Annual Assessment and Public Information Dissemination Report for Construction Management

Academic Year (AY) 2022-2023

Missouri State™

UNIVERSITY

Missouri State University
Construction Management
Public Information Dissemination
As Required for ACCE Standard Section VIII

I. Program Goals and Objectives

The Department of Technology & Construction Management has developed a comprehensive plan to achieve the academic and non-academic goals as embodied in program outcomes, student learning outcomes, course learning objectives, and strategic plan goals and objectives. At a program level, a student, upon completion of this degree program, will be able to:

PLO #1. Demonstrate the application of oral, written, and graphic communication skills to present data/information and support decision-making. (*Technical Communication*)
PLO #2. Demonstrate the effective utilization of discipline-specific technical knowledge and skills. (*Technology*)
PLO #3. Utilize critical thinking, math, statistics, and science skills for problem-solving. (*Application of Math and Scientific Principles*)
PLO #4. Demonstrate leadership, participation, and problem-solving skills in a team environment. (*Teamwork*)
PLO #5. Utilize applied management topics to manage, control, and improve corporate environments. (*Applied Management*)
PLO #6. Demonstrate knowledge of safety, ethics, non-discrimination, and diversity in the workplace. (*Professional Responsibility*)

These program outcomes are embodied throughout the twenty student learning outcomes designated by ACCE and adopted by the program. These student learning outcomes are:

SLO #1. Create written communications appropriate to the construction discipline.
SLO #2. Create oral presentations appropriate to the construction discipline.
SLO #3. Create a construction project safety plan.
SLO #4. Create construction project cost estimates.
SLO #5. Create construction project schedules.
SLO #6. Analyze professional decisions based on ethical principles.
SLO #7. Analyze construction documents for planning and management of construction processes.
SLO #8. Analyze methods, materials, and equipment used to construct projects.
SLO #9. Apply construction management skills as a member of a multi-disciplinary team.
SLO #10. Apply electronic-based technology to manage the construction process.
SLO #11. Apply basic surveying techniques for construction layout and control.
SLO #12. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.
SLO #13. Understand construction risk management.
SLO #14. Understand construction accounting and cost control.
SLO #15. Understand construction quality assurance and control.
SLO #16. Understand construction project control processes.
SLO #17. Understand the legal implications of contract, common, and regulatory law to manage a construction project.
SLO #18. Understand the basic principles of sustainable construction.
SLO #19. Understand the basic principles of structural behavior.
SLO #20. Understand the basic principles of mechanical, electrical, and piping systems.

Lastly, the strategic plan for the Technology and Construction Management department operationalizes select strategies and action plans to assure the program learning outcomes and student learning outcomes are met. The goals that summarize this strategic plan are:

- TCM Goal 1: Strengthen academic programs through student recruitment, relevant and innovative curricula, and experiential learning opportunities that bridge the gap between the classroom and the workforce.
- TCM Goal 2: Prepare students for successful careers as technical managers within their communities and in a global context.
- TCM Goal 3: Recruit, retain, develop, and reward outstanding, diverse, and collegial faculty and staff who demonstrate high-impact academic and professional engagement.
- TCM Goal 4: Strengthen external relationships and grow our profile and reputation.

II. Program admission requirements

Students may declare the construction management major at any time prior to completing 75 credit hours. After declaring construction management as their major and upon obtaining a passing grade in either MTH 261 or MTH 287, students are admitted into the degree program upon completion of the application to a degree program form.

III. Program Assessment Measures

The construction management program collects and analyzes data from ten assessment measures as outlined below. These measures, their frequency, and their relationship to the department goals and program outcomes are also indicated below.

Instrument Number	Instrument	Direct Indirect	Program Level Course Level SLO Level	Where\when Implemented	Frequency	Feedback	Implementation of Changes	Goals (Strategic Plan) and Program Outcomes
1	Senior Exit Examination	D	C, S	Completed in capstone course by all students	Fall and Spring	Summary and objective-specific feedback supplied to all faculty	Faculty adjust courses and evaluate questions under the direction of the assessment committee	Goal 1 Program Outcomes 2,3,6
2	Capstone Course	D	P	Presentation and paper completed by all students in the senior capstone course	Fall and Spring	Results are summarized by course faculty and discussed at end of semester meeting	Weaknesses are identified by grading matrix and a strategy is discussed at the fall faculty retreat to correct deficiencies	Goal 1 Program Outcomes 1-6
3	Course Folders	D	C, S	All course folders are to be current at the end of the academic year, placed in the departmental office, with	Spring	Folders are reviewed by the department head and department assessment	The department head and curriculum committee formally request course changes and monitor for corrections	Goal 1

				Instructor Course Evaluations completed		committee with feedback provided to the faculty		
4	Advisory Board Course Review	D	C, S	All courses folders are evaluated by advisory board curriculum subcommittee.	5-Year Rotation, 4 SLOs per year	Advisory council provides feedback using feedback form	Department head reviews suggestions individually with impacted faculty and corrective strategy is formulated	Goal 1
5	Strategic Plan Progress Review	D	P	Week before Fall classes at departmental planning meeting	Fall Faculty Planning Session	Department as a whole reviews progress toward goals	Department head monitors and adjusts plan as needed in consultation with faculty	Goals 1-4
6	Course Evaluations	I	C	Completed by all students in every course	Fall and Spring	Compiled by university. Feedback provided to individual faculty and department head	Faculty discuss changes to address concerns with department head and monitor for improvements	Goal 1
7	Senior Exit Surveys	I	P, S	Completed prior to exit interview by all graduating seniors	Fall and Spring	Department Head compiles results which are discussed with faculty	Department Head discusses feedback with faculty to determine if a problem exists and corrective strategy is formulated	Goal 1
8	Senior Exit Interview	I	P, C	Completed by all graduating seniors, conducted by department head	Fall and Spring	Department Head summarized feedback which is discussed in general with all faculty and when needed with specific faculty	Department Head discusses feedback with faculty to determine if a problem exists and a corrective strategy is formulated and monitored.	Goal 1
9	Alumni Surveys	I	P, S	Completed by all alumni from prior five years	Every five Years	Department Head compiles results which are discussed at fall planning session	Department Head discusses feedback with faculty to determine if a problem exists and corrective strategy is formulated and monitored.	Goal 1
10	Employer Survey	I	P, S	Completed by employers hiring graduates from prior five years	Every five years	Department Head compiles results which are discussed at fall planning session	Department Head discusses feedback with faculty to determine if a problem exists and corrective strategy is formulated /monitored.	Goal 1

IV. Information Obtained from Assessment Measures

A. Senior Exit Exams

The senior exit exam is administered as the final exam in the required capstone course – TCM 499, Senior Project. The instrument provides a measure of student learning outcomes at the analyze, apply, and understand level. It is a compilation of all the standardized examination questions administered at the course level and provides feedback to the faculty on student performance. While these measures do not form the basis of whether corrective action is required at the course level, they do provide an invaluable longitudinal look at student progress and knowledge retention. For fall 2022, the mean score on the senior exit exam was 57.68% and for spring 2023, the mean score was 58.37%.

