

CSM Assessment Results (2016-2019)

Assessment Results for the CSM Program Objectives (2016-2019)

Academic Year: **2016-17**

Program objectives	Measures	Performance criteria	Data reported	Meet criteria?	Action(s)
Maintain a proper size of the program	The total number of students enrolled in the program during the fall semester	The total number of students enrolled in the program is no less than 300	285	No	The previous year's enrollment number was 308, which met the criteria. Wait for more data to determine action.
Increase the diversity of student body	% of women and minority students enrolled in the program during the fall semester	Maintain 10% women and minority students, respectively, for the program	5.2% (Women); 9.7% (Minority)	No No	The past two years' rates for women were 5.7% and 6.7%, respectively, and the minority rates for the past two years were 12%. It seems that the women student population in CSM was consistently lower than the set criteria. The FABE department recruitment staff will work with the IAC Diversity Committee to strengthen our outreach efforts within and beyond OSU (including a Women Inspire Construction Panel Discussion event).
Provide extra-curricular	% of students having extra-	Providing extra-curricular	Not available	Not available	No action

opportunities for students	curricular activities based on the Exit Survey results	opportunities for 50% of students			
Provide students with experiential learning/internship experience	% of students with one or more internships based on the Exit Survey results	Have 100% of students to obtain experiential learning/internship experience and at least 60% of students having two or more internships	100% for one internship/Not available	One internship was required for graduation. So, each student graduating in this year had at least one internship finished/Not available	Will collect data for students having 2 or more internships during the next academic year.
Achieve a high job placement rate for CSM graduates	The 6-month post-graduation placement rate	Over 95% of CSM graduates secure a job within 6 months of graduation	97.1%	Yes	No action
Maintain proper accreditation for the program	The ACCE accreditation status	Maintain accreditation by ACCE	ACCE accredited	Yes	Continue developing the direct and indirect assessment methods for SLOs.

Academic Year: **2017-18**

Program objectives	Measures	Performance criteria	Data reported	Meet criteria?	Action(s)
Maintain a proper size of the program	The total number of students enrolled in the program during the fall semester	The total number of students enrolled in the program is no less than 300	263	No	The FABE's communication and recruitment staff developed the strategic plan and action items that aim to increase the student enrollment number for the CSM program.
Increase the diversity of student body	% of women and minority students enrolled in the program during the fall semester	Maintain 10% women and minority students, respectively, for the program	6.0% (Women) 12.0% (Minority)	No Yes	Continue the outreach efforts to recruit women and minority students.
Provide extra-curricular opportunities for students	% of students having extra-curricular activities based on the Exit Survey results	Providing extra-curricular opportunities for 50% of students	64%	Yes	No action
Provide students with experiential learning/internship experience	% of students with one or more internships based on the Exit Survey results	Have 100% of students to obtain experiential learning/internship experience and at least 60% of students having two or more internships	100% of students having one internship/59% having 2+ internships	No	No action is needed since the measured performance (59% having 2+ internships) is so close to the 60% goal. We will monitor the performance in next year.
Achieve a high job placement rate for CSM graduates	The 6-month post-graduation placement rate	Over 95% of CSM graduates secure a job within 6 months of graduation	To be available by the end of June	Not available	No action at this stage.

Maintain proper accreditation for the program	The ACCE accreditation status	Maintain accreditation by ACCE	ACCE accredited	Yes	Continue developing the direct assessment methods for some SLOs.
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Academic Year: **2018-2019**

Program objectives	Measures	Performance criteria	Data reported	Meet criteria?	Action(s)
Maintain a proper size of the program	The total number of students enrolled in the program during the fall semester	The total number of students enrolled in the program is no less than 300	240	No	There is a concern about the dropping enrollment number. This issue will be discussed among FABE faculty, staff and IAC members in Au 2019 and action items will be determined then.
Increase the diversity of student body	% of women and minority students enrolled in the program during the fall semester	Maintain 10% women and minority students, respectively, for the program	4.7% (Women); 11.5% (Minority)	No Yes	Continue the outreach efforts to recruit women and minority students.
Provide extra-curricular opportunities for students	% of students having extra-curricular activities based on the Exit Survey results	Providing extra-curricular opportunities for 50% of students	64%	Yes	No action.
Provide students with experiential learning/internship experience	% of students with one or more internships based on the Exit Survey results	Have 100% of students to obtain experiential learning/internship experience and at least 60% of students having two or more internships	100% of students having one internship/62% having 2+ internships	Yes	No action.
Achieve a high job placement rate for CSM graduates	The 6-month post-graduation placement rate	Over 95% of CSM graduates secure a job within 6 months of graduation	Not available	Not available	Update the assessment result when data becomes available and determine if any action is needed.

