3. Create a construction project safety plan.
4. Create construction project cost estimates.
5. Create construction project schedules.
6. Analyze professional decisions based on ethical principles.
7. **Analyze methods, materials, and equipment used to construct projects.**
8. Apply electronic-based technology to manage the construction process.
9. Apply basic surveying techniques for construction layout and control.
10. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.
11. Understand construction accounting and cost control.
12. Understand construction quality assurance and control.
13. Understand construction project control processes.
14. Understand the legal implications of contract, common, and regulatory law to manage a construction project.
15. **Understand the basic principles of sustainable construction.**
16. Understand the basic principles of structural behavior.
17. Understand the basic principles of mechanical, electrical and special systems.

Required Text

Allen, E. (2014), *Fundamentals of building construction: Materials and methods* (6th ed.) New York, Wiley

Course Materials Needed Every Day

Textbook, pen/pencil, and laptop, tablet, smartphone, or calculator. The textbook will be used regularly as an in-class resource. A laptop or tablet will be useful for construction observation activities and to access Canvas materials.

Attendance

The ISU Undergraduate Catalog states that attendance regulation is based on two principles. First, students are expected to attend class regularly; and second, students are primarily responsible to the instructor in matters pertaining to class attendance. Every student will be held responsible for class attendance and successful completion of academic work. Attendance regulations are intended to encourage student maturity and are based on the assumption that academic success is the student's primary goal in college. Regular attendance is closely correlated with academic success!

Content Outline: (A detailed course schedule may be found on Canvas under the Syllabus tab.)

Building Science and Energy (web links) • Sustainability & green building: What are the issues? • Assessing sustainable buildings • Heat, air & moisture control • Perfect Wall / Enclosure • Embedded energy & LCA	Design Constraints and Regulation (Ch. 1) • Zoning & Building codes • Occupational Safety and Health • Other legal constraints • Information resources (UL, ASTM, ANSI) • Construction Standards Institute (CSI)
Foundations (Ch. 2) • Foundation loads and settlement	Wood Products (Ch. 3) • Trees and Lumber

• Soils, excavation, slope support • Types of foundations • Underpinning and retaining walls • Waterproofing and drainage	• Manufactured wood products • Characteristics of wood • Wood treatment • Fasteners
Light Frame (Ch. 5) • Balloon and platform framing • Frame components and layout of floors, walls, stairs and roofs • Building codes • Energy efficiency & alternative methods	Exterior Finish Systems (Ch. 6, 16-21) • Light frame & commercial cladding • Roofing • Windows & Siding • Exterior finishes
Interior Finishes (Ch. 7, 22, 23, 24) • Sequence of int. fin. Operations • Thermal insulation and vapor barriers • Walls and partitions • Ceiling finishes • Flooring and ceramic tile • Stairs	Masonry (Ch. 8, 9, 10) • Bricks • Concrete masonry units • Stone • Mortar • Load bearing masonry • Waterproofing
Steel Frame Construction (Ch. 11, 12) • Steel manufacturing • Steel nomenclature • Details of steel framing • Bracing and reinforcement • Fireproofing of steel framing	Concrete Construction (Ch. 13 - 15) • Cement and concrete • Formwork and reinforcement • Placing concrete • Prestressed reinforcement • Precast concrete systems
Roofing (Ch. 16) • Low-slope roofs • Steep-slope roofs • Roofs and building codes	Glass, Glazing , & Doors (Ch. 17, 18) • Types of glazing materials • Glass and energy • Windows & Doors
Cladding Systems (Ch. 19 - 21) • Design requirements • Approaches to water-tightness • Masonry & concrete cladding • Metal & glass cladding systems • Sealants • Testing	

Attendance Management

To encourage success and make the best use of everyone's time, an attendance sheet will be circulated during each class. Attendance may be considered in determining student's final grade. There will be no make-up of quizzes, tests, or in-class assignments unless prior arrangements have been made. In addition, some Canvas quizzes may require previous class attendance and require a password announced in-class. Links to campus policies regarding bereavement, volunteer service during civil emergencies, and extracurricular activities can be found on the Dean of Students webpage at <http://deanofstudents.illinoisstate.edu/>. For little pep talk on the value of class attendance, see <http://www.collegeparents.org/members/resources/articles/are-there-secrets-college-success>.

Learning Activities

Oddly, quizzes, assignments and tests are not provided because instructors are cruel or unreasonable, but rather to promote learning and provide feedback on your performance so that you know where to focus your efforts in the future. Under the syllabus tab in Canvas, you will find a detailed course schedule so that you can

plan ahead. Assignments will come with performance rubrics and guidance on how to tackle the activity. On the first day of class, I'll solicit your input on ways that you think will help you learn.

Online quizzes (200 pts): The purpose of homework (quizzes) is to provide learners with the background terminology and concepts to prime class discussion and activities in order to utilize class time for more advanced treatment of the topic. Your first exposure to most of the course content will be through reading the textbook and other online resources. Class resources include a series of PowerPoint slides that will NOT normally be presented in class. The PPTs are provided to supplement the textbook and class activities. Quiz questions, or a close variant, will be used on the examinations. Tentative quiz dates are listed on Canvas learning module and course schedule; however, note that dates may be revised to align with course pacing (10 quizzes @ 20 points each).

Energy points (50 pts): Shameless stolen from the Khan Academy, Energy Points will be awarded for successful participating in selected class activities. Evidence of participation may include simply signing in on the attendance sheet or may require submission of individual or group activity results. To assist you in contributing to discussion, you may also be asked to investigate and bring to class printed copies of resources/media regarding a specific topic (5 activities @ 10 points each). Note that you must be in attendance to earn energy points.

Construction Observation (50 pts): Learning activities will comprise the observation and documentation of real-world building construction projects from webcams provided by [OxBlue](#). Working individually or in assigned groups, you will observe construction activities to understand the materials, methods, equipment, sequencing, and timelines of construction projects. Specific observation topics will be linked to the textbook, grading rubric, and/or other resources for guidance. The goal of these observations is to develop a holistic understanding of the what, why, and how of material selection and installation methods. Note that the "why" may include structural, sustainability, and building science benefits and limitations of the various materials and methods. (5 observations @ 10 points each).

Midterm and Final Examinations (200 pts total / 100 pts each) will be cumulative and cover content from the textbook, PPTs, and class activities. Note that the quiz questions, or close variants, will be utilized on the examinations. The final examination schedule will be posted by the Registrar about mid-semester.

Extra-Credit Assignments: To allow for the odd forgotten quiz or assignment, hungry dog, or slept in and missed the energy points, there will be an opportunity to earn up to **25 extra-credit points**.

These points may be accrued by participating in CMSA activities (see details at end of syllabus) OR by completing one or more extra-credit activity. Details for extra-credit activities will be announced in class and posted on Canvas.

Grade Scale - Total Points 500: A $\geq$ 450; B $\geq$ 400; C $\geq$ 350; D $\geq$ 300; F < 300.

Grading Notes

1. The instructor reserves the right to include unannounced quizzes and graded classroom activities to encourage active reading of assigned materials and participation. These activities will be part of the "energy points."
2. Assignments are to be submitted online or as specified on the DUE date. The instructor is under no obligation to accept late assignments or provide make-up grading activities.
3. Course grade percentages for activities may be changed to reflect the emphasis of the course, but only with consent of the majority students.