B. Capstone Course

Spring 2023

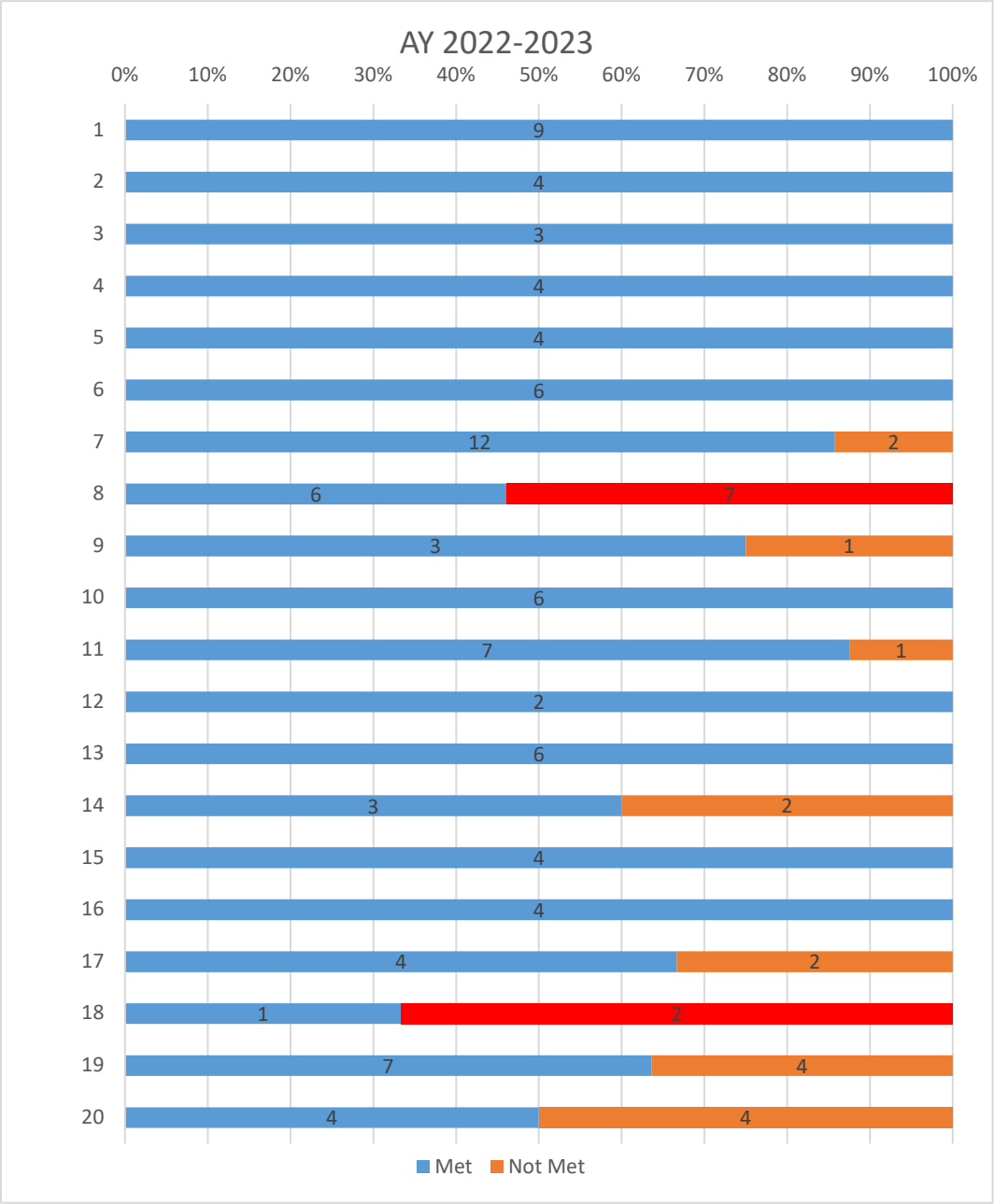
This semester the course schedule switched from a 3-hour block once a week to twice a week which posed a challenge in maximizing productivity inside the classroom. Combined with nearly 40 students, group presentations were cut to only 2 intermediate presentations in lieu of 5. For the first time since I started teaching this course, I used two separate projects split among nine groups. The student feedback for this approach was favorable as it created a learning opportunity to see how similar principles were applied to different projects. The downside of having so many students is that most of them wished they could have presented in front of the industry, which wasn't feasible due to time constraints. This semester, many field-aligned students were in the course, so more details on execution, sequencing, etc. were seen, and appeared to be appreciated by the industry.

Fall 2022

This was my first semester as a full-time faculty and having the ability to interact with the students more throughout the semester, either through office hours or stopping by the computer lab appeared to have an impact on the level of effort students put forth into the project. A previous year's project was used again which provided significant complexity in the scheduling and logistics portion of the course. Students appeared to grasp more difficult sequences more easily than in some previous years, which helped the overall presentations get a favorable review from the industry. Student composition this semester had students with a wide variety of experiences from heavy civil, to electrical, which helped provide more diversity and knowledge among the groups.

C. Course Folders

Course folders were collected and updated with syllabi, instructor course evaluation forms, and representative work samples for all major assignments/exams. As most student learning outcomes have multiple direct measures, the chart below shows the number of direct measures that were above and below the target level of 70% as detailed in the Assessment Implementation Plan. SLO #8 and SLO #18 are the only student-leaning outcomes where more measures did not meet than met the desired 70% pass rate. A corrective action plan will be discussed at the end of this report.



D. Advisory Board Course Review

During AY 2022-2023, the Construction Management Advisory Board (CMAB) reviewed the overall CM Program and three courses in accordance with the Advisory Board Course/SLO Review Schedule published in Appendix K of the ACCE Self-Study. The content slated for review in Fall 2022 was TCM 324 and the overall CM program requirements. In Spring 2023, TCM 121 and TCM 223 were also reviewed. A summary of the feedback is presented below.