Maintain proper accreditation for the program	The ACCE accreditation status	Maintain accreditation by ACCE	ACCE accredited	Yes	Working on the reaccreditation that will occur in Au 19
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Assessment Results for the ACCE SLOs (2016-2019)

SLO #1 Create written communications appropriate to the construction discipline

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4605 Professional Development II	Combined grade for four writing assignments	75% of students scoring 70% or higher	71.4%	89.0%	94.9%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.23	4.53
Meet criteria?			Not met based on one direct measure	Met based on two measures	Met based on two measures
Action(s)			Wait for more data and no action taken	Data looks good and no action taken	No action taken

SLO #2 Create oral presentations appropriate to the construction discipline

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4605 Professional Development II	Final presentation	75% of students scoring 70% or higher	100%	97.3%	97.4%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.30	4.61
Meet criteria?			Met based on one direct measure	Met based on two measures	Met based on two measures
Action(s)			No action taken	No action taken	No action taken

SLO #3 Create a construction project safety plan

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM2600 Construction Safety and Health	Safety plan assignment	75% of students scoring 70% or higher	Not available	98.8%	97.2%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	3.72	4.38
Meet criteria?			Measures not developed	Met based on two measures	Met based on two measures
Action(s)			Worked with the instructor to develop the assessment method	No action taken	No action taken

SLO #4 Create construction project cost estimates

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM3450 Estimating	Take-home exam for an estimating project	75% of students scoring 70% or higher	Not available	88.3%	84%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.23	4.19
Meet criteria?			Measures not developed	Met based on two measures	Met based on two measures
Action(s)			Worked with the instructor to develop the assessment method	No action taken	No action taken

SLO #5 Create construction project schedules

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM3451 Scheduling	A schedule lab based on an actual project	75% of students scoring 70% or higher	96.8%	90.5%	94%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.14	4.15
Meet criteria?			Met based on one direct measure	Met based on two measures	Met based on two measures
Action(s)			No action taken	No action taken	No action taken

SLO #6 Analyze professional decisions based on ethical principles

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4605 Professional Development II	One ethics essay writing assignment	75% of students scoring 70% or higher	94.5%	90.8%	98.7%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.36	4.62
Meet criteria?			Met based on one direct measure	Met based on two measures	Met based on two measures
Action(s)			No action taken	No action taken	No action taken

SLO #7 Analyze construction documents for planning and management of construction processes

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM3450 Estimating	Homework on structural steel take-off	75% of students scoring 70% or higher	Not available	94.8%	84%
CSM3451 Scheduling	Exam on determining construction activities and sequences based on an actual project	75% of students scoring 70% or higher	Not available	97.3%	95.2%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.14	4.37
Meet criteria?			Measures not developed	Met based on three measures	Met based on three measures
Action(s)			Worked with the instructor to develop the assessment method	No action taken	No action taken

SLO #8 Analyze methods, materials, and equipment used to construct projects

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM3450 Estimating	Take-home exam for an estimating project	75% of students scoring 70% or higher	Not available	Not available	84%
CSM4660 Heavy Construction Management	Exam based on given project documents and site visit	75% of students scoring 70% or higher	Not available	69.6%	73.4%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.00	4.42
Meet criteria?			Measures not developed	Met based on two measures	Met based on one direct and one indirect measure but slightly below another direct measure's criteria
Action(s)			Worked with the instructor to develop the assessment method	No action taken	Wait for more data to determine if any action is needed

SLO #9 Apply construction management skills as a member of a multi-disciplinary team

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4900 Construction Management Capstone	Under developed	75% of students scoring 70% or higher	Not available	Not available	Not available
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.16	4.55
Meet criteria?			Measures not developed	Met based on one indirect measure	Met based on one indirect measure
Action(s)			We phased the development of direct measures for SLOs. This SLO was not addressed at this phase.	Worked with the instructor to develop the assessment method	The instructor who teach this course retired by the end of Sp 19. Due to the transition to the new instructor, the development and implementation of the direct measure was not completed. We will work with the new instructor to get this measure implemented.