4. Incomplete “I” grades are reserved for students who have serious life crisis in the final weeks of the semester and are therefore unable to complete the required assignments or projects.
5. All midterm and final examination materials will be collected and retained by the instructor.

When Taking a Test Through Canvas, Students Should:

- Only use a desktop or laptop, not a mobile device (like a smartphone or a tablet).
- Open only one window and one browser. Students should be looking at only the testing screen and not be clicking modules, resources & materials, or any other tools in Canvas while taking a test.
- **Save the answers as often** as possible. If the questions are all displayed on one page, the “save” button will be at the bottom of the page. Students should periodically click “save” and then scroll back up to answer the questions. Canvas timeouts after 60 minutes!
- Not log in to Canvas from multiple tabs, multiple browsers or multiple devices (for example, a computer and a mobile device).
- Not use the browser’s back and forward buttons.
- Wait for a **confirmation number**. After clicking “submit for grading,” wait for the submission screen that includes the confirmation number. If you close Canvas before seeing this screen, your test may not be recorded.
- **Getting Help:** Student help requests should contact the University’s Technology Support Center at [Helpdesk.IllinoisState.edu](http://helpdesk.illinoisstate.edu) or (309)438-4357.

You can link to this information at: <http://ctlit.illinoisstate.edu/technology/Canvas/testing/>

Academic Integrity

Students are expected to be honest in all academic work. A student’s placement of his or her name on any academic exercise shall be regarded as assurance that the work is the result of the student’s own thought, effort, and study. Academic dishonesty is considered an offense to the department and university. Cases will be handled consistent with university policy, which specifies that faculty members are to report all instances of academic dishonesty to the Dean of Students staff. Also, consistent with university policy, faculty members retain authority to determine grade penalties in cases of academic dishonesty. In this course, at a minimum, academic dishonest will result in a failing grade for the assignment and the incident will be reported to the Dean of Students. Other consequences may include additional grade penalties or failure of the course. For additional information, see the link to the Code of Student Conduct at

<http://deanofstudents.illinoisstate.edu/conflict/conduct/code/academic.php>.

Classroom Behavior / Comportment

In order to maintain a positive and professional atmosphere and to minimize distractions, I request that you refrain from eating/drinking, putting your feet on the tables, reading newspapers or other material not pertaining to the course. Students creating distractions that interfere with the class or the learning of others will be asked to leave. Non-registered visitors are not allowed at class sessions. The use of tobacco products or alcohol in any form is not permitted. Telephones, pagers, headphones, and other electronic devices that distract students must be turned off during classes.

Disabilities Concerns

Any student needing to arrange a reasonable accommodation for a documented disability should contact Disability Concerns at 350 Fell Hall, 309-438-5853, www.disabilityconcerns.ilstu.edu.

General Education

General Education provides students with a broad, common foundation of study upon which to build an undergraduate education. The program develops skills of oral and written communication, logical and scientific reasoning, computer usage, and quantitative analysis. Courses in general education explore ways of knowing in the various disciplines through examination of significant historical, social, cultural, and scientific issues.

Student Counseling Services:

Life at college can get very complicated. Students sometimes feel overwhelmed, lost, experience anxiety or depression, struggle with relationship difficulties or diminished self-esteem. However, many of these issues can be effectively addressed with a little help. Student Counseling Services (SCS) helps students cope with difficult emotions and life stressors. Student Counseling Services is staffed by experienced, professional psychologists and counselors, who are attuned to the needs of college students. The services are FREE and completely confidential. Find out more at <http://counseling.illinoisstate.edu/> or by calling (309) 438-3655.

How To Earn Good Grades and Learn Something Too!

- Attend class regularly.
- Attend class regularly.
- Come to class prepared - read text and/or other reference material in advance.
- Regularly observe a construction project (often one near campus) to understand the (a) sequence of work, and (b) materials, methods, and equipment used?
- Ask questions when you don't understand - if you don't get it, others probably don't either - so you will not be wasting class time by asking questions.
- Use a questioning approach to reading - read the questions and terms at the end of the chapter first so that you are mentally prepared to receive information in the chapter.
- Use a questioning approach when listening in class. Don't write extensive notes; instead try to grasp the main ideas and how the concepts are related to each other.
- PowerPoint slides and other visual materials are provided on Canvas. Review in advance and note content that may not be clear to you.
- Do the homework assignments - not only will you learn the material, but you'll earn grade points! Besides, where do you think exam questions come from?
- Read the syllabus - course contract - to see what is required of you and when.
- Attend CMSA events to reinforce course content (more below).

CMSA Membership & Participation

Students are encouraged to become active participants in the ISU Construction Management Student Association (CMSA). The CMSA is organized to promote participation in professional construction organizations such as the Associated General Contractors, Mechanical Contractors Association of America, National Association of Home Builders, National Electrical Contractors Association, and U.S. Green Building Council. Students MAY earn 15 to 25 points (5 events @ 5 points each) for attending CMSA meetings, field trips, and community service activities. Earning extra-credit points for CMSA is good insurance for a missed online quiz or in-class energy point activity.

To qualify for the bonus grades students MUST:

- a. Be in "good standing" i.e. a PAID member of CMSA by the end of the 2nd month of the semester,
- b. Attend three (3) or more CMSA sponsored events as verified by the CMSA attendance sheet.

The earned bonus points may be applied to only ONE CM course per semester -- your choice or CM faculty will select the course where the bonus points will give you the most benefit. CMSA bonus credit can NOT be used to raise your grade from an F to a D or a D to a C.

Benefits of membership in student professional organizations include:

- Scholarships that are ONLY available to student chapter members (AGC, NAHB, MCAA, NAHB, NECA)
- Guest speaker and field trip events
- Chance to network with construction professionals – this is becoming critical for internships and job opportunities.
- Attend national job fairs
- Participate in construction management competitions and travel opportunities
- Attend conferences and seminars
- Social activities

Please remember to SIGN the attendance sheet at each CMSA event. CMSA meetings/event dates will typically be announced in class. Event dates are distributed to all CM students via email listserv and usually on the video display outside of Turner Hall 120. Field trips are scheduled periodically, typically on Fridays, with details announced in-class, by email.

END of Syllabus

Appendix III

Example

Academic Program Profile

Undergraduate Program Measures in Construction Management (52.2001)

Fall 2016 Academic Profiles – Undergraduate Measures B.S. in Construction Management (52.2001)

Inputs

New Applicants ¹				Mean External Transfer GPA			
	Fall 2015		Fall 2016	Cohort Count	Transfer GPA		Transfer GPA
	First Time in College	External Transfers	First Time in College		Count		
Applied to Profile CIP - Admitted to Profile CIP	32	22	41	21	19	2.90	
Applied to Profile CIP - Admitted to Other CIP	0	11	10	20	20	3.05	
Applied to Profile CIP - Denied from Any CIP	7	3	14				
Applied to Profile CIP - Total	39	36	65				
Applied to Other CIP - Admitted to Profile CIP	1	-	1				