Fall 2022

- Overall Program: The CMAB Curriculum Subcommittee began its review by examining the overall coursework required for the B.S. in Construction Management degree

program. Comments from reviewers (n=6) were generally positive and indicated a "well-rounded" curriculum. The below list identifies the general themes from reviewers in the areas of strengths, weaknesses, and suggestions for improvement.

- Strengths
  - In general, the overall depth of topics covered throughout the curriculum is a strength. The range of topics in the courses prepares students for multiple entry points into the construction industry.
  - The CM program does a great job preparing students by covering all necessary disciplines of the construction industry while also helping students develop relationships with industry professionals.
  - The quality of content and the wide spectrum that gets covered. It appears there is a good balance.
  - I believe the strengths revolve around how relevant the program stays according to how the industry is shifting and how well its students are prepared.
  - The program does an excellent job of covering a wide berth of technical information across multiple disciplines and facets of the construction industry.
- Weaknesses
  - I believe the curriculum is light on electrical and mechanical systems, but with that said, this is not an engineering degree.
  - A weakness that the program has had for several years is the ability to attract and retain top professors.
  - We must have a knowledge of construction, how things are built, and the business side (administrative). Also, a large part of what we do as superintendents and project managers is manage people and expectations (Owner, Design Team, Trade Partners, Suppliers). Having the proper people skills to navigate tough and crucial conversations is a must. Not sure how/if to incorporate people management/conflict resolution into a course or across the board.
  - It is easy for me to say to not get into the weeds as much, but I also understand why that is necessary. I wouldn't label it as a weakness, but just as much as the little stuff it also hit on the bigger picture is as well.
  - I see a lot of students coming out of school with more of a technology-based understanding of modern-day construction.
- Suggestions for Improvement
  - Overall, I feel the courses are adequate, or even above average in content.
  - Soft Skills, Managing Difficult Conversations, Navigating Negotiations. I saw that TCM 401 - Construction Leadership was listed in the overall program but I could not find the summary of the course in the Course Syllabi document. Maybe that class touches on a few of my comments above.
  - I am really big on Scope of Work. These are critical to the success (or failure) of a project. Not sure if this would need to be a dedicated course, but it is very important to me as a project manager to know that I must live with the successes and misses in scope.
  - Soils and equipment management do not need to be full courses. Project selection could cover the time value of money from equipment management. Leadership and management tactics could be introduced to TCM 226.

        - Outside of the department, continue to require intro to financial accounting. General accounting courses should be required in all programs, not just business-related programs. The difference is very noticeable when hiring students from an engineering background with a lighter course load on the business side.
- TCM 324 – Construction Estimating (n=7)
    - SLO Coverage Appropriateness (4.37/5.00) and Adequacy (4.25/5.00)
    - Noteworthy comments:
        - There is a steady flow of information. I understand the need to start from the ground and work your way up, however, GCs and your "bid day" focus should hold more weight.
        - All in all, I think this is a well-rounded course. However, to keep pace with some of the courses I hear about our PEs taking, I'd like to see more of an interface with the technology that is used today.
        - All lectures include relevant information and provide good insight into construction estimating and related procedures. I know you only have so many classroom hours, but some of the big topics could maybe use more than one slide and a deeper dive. Some examples: Putting together an Invitation to bid; finding subcontractors/vendors in an unfamiliar market (phone calls to suppliers, why because they will only recommend subs that pay their bills), Go/No-Go decision-making on bidding on a project, Bonding, Insurance, How to figure out local tax rates and permit fees, etc. For example: Putting together an Invitation to Bid and the related documents are paramount to a successful bid. The clearer and more complete the invitation to bid is, the more "bites" you will get from subcontractors/suppliers. And follow up phone calls to the key players to make sure they understand the work and that you are very interested in their participation goes a long way to getting good bid day coverage.
        - Overall, the content for this course is very thorough and I keep saying, "good job".
        - One item (other than the comments listed) that came to mind is bid validity (length bids are good for). Just a few years ago subcontractors would hold their bids for 30-60, but we are seeing some bids that are good for 1 week or less. We have had a few instances where we received a bid with a number for that day because their suppliers are telling them, "we will let you know what the cost is when it is delivered". On a large scope, this could be a 6-digit number.
        - Lastly, cost escalation is not something I remember seeing, but is extremely important for our SD and DD estimates because depending on project size and timing (especially in the world we are currently living in) this can have a major impact on budgets.

Spring 2023

- TCM 121 – Construction Principles (n=14)
    - SLO Coverage Appropriateness (4.64/5.00) and Adequacy (4.37/5.00)
    - Noteworthy comments:
        - I think the department should consider moving to new hard hats (climber type). We are using Kask and Milwaukee. I think it would be beneficial for you to be current with the new trend in safety. It's practical but also helps with the department's perception. These are not cheap and may require a fundraiser or sponsors. Those companies

might also be willing to 'partner' with you to get their hats on the future decision-makers early.
        - The PowerPoint slides were comprehensive and had great visual examples for students entering the construction career path. This course has so much to cover, great job pairing it down into chewable-size lectures and labs.
        - In today's climate, I think having the sustainability slides is a good addition (doesn't really fit in the objectives above). I see a couple of architects really focused on better intentions when it comes to materials. However, LEED isn't as much of a hot topic as it was before in the Midwest, good to review though!
        - The addition of welding and crane work in the past couple of years is awesome.
        - We have not seen as much emphasis on LEED in the past few years - more emphasis on incorporating green building principles when possible and not bothering with certifying buildings.
        - Overall, I think TCM 121 does a good job of preparing students for the basic materials and methods on a construction site. As mentioned, I think shifting focus from masonry to concrete in the lab activities would be a benefit to the course and program overall.
        - I am impressed with what is covered in this class in comparison to what it was when I went through the program. Also having stopped in to see the lab work I can see that this course helps to pull students into the program which is very important for the entry level courses.
        - Overall, I believe the course objectives are relevant/appropriate for the TCM program and the course level. Coverage of each topic varies slightly between different objectives but as an introductory course, much of the main topics are adequately addressed and likely create room for additional lecture discussion that is likely as important as the written materials.
        - I think this course covers a lot of great content and it's presented in an easy-to-digest manner. A few ideas to potentially incorporate:
            - More focus on structural drawings to provide more examples of what details look like and the complexities of different project types.
            - Videos of concrete/steel in action to provide more context behind the images for how the work is put in place.
        - Great introductory course that I remember taking while at MSU. Gets the students hands-on learning with the Labs. Multiple Site Visits to see real-world examples of things they've learned.
- TCM 223 – Construction Surveying (n=7)
    - SLO Coverage Appropriateness (4.80/5.00) and Adequacy (4.57/5.00)
    - Noteworthy comments:
        - I think overall the course achieves its goals. There could be points that allow for something to be related back to what students might see on the job site, so taking advantage of that could be beneficial. They might not be doing the actual survey or layout, but they need to know how/why it is done and how to check it.
        - The only thing that comes to mind that I'd investigate adding to this course is an element of integration between as-built data collected and surveying/CAD software. Overall, this is a great course!