SLO #10 Apply electronic-based technology to manage the construction process

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4641 Construction Project Management	Average grade for two homework assignments using electronic-based technology to create site utilization plan and request for change order	75% of students scoring 70% or higher	96.8%	90.5%	93.3%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	3.63	4.20
Meet criteria?			Met based on one direct measure	Met based on two measures	Met based on two measures
Action(s)			No action taken	No action taken	No action taken

SLO #11 Apply basic surveying techniques for construction layout and control

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM2440 Construction Project Management	Lab assignment to set up a layout for a simple structure using the Total Station	75% of students scoring 70% or higher	Not available	100%	100%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	3.84	4.28
Meet criteria?			Measures not developed	Met based on two measures	Met based on two measures
Action(s)			Worked with the instructor to develop the assessment method	No action taken	No action taken

SLO #12 Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4642 Construction Contracts & Documents	17 selected questions in the midterm	75% of students scoring 70% or higher	Not available	87.7%	79.7%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.02	4.42
Meet criteria?			Measures not developed	Met based on two measures	Met based on two measures
Action(s)			Worked with the instructor to develop the assessment method	No action taken	No action taken

SLO #13 Understand construction risk management

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4642 Construction Contracts & Documents	Average grade for midterm and final	75% of students scoring 70% or higher	Not available	87.7%	95%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.12	4.50
Meet criteria?			Measures not developed	Met based on two measures	Met based on two measures
Action(s)			Worked with the instructor to develop the assessment method	No action taken	No action taken

SLO #14 Understand construction accounting and cost control

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4900 Construction Management Capstone	A homework assignment related to applying cost code and type to estimated costs	75% of students scoring 70% or higher	76.1%	72.4%	77.9%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	3.53	4.03
Meet criteria?			Met based on one direct measure	Met the indirect measure but slightly below the direct measure criteria	Met based on two measures
Action(s)			No action taken	No action taken (The instructor mentioned that some students in his capstone class knew they were able to graduate and therefore did not turn in this homework. The "0" scores received by these students negatively affected the performance of the class.)	No action taken

SLO #15 Understand construction quality assurance and control

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4641 Construction Project Management	A homework assignment to create a quality control plan based on given construction documents	75% of students scoring 70% or higher	100%	97.0%	98.7%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.02	4.37
Meet criteria?			Met based on one direct measure	Met based on two measures	Met based on two measures
Action(s)			No action taken	No action taken	No action taken

SLO #16 Understand construction project control processes

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4641 Construction Project Management	A homework assignment to create bid packages from a set of contract specifications	75% of students scoring 70% or higher	100%	95.5%	98.7%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	3.91	4.27
Meet criteria?			Met based on one direct measure	Met based on two measures	Met based on two measures
Action(s)			No action taken	No action taken	No action taken

SLO #17 Understand the legal implications of contract, common, and regulatory law to manage a construction project

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4642 Construction Contracts & Documents	Average grade for midterm and final	75% of students scoring 70% or higher	96.1%	96.9%	95%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	4.05	4.38
Meet criteria?			Met based on one direct measure	Met based on two measures	Met based on two measures
Action(s)			No action taken	No action taken	No action taken

SLO #18 Understand the basic principles of sustainable construction

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM4900 Construction Management Capstone	A homework assignment about sustainable construction	75% of students scoring 70% or higher	Not available	Not available	95.7%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	3.74	4.15
Meet criteria?			Measures not developed	Met based on one indirect measure	Met based on two measures
Action(s)			We phased the development of direct measures for SLOs. This SLO was not addressed at this phase.	Worked with the instructor to develop the assessment method	No action taken