Average ACT Scores of New First Time in College Students												
Admission Type	Fall 2015				Fall 2016							
	Academic Level Breakout		Full-Time		Part-Time		Full-Time		Part-Time			
	Freshman – Degree Seeking	Sophomore – Degree Seeking	Junior – Degree Seeking	Transfer	Freshman – Degree Seeking	Sophomore – Degree Seeking	Junior – Degree Seeking	Transfer				
First Time in College	Freshman	24	-	17	-	Fall 2015	24	22.5	21.4	22.6	22.5	23.1
	Sophomore	-	-	-	-	Fall 2016	17	21.9	21.8	22.3	21.5	20.3
	Junior	-	-	-	-							
	Transfer	-	-	-	-							
External Transfers	Freshman	1	1	2	-							
	Sophomore	9	7	1	-							
	Junior	9	1	10	-							
	Senior	-	-	-	-							
2nd Bachelors	-	-	-	-								

Average TOEFL Scores of New First Time in College and External Transfer Students										
Admission Type	Fall 2015		Fall 2016		TOEFL Data		TOEFL		TOEFL	
	Primary Plan	TOEFL Score Available	Primary Plan	TOEFL Score Available	Composite	Listening	Reading	Speaking	Writing	
	Fall 2015	45	-	-	-	-	-	-	-	
First Time in College	Fall 2015	45	-	-						
	Fall 2016	37	-	-						

Student Profile

Enrollment			Age			Gender			On/Off Campus Breakout by Academic Load					
Primary Plans	Fall 2015		Under 25	Fall 2015		Male	Fall 2015		On-Campus	Fall 2015		Off-Campus	Fall 2016	
	171	163		Under 25	158		153	Full-Time		Part-Time	Full-Time		Part-Time	
Additional Plans	1	1	25 or Older	15	13	Female	4	7		160	10	158	9	
						Unspecified	-	-		-	1	-	1	

¹ Counts include undergraduate applicants who applied in the summer prior to the fall. Each student is only counted once, regardless of how many applications were completed. Only new applicants are counted; readmitted applicants are excluded. New enrollment counts in the "New Enrolled Students" table may be higher than admitted counts in the "New Applicants" table if some students were admitted in an earlier term, but did not enroll until a later term.

Prepared by: Planning, Research, and Policy Analysis (PRPA) 438-8393
Data are to be used for internal purposes only that fulfill a legitimate educational interest or business need. <http://registrar.illinoisstate.edu/ferpa/>

Fall 2016 Academic Profiles – Undergraduate Measures B.S. in Construction Management (52.2001)

Productivity - Part I

Mean Cumulative GPA of New and Continuing First Time in College and External Transfer Students End of Fall 2015 ¹					Mean Cumulative GPA of New First Time in College and External Transfer Students End of Fall 2015				
	First Time in College Count	First Time in College GPA	External Transfers Count	External Transfers GPA		First Time in College Count	First Time in College GPA	External Transfers Count	External Transfers GPA
Freshman – Degree Seeking	33	2.36	2	1.94	Freshman – Degree Seeking	22	2.16	2	1.94
Sophomore – Degree Seeking	24	2.88	17	2.85	Sophomore – Degree Seeking	-	-	9	3.00
Junior – Degree Seeking	11	2.85	24	3.00	Junior – Degree Seeking	-	-	11	3.15
Senior – Degree Seeking	13	2.97	34	3.05					
2nd Bachelors	-	-	1	3.04					

Fall to Spring Retention Rates ²					New, Full-Time, First Time in College and External Transfer Students				
	First Time in College Cohort	First Time in College Cohort	External Transfers Cohort	External Transfers Cohort		First Time in College Cohort	First Time in College Cohort	External Transfers Cohort	External Transfers Cohort
Cohort Count	Fall 2014	Fall 2015	Fall 2014	Fall 2015	Cohort Count	Fall 2014	Fall 2015	Fall 2014	Fall 2015
Spring Exclusions	26	24	16	19	Spring Exclusions	-	-	-	-
Spring Adjusted Cohort	25	24	16	19	Spring Adjusted Cohort	25	24	16	19
Spring Retained Count - In Same CIP	23	22	16	17	Spring Retained Count - In Same CIP	23	22	16	17
Spring Retention Rate - In Same CIP	92.0%	91.7%	100.0%	89.5%	Spring Retention Rate - In Same CIP	92.0%	91.7%	100.0%	89.5%
Spring Retained Count - In Any CIP	23	23	16	18	Spring Retained Count - In Any CIP	23	23	16	18
Spring Retention Rate - In Any CIP	92.0%	95.8%	100.0%	94.7%	Spring Retention Rate - In Any CIP	92.0%	95.8%	100.0%	94.7%

Fall to Fall Retention Rates ²					New, Full-Time, First Time in College and External Transfer Students				
	First Time in College Cohort	First Time in College Cohort	External Transfers Cohort	External Transfers Cohort		First Time in College Cohort	First Time in College Cohort	External Transfers Cohort	External Transfers Cohort
Cohort Count	Fall 2014	Fall 2015	Fall 2014	Fall 2015	Cohort Count	Fall 2014	Fall 2015	Fall 2014	Fall 2015
Fall Exclusions	25	24	16	19	Fall Exclusions	25	24	16	19
Fall Adjusted Cohort	25	24	16	19	Fall Adjusted Cohort	25	24	16	19
Fall Retained Count - In Same CIP	17	16	11	17	Fall Retained Count - In Same CIP	17	16	11	17
Fall Retention Rate - In Same CIP	68.0%	66.7%	68.8%	89.5%	Fall Retention Rate - In Same CIP	68.0%	66.7%	68.8%	89.5%
Fall Retained Count - In Any CIP	19	18	14	18	Fall Retained Count - In Any CIP	19	18	14	18
Fall Retention Rate - In Any CIP	76.0%	75.0%	87.5%	94.7%	Fall Retention Rate - In Any CIP	76.0%	75.0%	87.5%	94.7%

¹ Students may be coded as first time in college, second bachelors if they started at ISU as first time in college, left ISU and got a degree elsewhere, and then came back to finish the degree that they first started. A student is no longer considered first time in college once he or she finishes the degree at ISU or becomes a graduate student. Counts are only based on students who attempted credit towards their GPA.

² Fall 2014 retention rates do not include summer starters. As of fall 2015 summer starters are included.

Prepared by: Planning, Research, and Policy Analysis (PRPA) 438-8393

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Fall 2016 Academic Profiles – Undergraduate Measures
B.S. in Construction Management (52.2001)

Productivity - Part II

Participation in Honors Program				
Primary Plan Count	Fall 2015 Honors Program Count	Percent in Honors Program	Primary Plan Count	Fall 2016 Honors Program Count
171	3	1.8%	103	1
				Percent in Honors Program 0.6%

End of Term Summer Enrollment and Earned Credit at ISU ¹

	Summer 2016	
	Full-Time	Part-Time
Cohort Count ²	11	17
Withdraw Count	-	-
Semester Credit Hours Earned Toward GPA	67.0	43.0
Semester Credit Hours Earned Not Toward GPA	6.0	9.0
Semester Test Credit Earned	-	-

¹ Summer session data are aggregated by the CIP code associated with the student's academic plan rather than the organization (i.e., department) that offered the course(s) in which the student was enrolled.

² If all credit values are blank and the cohort count is 1 or greater, the student(s) may have withdrawn, not passed the class(es), deferred the credit, or received an incomplete.