- Surveying seems to be a skill set that is lacking in our industry from young professionals entering the workforce. Being adept in surveying measurements and calculations is an invaluable skill set that will truly differentiate the students of the MSU TCM program from their peers across the country at other schools. This course material is not only appropriate but, in my opinion, essential to the future success of the program's students. Objectives outlined in the syllabus are thorough and appear to be more than adequate to measure the comprehension and practical knowledge of surveying skills gained by the students enrolled in the course.
- Once again, very thorough in principles/topics covered. Lessons do a good job introducing topics, but I also like the points on errors and field dos/don'ts (lessons learned). Labs give good exposure to apply lessons to real-life applications. The only item I have regarding content is about laser scanning. Lectures touch on this but can be used to survey existing building conditions/overhead rough-in/infrastructure and drop into a model that is useful to design teams and for field coordination. Not sure if this is something worth touching on here or in other M/E-Modeling-related classes.
- Very in-depth course for Surveying. I remember learning a ton in this class and it was taught extremely well. Although, I'd be interested to see how many students use this information after they graduate. Most companies aren't taking a student out of college to lay out a building. Most companies also have people who specialize in layout.
- I felt it was a pretty good overview of construction surveying. I think it could use some improvements for real-world adjustments. Such as:
    - Section on calculating grades with cut/fills.
    - Interpolation of grades/contours for specific stake-out locations.
    - Understanding of profiles and stakeout to flowlines/top of pipes. Calculations with pipe in/pipe out/top etc. Great example for the angle section in order to stake out a drop inlet or junction box.
- Understanding of offset stakes in some more detail, maybe with some practice problems. (e.g., Offset stake grade calculations when needing to continue slopes, Back of curb offset calculations, Storm and Sanitary possible, etc.)
- Also feel they need a section on plans. Road or site, how to find the information needed to calculate stakes for construction.

E. Strategic Plan Progress Reviews

This is the first year of the new strategic plan (2023-2028). The below framework includes both the academic unit and program goals/objectives for the upcoming period. Specific initiatives and/or strategies are being developed during the fall 2023 semester, and as such, the below does not include any specific item updates. These will be included in the next annual report.

- **Goal 1: Strengthen academic programs through student recruitment, relevant and innovative curricula, and experiential learning opportunities that bridge the gap between the classroom and the workforce.**
    - Objective 1.1 – Attract and retain high-potential students.
    - Objective 1.2 – Attain/maintain accreditations for all programs.

    - Objective 1.3 - Review and revise both undergraduate and graduate program curricula/content to ensure they are current, innovative, forward-looking, and competency-based.
    - Objective 1.4 - Encourage and promote interactions between students, faculty, and professionals in both academic and professional settings to actively engage students in the learning process.
    - Objective 1.5 – Strategically manage/grow enrollment.
    - Objective 1.6 – Maintain and modernize classroom and lab facilities/equipment.
    - Objective 1.7 – Enhance outreach efforts for underrepresented populations in each program and make available adequate resources for those students.
- **Goal 2: Prepare students for successful careers as technical managers within their communities and in a global context.**
    - Objective 2.1 – Achieve 100% placement for graduates of our programs.
    - Objective 2.2 - Provide high-impact student engagement opportunities for all programs including options for internships, job shadowing, or mentoring programs.
    - Objective 2.3 - Develop resources and communities for international students.
    - Objective 2.4 - Promote and actively support involvement in department student organizations that focus on professional development and public affairs.
- **Goal 3: Recruit, retain, develop, and reward outstanding, diverse, and collegial faculty and staff who demonstrate high-impact academic and professional engagement.**
    - Objective 3.1 - Actively recruit diverse and collegial faculty who are highly effective in teaching, research, and service and committed to diversity, equity, and inclusion.
    - Objective 3.2 - Promote a culture of importance around scholarship and high-impact intellectual contributions with an emphasis on societal impact and public affairs.
    - Objective 3.3 – Increase the profile of professional organization involvement for faculty.
    - Objective 3.4 - Provide resources and support for the development and implementation of experiential learning opportunities.
    - Objective 3.5 – Recognize and reward outstanding contributions to teaching, research, and service.
- **Goal 4: Strengthen external relationships and grow our profile and reputation.**
    - Objective 4.1 - Promote meaningful engagement with the Industry Advisory Boards for each academic program.
    - Objective 4.2 - Engage in activities that build affinity among all department constituents to encourage and promote support of the department both now and in the future.
    - Objective 4.3 - Create opportunities to inspire alumni to inform, engage, and support the department and its students.
    - Objective 4.4 – Create marketing material and social media content that increases engagement with all department constituents.

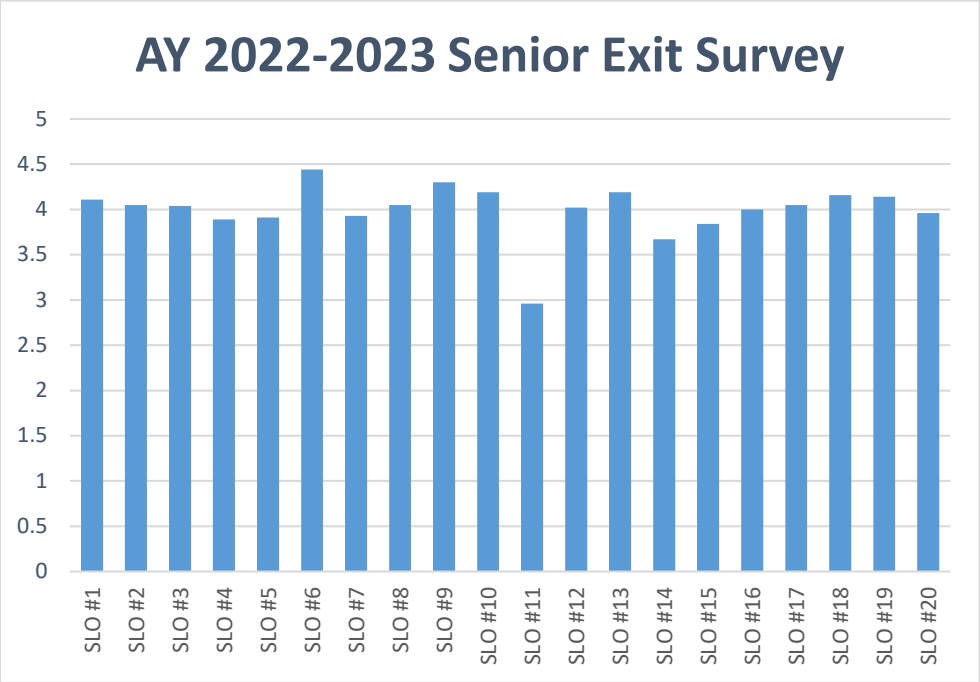
F. Course Evaluations

For AY 2022-2023, student evaluations of teaching were collected in both fall and spring semesters. The mean student evaluation of teaching scores for CM courses was 4.49/5.00. The standard deviation for the same time was 0.27 points. The mean student evaluation of teaching

score for the Technology and Construction Management department was 4.47/5.00 with a standard deviation of 0.36.