Fall 2016 Academic Profiles – Undergraduate Measures B.S. in Construction Management (52.2001)

Outcomes - Part I¹

Time to Degree First Time in College	
	Graduating Fiscal Year 2016
Cohort Count	17
4 Years or Less	58.8%
5 Years	35.3%
6 Years	5.9%
More than 6 Years	-

Average Credits To Degree	
Admission Type First Time in College	Graduating Fiscal Year 2016
Average Accepted Transfer Hours	1.9
Average Hours Earned Toward GPA at ISU	124.4
Average Transfer and Earned GPA Hours Combined	128.3
External Transfers	
Average Accepted Transfer Hours	81.3
Average Hours Earned Toward GPA at ISU	79.8
Average Transfer and Earned GPA Hours Combined	141.0

Awards Conferred by Sub-Plan	
	Graduating Fiscal Year 2016
Graduating Sub-Plan	
No Sub-Plan	41
Construction Management	4
Grand Total	45

Average Graduating GPA	
	Graduating Fiscal Year 2016
Graduating Sub-Plan	
GPA Data Available	GPA
No Sub-Plan	41 3.04
Construction Management	4 3.12
Grand Total	45 3.04

¹ Outcomes - Part I tables are based on the number of unique awards rather than the number of unique students; therefore, if a student earned more than one unique award in the same fiscal year, then he or she would be counted more than once.

² A combination of old abbreviated sub-plan (i.e., sequential) names from legacy are mixed with new abbreviated sub-plan names from Campus Solutions since fiscal year 2016 includes summer 2015 degrees from legacy and fall and spring 2016 data from Campus Solutions. These rows will need to be manually combined to get a full count and GPA for the sub-plan. GPAs would then need to be weighted averages.

Prepared by: Planning, Research, and Policy Analysis (PRPA) 438-8393

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Fall 2016 Academic Profiles – Undergraduate Measures B.S. in Construction Management (52.2001)

Outcomes - Part II

Graduation Rates of Full-Time, First-Time Bachelor's Students by First Enrolled Term ¹					
Cohort Count	Fall 2009 Cohort		Fall 2010 Cohort		
	First Time in College	External Transfers	First Time in College	External Transfers	External Transfers
4 Year Exclusions	-	-	15	-	4
4 Year Adjusted Cohort Count	-	-	15	-	4
4 Year Graduate Count - In Same CIP	-	-	10	-	4
4 Year Graduation Rate - In Same CIP	-	-	66.7%	-	100.0%
4 Year Graduate Count - In Any CIP	-	-	11	-	4
4 Year Graduation Rate - In Any CIP	-	-	73.3%	-	100.0%
5 Year Adjusted Cohort Count	-	-	15	-	4
5 Year Exclusions	-	-	-	-	-
5 Year Graduate Count - In Same CIP	-	-	10	-	4
5 Year Graduation Rate - In Same CIP	-	-	66.7%	-	100.0%
5 Year Graduate Count - In Any CIP	-	-	11	-	4
5 Year Graduation Rate - In Any CIP	-	-	73.3%	-	100.0%
6 Year Adjusted Cohort Count	-	-	15	-	4
6 Year Exclusions	-	-	-	-	-
6 Year Graduate Count - In Same CIP	-	-	10	-	4
6 Year Graduation Rate - In Same CIP	-	-	66.7%	-	100.0%
6 Year Graduate Count - In Any CIP	-	-	11	-	4
6 Year Graduation Rate - In Any CIP	-	-	73.3%	-	100.0%

¹ First time in college and new transfer cohorts will not include summer starters through fall 2014 cohorts.

Appendix IV

Department of Technology Employer Survey Policies & Procedures Last Revised: 2016

Excerpted for Construction Management Program

Rationale

Employer surveys are required to maintain accreditations and for continuous improvement as recommended by University Assessment Services. The data collected is confidential and will only be used in aggregate for assessment reports and program improvement decisions by faculty and industry advisory boards.. Your support is greatly appreciated.

Guidelines

Frequency of Data Collection

Annually, degree program representatives identify and interview 3 – 5 employers with knowledge of the job performance of alumni who have graduated *within the past 3 years* (more time elapsed may not capture recent program performance and so may not be as useful for program improvement). Data is compiled and aggregated in 3-year segments for reporting in learning outcomes reports.

June 30th: 3 – 5 survey forms for the academic year are forwarded to the Assistant Chair. Aggregated data is stored on the faculty share & SkyDrive server for use in learning outcomes reports.

Collection Method

Surveys will be conducted by personal interview or email. Each degree program will have a unique script catered for specific learning outcomes. One form will be used for each firm surveyed; though more than one graduate may work for the firm. The number of graduates will be reported as the “n” value.

Forms

- Employer Survey: Construction Management
- Employer Survey Results Reporting: Construction Management

Employer Survey B.S. in Construction Management

Illinois State University
Department of Technology

Date:

Employer:
Employer Representative & Title:
Number of program graduates hired within the past three years:

Confidentiality statement: *All information from interviews will be reported in aggregate and not linked to any individual or company. This information is intended to help with our continuous improvement efforts.*

Explanation of interview questions: *Our program curriculum and facilities are informed by several desired learning outcomes. Our interest is in understanding your perceptions as to how well prepared program graduates are positioned for success in the workplace with regard to these learning outcomes. For each outcome, please rate the overall performance of graduates as “meets expectations” or “below expectations,” and provide any insight into of the performance of our graduates within the context of your work environment. Please remember that you are not rating a specific employee, but rather graduates collectively from the **Construction Management program** during the past 3-years.*

Construction Management Learning Outcomes	Employer Rating	Employer Comments
1. Create written communications appropriate to the construction discipline.	☐ meets expectations ☐ below expectations ☐ N/A	
2. Create oral presentations appropriate to the construction discipline.	☐ meets expectations ☐ below expectations ☐ N/A	
3. Create a construction project safety plan.	☐ meets expectations ☐ below expectations ☐ N/A	
4. Create construction project cost estimates.	☐ meets expectations ☐ below expectations ☐ N/A	
5. Create construction project schedules.	☐ meets expectations ☐ below expectations ☐ N/A	
6. Analyze professional decisions based on ethical principles.	☐ meets expectations ☐ below expectations ☐ N/A	
7. Analyze methods, materials, and equipment used to construct projects.	☐ meets expectations ☐ below expectations ☐ N/A	
8. Apply electronic-based technology to manage the construction process.	☐ meets expectations ☐ below expectations ☐ N/A	
9. Apply basic surveying techniques for construction layout and control.	☐ meets expectations ☐ below expectations	

	☐ N/A	
10. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.	☐ meets expectations ☐ below expectations ☐ N/A	
11. Understand construction accounting and cost control.	☐ meets expectations ☐ below expectations ☐ N/A	
12. Understand construction quality assurance and control.	☐ meets expectations ☐ below expectations ☐ N/A	
13. Understand construction project control processes.	☐ meets expectations ☐ below expectations ☐ N/A	
14. Understand the legal implications of contract, common, and regulatory law to manage a construction project.	☐ meets expectations ☐ below expectations ☐ N/A	
15. Understand the basic principles of sustainable construction.	☐ meets expectations ☐ below expectations ☐ N/A	
16. Understand the basic principles of structural behavior.	☐ meets expectations ☐ below expectations ☐ N/A	
17. Understand the basic principles of mechanical, electrical and special systems.	☐ meets expectations ☐ below expectations ☐ N/A	

Employer Survey Results Reporting: Construction Management Month/Year:

Illinois State University

Department of Technology

Employers surveyed:

Total number of program graduates included:

Construction Management Learning Outcomes	Aggregate Employer Ratings (add # of graduates: i.e. 3 employers with 7 graduates meet expectations)	Aggregate Employer Comments
1. Create written communications appropriate to the construction discipline.	☐ meets expectations ☐ below expectations ☐ N/A	
2. Create oral presentations appropriate to the construction discipline.	☐ meets expectations ☐ below expectations ☐ N/A	
3. Create a construction project safety plan.	☐ meets expectations ☐ below expectations ☐ N/A	
4. Create construction project cost estimates.	☐ meets expectations ☐ below expectations ☐ N/A	
5. Create construction project schedules.	☐ meets expectations ☐ below expectations ☐ N/A	
6. Analyze professional decisions based on ethical principles.	☐ meets expectations ☐ below expectations ☐ N/A	
7. Analyze methods, materials, and equipment used to construct projects.	☐ meets expectations ☐ below expectations ☐ N/A	
8. Apply electronic-based technology to manage the construction process.	☐ meets expectations ☐ below expectations ☐ N/A	
9. Apply basic surveying techniques for construction layout and control.	☐ meets expectations ☐ below expectations ☐ N/A	
10. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.	☐ meets expectations ☐ below expectations ☐ N/A	
11. Understand construction accounting and cost control.	☐ meets expectations ☐ below expectations ☐ N/A	
12. Understand construction quality assurance and control.	☐ meets expectations ☐ below expectations ☐ N/A	

13. Understand construction project control processes.	☐ meets expectations ☐ below expectations ☐ N/A	
14. Understand the legal implications of contract, common, and regulatory law to manage a construction project.	☐ meets expectations ☐ below expectations ☐ N/A	
15. Understand the basic principles of sustainable construction.	☐ meets expectations ☐ below expectations ☐ N/A	
16. Understand the basic principles of structural behavior.	☐ meets expectations ☐ below expectations ☐ N/A	
17. Understand the basic principles of mechanical, electrical and special systems.	☐ meets expectations ☐ below expectations ☐ N/A	

Appendix V

Example of CM Senior Exit Survey

Spring 2017 CM Senior Survey

Page 1

Department of Technology Senior Exit Survey

As part of our continuous quality improvement process, we would like to know your perception of how well we have performed as a department and as an academic degree program.

This brief survey has two parts: (a) ratings of general perceptions about the department and its quality, and (b) ratings on how well you achieved the intended learning outcomes for your major. Anticipated time to complete the survey is about 10 minutes.

Thank you very much for your feedback on the quality of the Department of Technology and its programs of study!

Instructions for questions 1 to 8:

This section includes ratings of your perception about the Department of Technology and its quality.

1. Overall, the quality of instruction in my TEC courses was: *

	Excellent	Good	Neutral	Fair	Poor
Quality	☐	☐	☐	☐	☐

2. TEC faculty expertise in their subject matter areas was: *

	Excellent	Good	Neutral	Fair	Poor
Expertise	☐	☐	☐	☐	☐

3. Overall, the laboratory quality of my TEC courses (machines, devices, computers, software) was: *

	Excellent	Good	Neutral	Fair	Poor
Lab Quality	☐	☐	☐	☐	☐

4. Timeliness of the TEC Advisement Office responses to my inquiries was: *

	Excellent	Good	Neutral	Fair	Poor
Timely Advisement	☐	☐	☐	☐	☐

5. My TEC advisor's effectiveness in my Academic planning was: *

	Excellent	Good	Neutral	Fair	Poor
Advisement Expertise	☐	☐	☐	☐	☐

6. I rate the usefulness of my TEC major in expanding my career options as: *

	Very Useful	Useful	Neutral	Useless	Very Useless
Career Options	☐	☐	☐	☐	☐

7. I would recommend TEC to a good friend or family member. *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Recommendation	☐	☐	☐	☐	☐

8. Would you care to share any additional comments about your experiences with the Dept of Technology?

Instructions for questions 9 to 29:

Please indicate how well your degree program prepared you to perform each of the following.

9. I am able to create written communications appropriate to the construction discipline.*

Communication

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Communication	☐	☐	☐	☐	☐

10. I am able to create oral presentations appropriate to the construction discipline.*

Oral Presentation

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Oral Presentation	☐	☐	☐	☐	☐

11. I am able to create a construction project safety plan.*

Safety

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Safety	☐	☐	☐	☐	☐

12. I am able to create construction project cost estimates.

Cost Estimates

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Cost Estimates	☐	☐	☐	☐	☐

13. I am able to create construction project schedules.

Schedule

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Schedule	☐	☐	☐	☐	☐

14. I am able to analyze professional decisions based on ethical principles.*

Ethics

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Ethics	☐	☐	☐	☐	☐

15. I am able to analyze construction documents for planning and management of construction processes.*

Construction Documents

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Construction Documents	☐	☐	☐	☐	☐

16. I am able to analyze methods, materials, and equipment used to construct projects.*

Methods, Materials, and Equipment

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
--	----------------	-------	---------	----------	-------------------

Methods, Materials, and Equipment	☐	☐	☐	☐	☐
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17. I am able to apply construction management skills as a member of a multidisciplinary team.*
Management of a Multidisciplinary Team

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Management of a Multidisciplinary Team	☐	☐	☐	☐	☐

18. I am able to apply electronic-based technology to manage the construction process.*
Electronic-Based Technology

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Electronic- Based Technology	☐	☐	☐	☐	☐

19. I am able to apply basic surveying techniques for construction layout and control.*
Construction Survey

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Construction Survey	☐	☐	☐	☐	☐

20. I am able to understand different methods of project delivery and the roles and responsibilities of all
constituencies involved in the design and construction process.*
Project Delivery Methods

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Project Delivery Methods	☐	☐	☐	☐	☐

21. I am able to understand construction risk management.*
Risk Management

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Risk Management	☐	☐	☐	☐	☐

22. I am able to understand construction accounting and cost control.*
Accounting and Cost Control

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Accounting and Cost Control	☐	☐	☐	☐	☐

23. I am able to understand construction quality assurance and control.*
Quality Assurance and Control

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Quality Assurance and Control	☐	☐	☐	☐	☐

24. I am able to understand construction project control processes.*
Project Control

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Project Control	☐	☐	☐	☐	☐

25. I am able to understand the legal implications of contract, common, and regulatory law to manage a construction project.*
Construction Law

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Construction Law	☐	☐	☐	☐	☐

26. I am able to understand the basic principles of sustainable construction.
Sustainable Construction

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Sustainable Construction	☐	☐	☐	☐	☐

27. I am able to understand the basic principles of structural behavior.*
Structure

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Structure	☐	☐	☐	☐	☐

28. I am able to understand the basic principles of mechanical, electrical and piping systems.
MEP

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
MEP	☐	☐	☐	☐	☐

29. Please provide any feedback about the instruction and your learning related to your degree program.

The remaining questions focus on various issues including your employment search and status.