G. *Senior Exit Surveys*

Each semester, graduating seniors are asked to complete a survey that assesses their perceived level of preparedness across each of the 20 student learning outcomes. In addition, this instrument also collects information about the courses and/or individuals who most contributed to these outcomes and job placement information. For AY 2022-2023, the mean perceived level of preparedness for all SLOs was 4.00/5.00 with a standard deviation of 0.30 points. The figure below shows the distribution of scores for the senior exit surveys. SLO #11 still appears to be the lowest and will be discussed in section six.

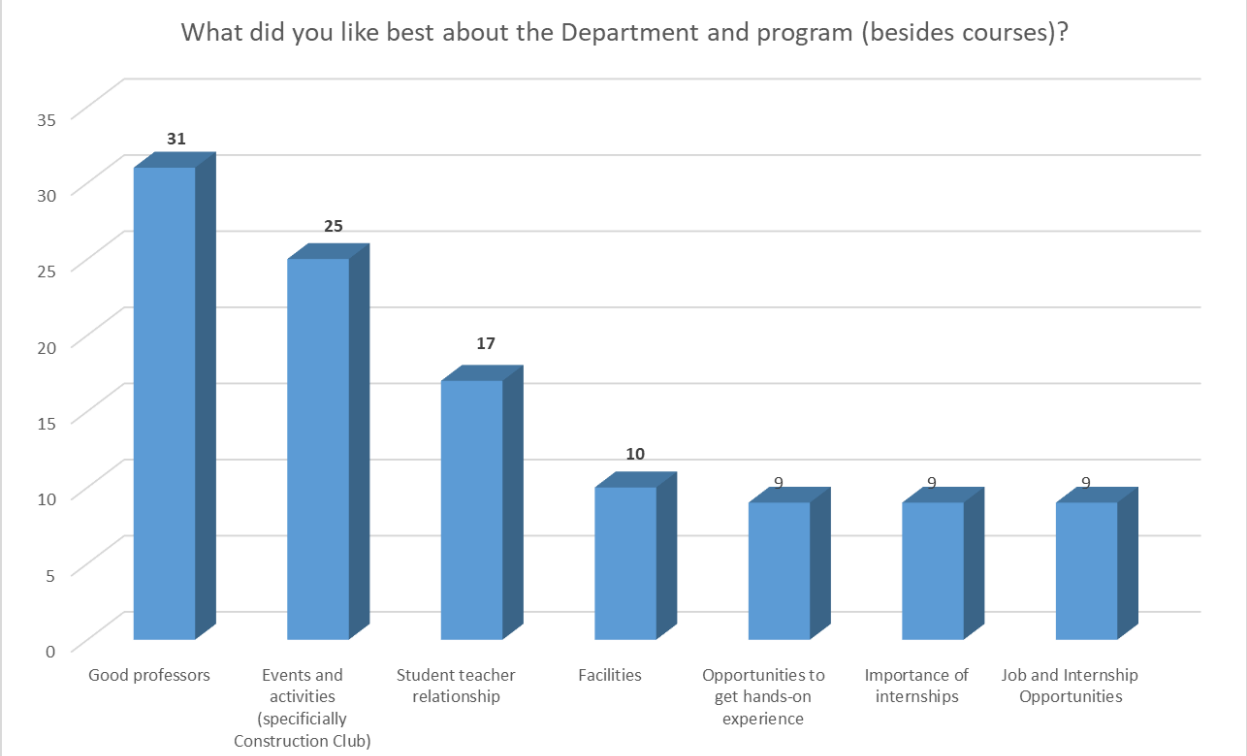


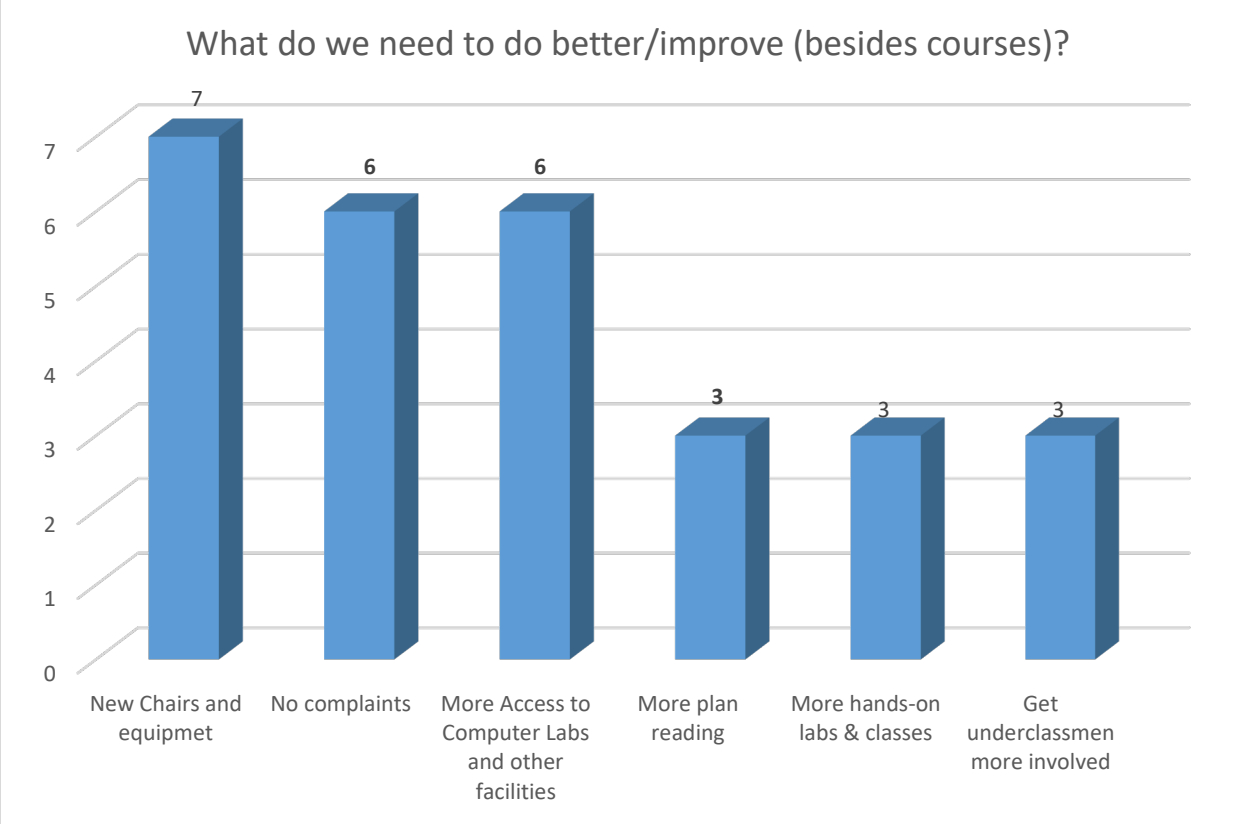
H. *Senior Exit Interview*

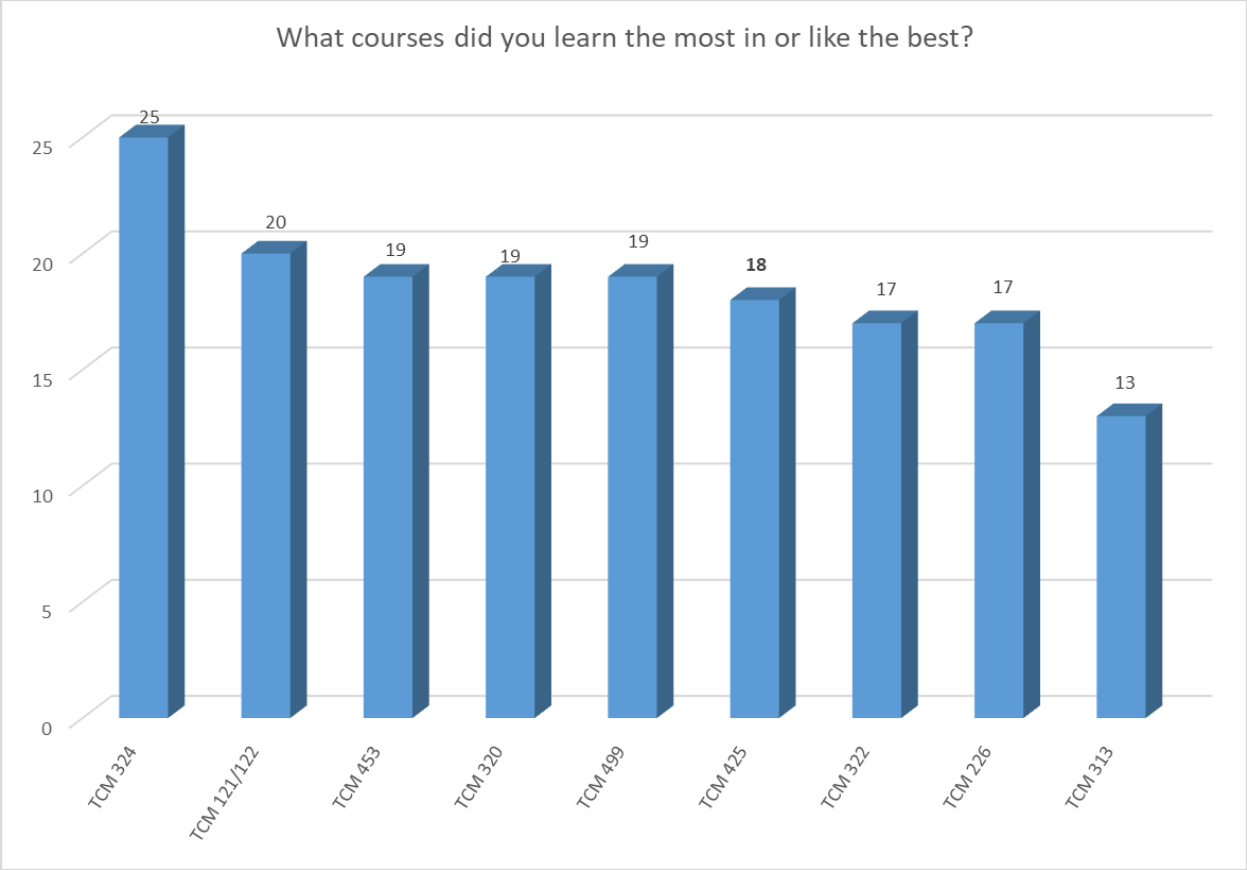
In addition to the senior exit survey, graduating seniors also individually sit down for exit interviews with the department head each semester. The questions asked during the exit included the following:

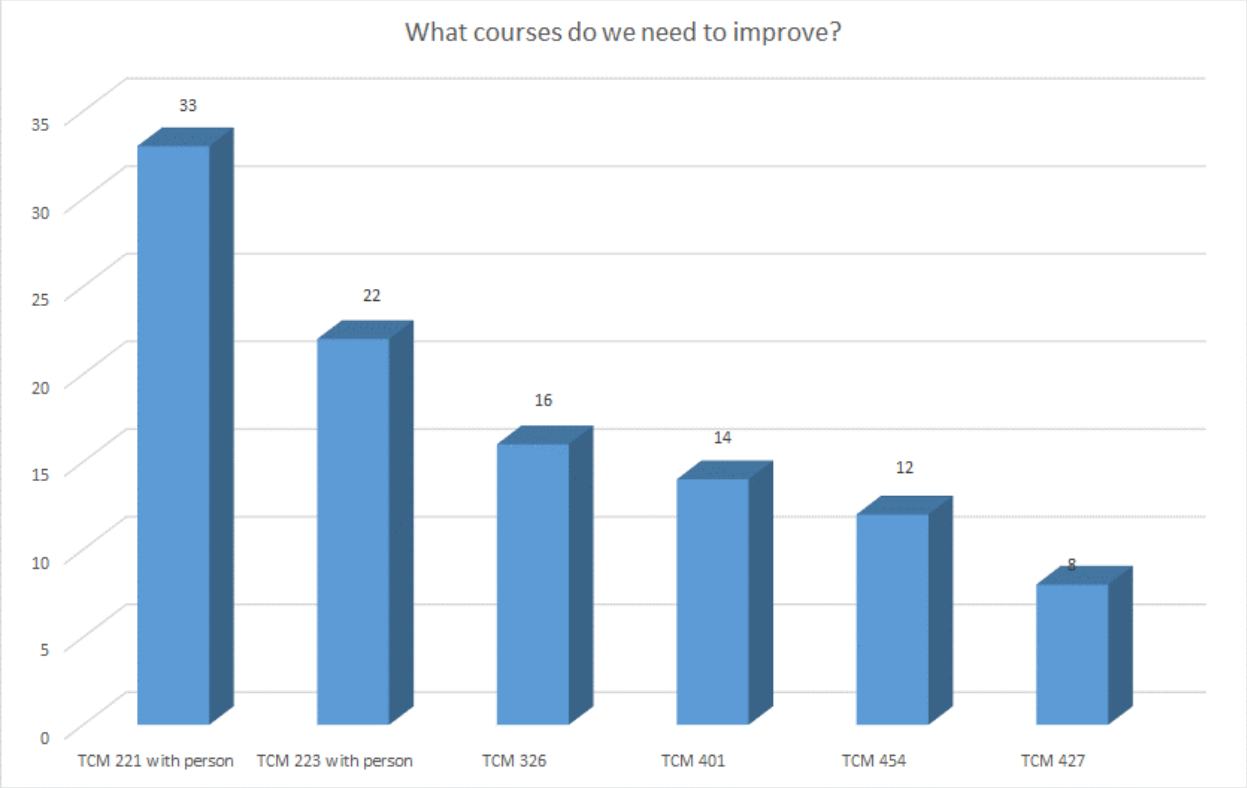
1. What did you like best about the Department and program (besides courses)?
2. What do we need to do better/improve (besides courses)?
3. What courses did you learn the most in or like the best?
4. What courses do we need to improve?

Pareto charts for the top responses from these interviews are presented below for the entire 2022-2023 academic year.


What did you like best about the Department and program (besides courses)?
35
30
25
20
15
10
5
0
31
25
17
10
9
9
9
Good professors
Events and activities (specificially Construction Club)
Student teacher relationship
Facilities
Opportunities to get hands-on experience
Importance of internships
Job and Internship Opportunities

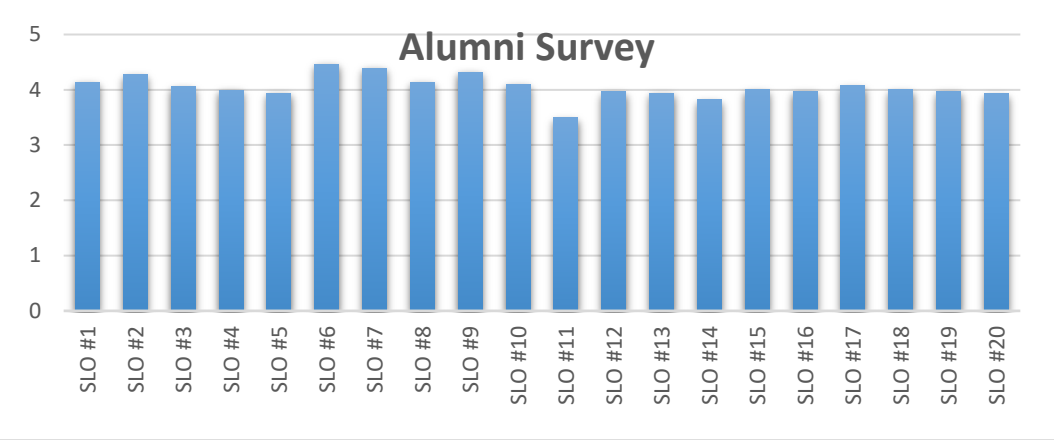

What do we need to do better/improve (besides courses)?
7
6
5
4
3
2
1
0
7
6
6
3
3
3
New Chairs and equipmet
No complaints
More Access to Computer Labs and other facilities
More plan reading
More hands-on labs & classes
Get underclassmen more involved


What courses did you learn the most in or like the best?
25
20
19
19
19
18
17
17
13
0
5
10
15
20
25
TCM 324
TCM 121/122
TCM 453
TCM 320
TCM 499
TCM 425
TCM 322
TCM 226
TCM 313


What courses do we need to improve?
33
22
16
14
12
8
0
5
10
15
20
25
30
35
TCM 221 with person
TCM 223 with person
TCM 326
TCM 401
TCM 454
TCM 427

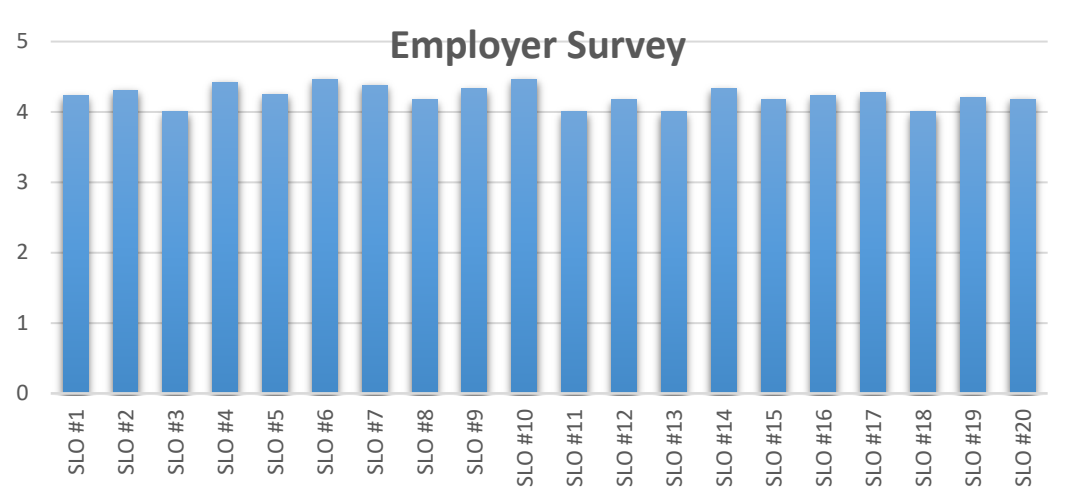
I. Alumni Survey

Every five years, recent alumni are asked to complete a survey that assesses their perceived level of preparedness across each of the 20 student learning outcomes. In addition, this instrument also collects information about the overall satisfaction with their undergraduate experience, perceived department strengths/weaknesses, and contact information. In the most recent cycle (2020), the mean perceived level of preparedness for all SLOs was 4.05/5.00 with a standard deviation of 0.21 points. The figure below shows the distribution of scores for the alumni survey.