30. At what stage are you in finding a position in your major field?

	Accepted an offer	Have tentative offer	Interviewing	Have not started searching
Job Search	☐	☐	☐	☐

31. If you are actively searching for a job or have landed a position, what has been most helpful so far: (you may answer more than one)

	ISU Career Services	ISU Career Fairs	eRecruiting	TEC Faculty Employer Contacts	My Own Searches (Websites, personal contacts, etc.)
Help in job search	☐	☐	☐	☐	☐

32. If you have secured a position, please provide the name of the employer:

Name of employer

33. If you have secured a position, what is the title of your position?

Title of position

34. What is the salary range for your position?

- ☐ less than \$10,000
- ☐ 10,001 - \$20,000
- ☐ 20,001 - \$30,000
- ☐ 30,001 - \$40,000
- ☐ 40,001 - \$50,000
- ☐ 50,001 - \$60,000
- ☐ 60,001 - \$70,000
- ☐ 70,001 - \$80,000
- ☐ Over 80,000

35. If you have secured a position, in what area of the construction industry is your position?

Area of Construction

- ☐ Commercial
- ☐ Residential
- ☐ Heavy/Civil
- ☐ Mechanical
- ☐ Electrical
- ☐ Plumbing
- ☐ Industrial
- ☐ Other, please specify

Appendix VI

Example of ISU Alumni Survey of Student Learning Outcomes

2011 Construction Management

Page 1

1. Please indicate how well the CM sequence prepared you to perform each skill.

	Well above average	Above average	Average	Below average	Well below average	N/A
Apply the fundamentals of business and management including accounting, finance, economics, business regulation, and contract law.	☐	☐	☐	☐	☐	☐
Apply knowledge of construction materials and methods including products, systems, and interface issues related to job site organization and the selection of assembly techniques and equipment.	☐	☐	☐	☐	☐	☐
Interpret construction documents (blueprints and specifications) in order to perform such activities as quantity take-offs, cost estimates, quality control, and site layout.	☐	☐	☐	☐	☐	☐
Demonstrate knowledge of design fundamentals in order to communicate with design professionals (architects and engineers), contribute to the planning phase of design-build projects, and solve practical construction problems.	☐	☐	☐	☐	☐	☐

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2. Please indicate how well the CM sequence prepared you to perform each skill.

	Well above average	Above average	Average	Below average	Well below average	N/A
Interpret OSHA and other appropriate safety standards and	☐	☐	☐	☐	☐	☐

develop/execute a construction safety plan that conforms to mandatory procedures, training, and record-keeping requirements.						
Prepare a project bid that includes quantity takeoffs, labor and equipment productivity factors, pricing based on historical costs, and overhead and profit.	☐	☐	☐	☐	☐	☐
Develop, and be able to revise, an effective project plan and schedule that includes network diagramming, critical path, and resource allocation.	☐	☐	☐	☐	☐	☐
Demonstrate an understanding of the concepts, roles, responsibilities, and procedures of project management and as applied to ethics, project delivery systems, administrative systems and procedures, cost and time control, site analysis, value engineering, job site and office documentation, quality control philosophies and practices.	☐	☐	☐	☐	☐	☐
Utilize industry-accepted software for project management, planning and scheduling, estimating, and design.	☐	☐	☐	☐	☐	☐

Appendix VII

Annual Assessment & Reporting Calendar

Last Updated August 2013

Date	Activity	Accountable
As appropriate by course schedule	IDEA student ratings of instruction (November and April).	Secretary
As appropriate	Share assessment data with program and/or program advisory committees	Program Coordinator
As appropriate	Faculty Retreat - Review annual assessment data and establish improvement priorities.	Chair
April	Conduct TEC Senior Student Exit Survey	Advisor
April	Organize follow-up survey of employers (minimum 3-year cycle)	Asst Chair & Secretary
April	Mail pre-survey letter to alumni.	Secretary
June	TEC Senior Student Exit Survey results and Employer Survey results distributed to faculty.	Advisor, Asst. Chair
June/July	Survey minimum of three employers	Coordinator
August	Alumni data distributed to coordinators	Asst. Chair
August	Coordinators meeting to discuss new assessment data and review assessment process	Asst. Chair
September 15	Program Coordinators submit the annual <i>Learning Outcomes Report</i>	Program Coordinator
September 15	Program Coordinators submit the annual <i>Program Goals Report and Plan of Work</i>	Program Coordinator
September/October	Organize and conduct scheduled Peer Teaching Observations.	Asst. Chair
November 1	Post annual TEC Assessment Report on TEC website	Asst. Chair
December 1	Department of Technology Annual Report and Consolidated Annual Budget Report	Chair

Appendix VIII

Example Annual Assessment Results Dashboard

CM Learning Outcome Assessment Report 2016-17									
Learning Outcome (Developed from ACCE Standards)		Related Course	Assessment Methods and Outcomes					Response /Action (2016-2017).	
			AIC Exam in Fall 2016 and Spring 2017 (n=38)		Employer Survey ² (n=8, no of graduates hired=44, 2016)	Senior Survey ³ (n=31, Fall 2016/ Spr 2017)	ISU Alum Survey ³		
			ISU Average	National Average					
1	Create written communications appropriate to the construction discipline.	TEC 222, 223, 224, 229, 292, 326, 394	75.3%	74.0%	8/0/0	100.0%	4.06	N/A	No action at this time. Objective and self-report measures all positive.
2	Create oral presentations appropriate to the construction discipline.	TEC 222, 223, 292, 394	73.6%	73.0%	6/1/0	85.7%	4.13	N/A	No action at this time. Objective and self-report measures all positive.
3	Create a construction project safety plan.	TEC 121, 224, 292, 394, HSC 272	76.4%	71.0%	3/0/5	100.0%	3.42	N/A	Faculty review & monitor. HSC 272 starts to require development of a safety plan for the class term project.
4	Create construction project cost estimates.	TEC 123, 229, 325, 394	71.2%	72.0%	7/0/1	100.0%	4.13	N/A	No action at this time. Objective and self-report measures all positive.
5	Create construction project schedules.	TEC 229, 325, 394	73.9%	75.0%	6/1/1	85.7%	4.06	N/A	No action at this time. Objective and self-report measures all positive.
6	Analyze professional decisions based on ethical principles.	TEC 120, 123, 223, 226, 229, 325, 326,	83.7%	80.0%	6/0/2	100.0%	4.45	N/A	No action at this time. Objective and self-report measures all positive.
7	Analyze construction documents for planning and management of construction processes.	TEC 117, 123, 217, 223, 224, 226, 229,	74.8%	74.0%	8/0/0	100.0%	4.19	N/A	No action at this time. Objective and self-report measures all positive.
8	Analyze methods, materials, and equipment used to construct projects.	TEC 120, 121, 223, 224, 292, 325, 327,	72.9%	72.0%	7/1/0	87.5%	4.16	N/A	No action at this time. Objective and self-report measures all positive.
9	Apply construction management skills as a member of a multidisciplinary team.	TEC 117, 217, 224, 292, 394	74.8%	76.0%	7/0/1	100.0%	4.35	N/A	No action at this time. Objective and self-report measures all positive.
10	Apply electronic-based technology to manage the construction process.	TEC 117, 217, 223, 229, 325, 326, 394	74.4%	72.0%	4/1/2	66.7%	4.23	N/A	Faculty review & monitor. More diverse computer software are planned to be introduced (Bluebeam Revu in TEC 325).
11	Apply basic surveying techniques for construction layout and control.	TEC 223	74.5%	74.0%	4/0/4	100.0%	3.77	N/A	No action at this time. Objective and self-report measures all positive.
12	Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.	TEC 123, 226, 394	71.2%	71.0%	7/0/1	100.0%	4.26	N/A	No action at this time. Objective and self-report measures all positive.
13	Understand construction risk management.	TEC 123, 224, 226, 325, 394	77.4%	76.0%	5/0/3	100.0%	4.13	N/A	No action at this time. Objective and self-report measures all positive.
14	Understand construction accounting and cost control.	TEC 326	71.2%	70.0%	6/1/1	85.7%	4.06	N/A	No action at this time. Objective and self-report measures all positive.
15	Understand construction quality assurance and control.	TEC 394	70.5%	70.0%	8/0/0	100.0%	4.10	N/A	No action at this time. Objective and self-report measures all positive.
16	Understand construction project control processes.	TEC 224, 326, 394	74.7%	75.0%	5/1/2	83.3%	4.13	N/A	No action at this time. Objective and self-report measures all positive.
17	Understand the legal implications of contract, common, and regulatory law to manage a construction project.	TEC 120, 226, 394	71.6%	71.0%	4/0/4	100.0%	4.19	N/A	No action at this time. Objective and self-report measures all positive.
18	Understand the basic principles of sustainable construction.	TEC 120, 121, 292, 394	62.2%	61.0%	5/0/3	100.0%	3.84	N/A	Faculty review & monitor. While the ISU average grade is higher than the national average, it is below than 70%. Requirement of TEC 394 is going to be proposed instead of an elective course.
19	Understand the basic principles of structural behavior.	TEC 292, 327, 394	67.4%	67.0%	7/0/1	100.0%	4.16	N/A	Faculty review & monitor.
20	Understand the basic principles of mechanical, electrical and piping systems.	TEC 222, 394	75%	74%	6/0/2	100.0%	3.57	N/A	No action at this time. Objective and self-report measures all positive.

Notes

1. Performance Criteria for American Institute of Constructors (AIC) Level 1 Exam Benchmark: >70% /100% or exceed national average
2. # of "meets expectations" /# of "below expectations" /# of "N/A"
3. Benchmark for Action for Survey Data < 3.5 on 5-pt. scale
4. red = No Data
5. **Measure below benchmark**
- Trigger for action = 2 or more measures below benchmark

2. Action Benchmark for employer survey data:
<75% "meets expectations" or above

Action benchmark for Survey Data:
< 3.5/5.0 scale

Scale	5	Well above average
	4	Above average
	3	Avg
	2	Below average
	1	Well below average

Appendix IX

Construction Management (CM) Mission, Strategic Plan, and Goals Report

Department of Technology Construction Management (CM) Program

CM Program Mission, Strategic Plan, and Goals Report

Mission: *Our mission is to be a “first choice” provider and center for construction education.*

Strategic Plan: Program Plan of Work and Goals Report (2016-2017)

CM Goals	Goal Alignment	Strategies	Plan of Work for 2016-2017	Report on POW 2016-2017
1. Student Learning Outcomes: Continually improve the curriculum and provide students with high quality educational experiences that will develop technical and managerial knowledge and skills necessary for successful leadership roles in the construction industry. [CAST 2014-2018] 1. CAST provides premier comprehensive undergraduate programs. [TEC] 1. TEC will provide a premier undergraduate and graduate education.	[Educating Illinois 2013–2018] 1. Provide a supportive and student-centered educational experience for high-achieving, diverse, and motivated students that promotes their success. 2. Provide rigorous, innovative, and high-impact undergraduate and graduate programs that prepare students to excel in a globally competitive, culturally diverse, and changing environment. [CAST 2014-2018] 1. CAST provides premier comprehensive undergraduate programs. [TEC] 1. TEC will provide a premier undergraduate and graduate education.	a. Continuously improve the CM learning experiences for students and link program content closely to industry. b. Maintain an effective advisory board focused on continuous program improvement. c. Encourage a majority of graduating seniors to acquire industry credentials such as AC and OSHA 32 hours training. d. Continuously improve the curriculum in alignment with ACCE standards. e. Encourage faculty and industry board members to attend professional meetings and accreditation visits to learn the latest in industry and academia	a. Incorporate new construction paradigms, technologies, and methods into existing courses (Faculty). b. Explore/ operationalize international education opportunities that provide opportunities for students (Faculty). c. Utilize the AIC/AC exam as part of assessment and host AIC exams in October and April (Faculty). d. Conduct employer and senior surveys (Cleary & Shim). e. Provide research and unconventional learning opportunities to complement traditional education (Faculty). f. Arrange project tours and guest lectures (Faculty). g. Continue to evolve the Advisory Board to reflect the industry on a National and global scale representing industry insight that can guide the CM program to mold students best prepared to meet the challenges of today and adapt to the ever changing industry as they face the innovations of the future (Faculty). h. Explore new innovative curriculum, adaptable to the quick and dramatic changes in the industry and the revised ACCE outcomes for incorporation into next catalog (Faculty). i. Actively participate in ACCE meetings, committee/ accreditation activities. On a rotational basis, one faculty member annually to ACCE meeting for accreditation training (Shim & CM Faculty).	a. Pull-planning was incorporated in TEC 229 (Cost Estimating and Project Planning) as a tool for implementation of the Lean construction (Shim); Introduced energy study using Green Building Analysis functions of Revit (Xie) b. Initiated a study abroad program: TEC 398 International Project Management (Xie) c. Two AIC exams were hosted and the results were incorporated in CM learning outcome assessment. (Faculty). d. Both employer survey (8 responses) and senior exit survey (31 responses) were conducted and incorporated in CM learning outcome assessment. (Cleary & Shim). e. Supervised group of students including 1 CM student on a Innovative Consulting Community (ICC) project (Solanki); Introduced ‘Green Concrete’ project in TEC 292 for teaching sustainability concepts (Solanki); Introduced energy analysis and simulation to TEC 217 BIM class. f. Diverse jobsite tours occurred at multiple construction sites and operating buildings, <u>Dental Hievan</u>, Normal, Normal Fire Department, Normal, Uptown Office building, Normal, BNWARD, TON Water Department, Old Chicago Post Office, Chicago, 150 N. Riverside Chicago (Cleary); Arranged guest speakers from National Precast Concrete Association in CMSA meeting and <u>Geodecks</u> in TEC 224 (Solanki); Arranged TEC 117 and TEC 217 site tour to 6 design-builders in Peoria on April 07, 2017, including River City Design Group, PCM+D, Design Solutions, Denotica Kamper Architects, <u>Denbury</u>, and Farnsworth (Xie). Arranged TEC 224 site tour to Ramsey Geotechnical Engineering in Bloomington, IL, TEC 292 site tour to Prairie real-mix concrete plant in Normal, IL, and TEC 327 site tour to American Buildings Corporation in El Paso, IL (Solanki); g. The Advisory Board includes members from diverse backgrounds including regional/national contractors and representatives from different trades sectors in the construction industry (Faculty) h. The CM curriculum is under revision according to new ACCE standards and change in the industry (Faculty). i. Attended annual ACCE meeting and got trained for accreditation (Shim); Participated in an accreditation visiting team as a member of training (Shim).