J. Employer Survey

Every five years, employers are asked to complete a survey that assesses their level of satisfaction with the preparedness of Missouri State University construction management graduates across each of the 20 student learning outcomes. In addition, this instrument also collects information about the overall likelihood to continue to hire graduates from the MSU CM program, the perceived department strengths/weaknesses, and contact information. In the most recent cycle (2020), the mean level of satisfaction for employers across all SLOs was 4.23/5.00 with a standard deviation of 0.15 points. The figure below shows the distribution of scores for the employer survey.



V. Actions Taken as a result of assessment data collected

The construction management faculty met in August 2023 to discuss the findings of the AY 2022-2023 assessment cycle. All ten measures identified in the ACCE self-study were reviewed and discussed. Overall, the CM program appears to be meeting the majority of student and program learning outcomes. Course-level corrective actions are taken anytime a single direct measure falls below the 70% target level detailed in the Assessment Implementation Plan. The CM course binders contain the instructor course evaluation and improvement plan forms where these actions are documented and tracked.

For the AY 2022-2023 cycle, the faculty first investigated the areas of concern from the AY 2021-2022 cycle. These items include: 1) SLO #18 and the number of direct measures meeting the 70% threshold; 2) The printer is Kemper 207; 3) the strategic plan; and 4) SLO #19 and the number of direct measures meeting the 70% threshold.

For issue #1, the assessment questions for SLO #18 did not achieve more than 50% of the SLO measures were above the 70% threshold. The faculty has implemented changes to the relevant course content and schedules. In addition, the assessment questions for this area will be reviewed as part of the ACCE year 1 progress report action items that are a result of the accreditation visit. This item should be reviewed again next cycle. For issue #2, the printer in Kemper 207 has been replaced with a similar, but newer printer. This issue is considered closed. For issue #3, a new strategic plan was adopted in the spring 2023 semester with department-wide faculty input. The CM program, along with the entire academic unit, will add strategies for the already established goals and objectives. This item is considered closed. For issue #4, the number of measures meeting the 70% threshold for SLO #19 exceeded the number that did not. This item is considered resolved.

There were three new areas of concern from the current data cycle. The new issues include: 5) SLO #8 and the number of direct measures meeting the 70% threshold; 6) SLO #20 and the number of direct measures meeting the 70% threshold; and, 7) SLO #11 and the gap between the student and employer perceptions on level of preparedness. For issue item #5, there was a faculty change in multiple of the courses where this SLO is assessed. This item should be monitored for one more year before corrective actions are implemented as the new instructor gains traction and given the fact that the pass/fail ratio was 46% to 54%. For issue item #6, SLO #20 had an equal number of measures that met and did not meet the 70% threshold. Unfortunately, this is another scenario where there was an instructor change in the courses where the SLO is assessed. This item should be monitored for one more year before corrective actions are implemented as the new instructor gains traction and given the fact that the pass/fail ratio was borderline at exactly 50%. Finally, for issue item #7, the gap between student and employer perception of the level of preparedness regarding “surveying knowledge” was greater than the 1.0 maximum. There was a personnel change in the course where SLO #11 was being taught and this issue should be resolved within the next cycle. This item should be monitored for one more year before corrective actions are implemented

Overall, the construction management faculty are encouraged by the continued growth and development of the program. Improvements within the CMAB, the growing demand for graduates, and positive industry growth are all signs that the program will continue its success in the coming years.

VI. Student Achievement

A. Awards and Accomplishments

2023 – Mr. David Joswick won the Region 4 Outstanding Educator Award by ASC.
2023 – Senior CM Student Lindsey Sanderson was awarded the University's top student honor, the Citizen Scholar Award.
2023 – Sigma Lambda Chi received a Gold Chapter award for the honor society activities.
2022 – The MEP Club's competition team placed 2nd (1st in the USA) in the MCAA National Competition.
2022 – At the Associated Schools of Construction Region 4 Competition, one team won first (Commercial GC) and three teams were awarded second place (Design-Build, Heavy/Civil, and Specialty).
2022 – The CM program received a $2,000,000 matching MoExcels grant from the State of Missouri for the creation of a construction industry training hub. This grant, coupled with University, College, and private funds will all the addition of approximately 10,000 sq. ft. to Kemper Hall.

B. Student scholarships

The department and local industry annually award approximately $50,000 to CM students. On average $15,000 has been received by CM students on a regional or national level by CM students. The list of university-housed scholarships, awards, and annual award amounts are listed below.

Scholarships	Amount
Armin F. and Vivian M. Gimbel Achievement Award	1000
Bailey Family Construction Management Scholarship	1000
Buena Ridenhour Lansford and Raymond W. Lansford Scholarship Fund	2000
Cleo and Mona Casady Leadership Scholarship	2000
Construction Management Advisory Board Scholarship	2000
Doyle Kemper Memorial Scholarship	500
Dr. Robert W. and Charlotte K. Bitter Endowed Scholarship Fund (College of Business)	1500
Dr. Robert W. and Charlotte K. Bitter Endowed Scholarship Fund (College of Business)	1500
E. Ray Love Memorial Scholarship	825
EFCO Corporation Scholarship	500
Howard Moore Group, Inc. Scholarship	500
James W. Gardner, Jr. Memorial Scholarship	500
JE Dunn Construction Scholarship	1000
Kansas City Area Healthcare Engineers Scholarship	500
Marlyn Graff Rhoades Memorial Scholarship (COB)	1000
Missouri Concrete Association (MCA) Scholarship	500
Orin R Robinson Scholarship	600
Phil Roberts Scholarship Fund	2000
Raikos Scholarships	8550
Ray and Susie Forsythe - COB Scholarship	1500

Roy T. and Mildred Durr Wilcox Scholarship in the College of Business	1500
S. Strong Memorial Scholarship	500
Technology and Construction Management Department Scholarship	750
Technology and Construction Management Department Scholarship	750
Ted Smith Endowment Scholarship	1000
The Interstates Foundation Construction Management Scholarship	2000
Wilbur Shank Memorial Scholarship	600
Total	**$ 36,575**

VII. Rate and Types of Employment of Graduates

A. Student employment numbers for graduates during AY 2022-2023 including starting salary information.

Type of Employer	No. of Graduates
Commercial GC	34
Specialty Contractor	4
Residential Contractor	4
Heavy/Civil Contractor	6
Industrial	5
Other	2
Total	55

The average starting salary for CM graduates with a position in a related field during AY 2021-2023 was $68,309 (n=49).

VIII. Data to support qualitative claims made by the program

Not applicable.