2. Recruitment and Retention: Recruit and graduate a diverse, high-quality cohort of individuals into the program to support the construction industry in economic development in Illinois and throughout the United States.	[Educating Illinois 2013-2018] 1. Provide a supportive and student-centered educational experience for high-achieving, diverse, and motivated students that promotes their success. [CAST 2014-2018] 1. CAST provides premier comprehensive undergraduate programs. [TEC] 1. TEC will provide a premier undergraduate and graduate education.	a. Host career fairs and other promotional events. b. Promptly distribute job and internship opportunity announcements to students. c. Collaborate with other majors and RSO's.	a. Maintain community colleges-articulation agreements (Boser). b. Host two Construction Management career fairs during the year (Fall and Spring semesters), facilitated by the Career Center (Cleary & Shim) and provide opportunities for employers to visit throughout the year (Faculty). c. Distribute information on jobs, internships, scholarship, and CMAA activities in a timely fashion (Faculty). d. Connect employers and alumni in CM fields and share job related information with students with current mass media such as Facebook and LinkedIn. (Cleary & Shim) e. Make an advertising movie for ISU CM program and share it through CM webpage, and CM Facebook pages. (Shim & Faculty).	a. Updated community colleges-articulation agreements as needed (Boser). b. A career fair was hosted both in Fall and Spring with over 40 employers and over 100 students at each. (Cleary & Shim). Employers visited the campus for CMAA meetings, guest lecture, and career fair events. c. Distribute information on jobs, internships, scholarship, and CMAA activities in a timely fashion (Faculty). d. Job related information were shared with students through Facebook and LinkedIn (Cleary & Shim). e. Some movie clips were recorded, but not in good quality. Advertising movie with acceptable quality is planned to be made (Shim & Faculty).
3. Professional Development: Provide students with educational experiences necessary skills to successfully function in professional leadership roles in the construction industry and provide service to the construction industry through applied research, consulting workshops, and participation in professional organization.	[Educating Illinois 2013-2018] 1. Provide a supportive and student-centered educational experience for high-achieving, diverse, and motivated students that promotes their success. 2. Provide rigorous, innovative, and high-impact undergraduate and graduate programs that prepare students to excel in a globally competitive, culturally diverse, and changing environment. 3. Foster an engaged community and enhance the University's outreach and partnerships both internally and externally. [CAST 2014-2018] 1. CAST provides premier comprehensive undergraduate programs. 2. CAST provides graduate education programs that have a state, national, and international reputation for excellence. 3. CAST faculty and students will engage in high quality research and scholarship. 4. CAST provides outreach initiatives that are mutually beneficial to the academic community and public/private sectors. 6. CAST attracts, develops, and maintains meaningful relationships with internal and external constituencies. [TEC] 1. TEC will provide a premier undergraduate and graduate education. 3. Technology will provide professional service and outreach activities.	a. Maintain active student chapters that promote high levels of student interaction with industry. b. Tenure-Track/ Tenured faculty contribute at least 2 professional presentations and/or publications (including books, book chapters) annually. c. Provide industry workshops as appropriate (e.g. MCA, Laborers, Green Building training, etc.).	a. Facilitate student-led organizations and activities (CMAA, Cleary) • CMAA Meetings - monthly • CMAA Executive Board Meetings - monthly. • CMAA field trips - 1 or 2 per year • NECA Meetings - monthly • GreenEduca Meetings - bi-monthly • MCAA Student Summit, Denver, CO (Cleary) • MCAA National Convention and Student Competition, San Diego, CA (if funding permitting) (Cleary) • ASC Region 3 Conference and Student Competition (Commercial/Design-Build/Electrical) in Downers Grove, IL, (Shim & Xie) • NECA student competition (Cleary) • DOE Race to Zero student competition, Golden, CO (Boser & Cleary) • NAHB Competition in Orlando, FL (Boser) • ACI student competition, Detroit, MI (Solanki) b. Conduct applied research and professional development opportunities (CM Faculty). c. Connect with professional associations by attending their meetings (CM Faculty).	a. Student-led organizations and activities like CMAA were facilitated throughout the year (Cleary). • CMAA Meetings - monthly • CMAA Executive Board Meetings - monthly. • CMAA field trips; November Bear Old Chicago Post Office Clime 150 N. Riverside • MCA and NECA Meetings - monthly • Student Competition Meetings - monthly • GreenEduca Meetings - monthly • ASC Region 3 Conference and Student Competitions (Commercial, Design-Build, Electrical) in Downers Grove, IL, (Shim & Xie) • NECA student competition - submitted proposal (Cleary) • DOE Race to Zero competition, 2 teams presented in Golden, CO. (Boser & Cleary) • NAHB Competition in Orlando, FL (Boser) • ACI student competition, Detroit, MI (Solanki) b. Conducted applied research and professional development activities (CM Faculty) • 11 refereed journal articles, 9 refereed conference proceedings, and 2 poster presentations • Attended American Concrete Institute (ACI) Spring 2017 Convention - Driving Concrete Technology, March 28 - 30, 2017, Detroit, Michigan; Attended the 32nd International Conference on Solid Waste Technology and Management, March 19 - 22, 2017, Philadelphia, Pennsylvania (Solanki). • Attended 2017 Design-Build Educators Workshop hosted by Design-Build Institute of America (DBIA) and Denver University (Xie). • Provided BIM Fundamental Training to Land Engineers Company as Technology Transfer (Xie). c. Students attended meetings for professional associations; • MCAA Student Summit, in Denver, CO (Cleary) • MCAA National Convention and Student Competition, San Diego, CA (Cleary) • NECA National Convention, Boston • NECA Illinois Chapter Meetings (Cleary) • ACI student chapter at ISU was created (Solanki) • MCA of Chicago, Membership and Emerging Leaders meetings

4. Internal and External Funding Support. Through a combination of internal and external resources, maintain the funding necessary to support CM Program activities.	[Educating Illinois 2013–2018] 3. Foster an engaged community and enhance the University's outreach and partnerships both internally and externally. 4. Enhance institutional effectiveness by strengthening the organizational operation and enhancing resource development. [CAST 2014-2018] 6. CAST attracts, develops, and maintains meaningful relationships with internal and external constituencies.	a. Promote and maintain multiple ways for industry to connect with and support the program.	a. Evolve CM Annual Industry Partnership program. (Faculty). b. Host the CMSA Golf Outing the last Friday of April to maintain personal connections with CM alumni and industry leaders with proceeds to support the CM endowments (Cleary). c. Monitor and promote CM Scholarships, both at TEC website and other regular and on-going scholarships (Solanki). d. Maintain ISU CM Alumni group on LinkedIn to keep alumni engaged and share job openings for experienced candidates (Cleary). e. Support CM Alumni group summer event (Alumni & Faculty).	a. CM Industry Partnership had 59 partners for 2016-2017 (Faculty). b. Hosted the CMSA Golf Outing the last Friday of April to maintain personal connections with CM alumni and industry leaders with proceeds to support the CM endowments 36 foursomes participated (Cleary). c. Monitored and promoted CM Scholarships through e-mails, TEC website, student-shared drive and during classes. (Solanki) d. Maintained ISU CM Alumni group on LinkedIn to keep alumni engaged and share job openings for experienced candidates. CM program page developed on Facebook and has proved more successful interacting with Alums and current students. (Cleary). e. Support CM Alumni group summer event – Alumni were not able to organize an event this summer. (Alumni & Faculty).
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