SLO #19 Understand the basic principles of structural behavior

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM3545 Structures for Construct Managers I	Average grade of three midterms	75% of students scoring 70% or higher	42.7%	58.8%	60.3%
CSM3546 Structures for Construct Managers II	Average grade of three midterms	75% of students scoring 70% or higher	70.8%	72.5%	75.7%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	3.72	4.28
Meet criteria?			Not met based on two direct measures	Met one indirect measure but not met the two direct measure	Met one direct and one indirect measures but not met the other direct measure
Action(s)			Wait for more data and no action taken	Based on the two-year data, it seemed that student performance improved in the 2 nd structure course. Wait for more data to take action.	No action taken. Please see the comments from the instructor below.

Note: For both CSM 3545 and CSM 3546, the assessment method chosen (average grade of three midterms) is the broadest measure of the students' achievement of SLO #19, it also has a tendency to produce a lower-bound data point, due to having the direct assessment based on midterm exam performance. The reasons for this include lack of confidence in one's own abilities during the exam, exam anxiety and under-performance, dismissiveness of the student to the class and course content, and the relatively high

level of analytical skill and abstract thinking required to achieve a high score on the exams (when compared to the vast majority of the other courses within the CSM program).

Historically, the performance criteria of 75% of the students earning a score of at least 70% has not been achieved within the CSM 3545 course. For the reasons mentioned above, this threshold being set at 75% may be too high to truly evaluate the SLO within this specific course. CSM 3546 generally shows improvements in this same assessment method, which is part of the reason that structures are taught in a two-semester sequence. It takes most of the term for the average student to fully grasp the structural concepts that are introduced for the first time to them in this CSM 3545 course. Most of the students have not taken a statics course or a strength of materials course, or any other introductory engineering course prior to this course, so it is something that typically takes a few revolutions before they have the “lightbulb” moment, and things begin to click.

In reviewing the indirect assessment results, it is found that this SLO has indeed been met at a satisfactory performance level, in the perspective of the student’s own assessment of their learning. This evidence helps to reinforce the ideas above. But, to be sure, improved performance will still be sought in future semesters, as improvements to exam performance is an ongoing goal.

SLO #20 Understand the basic principles of mechanical, electrical and piping system

Where assessed	Assessment items	Performance criteria	2016-17	2017-18	2018-19
CSM2310 Electrical & Lighting Systems for Buildings	Average grade of two midterms	75% of students scoring 70% or higher	91.0%	64.6%	68.8%
CSM 2345 Mechanical Systems for Buildings	Average grade of three midterms	75% of students scoring 70% or higher	94.7%	88.5%	92.1%
Exit Survey	Question on how a student feels that he/she was prepared to accomplish this SLO	Average score 3.5 or higher on a scale of 1-5	Not available	3.98	4.28
Meet criteria?			Met based on two direct measures	Met one direct and one indirect measures but no met the other direct measure	Met one direct and one indirect measures but not met the other direct measure
Action(s)			No action taken	Wait for more data and no action taken	

The Ohio State University

CONSTRUCTION SYSTEMS MANAGEMENT

Industry Advisory Council

Education Committee



Syllabi Review Session:

<u>Course #</u>	<u>Course Name</u>	<u>Added Value Suggestions</u>	<u>SLO Relationship</u>
2205	Intro to Construction Management	none	
2210	Graphics	Not Reviewed	
2240	Construction Materials & Methods I	Change course to study all CSI Divisions 2 - 7	7, 8, 15
2241	Construction Materials & Methods II	Change course to study all CSI Divisions 8 - 16	7, 8, 15
2305	Professional Development I	Discuss Do's and Don'ts in meetings and professional communications; add use on online communication tools;	1, 2, 9, 10, 16
2310	Electrical & Lighting Systems	Not Reviewed	
2345	Mechanical Systems for Buildings	Too much emphasis on Plumbing, need more on HVAC systems; add discussion of prefab; add discussion of Design-Assist for MEP Systems	4, 7, 10, 12, 13, 15, 18, 20
2440	Construction Survey & Site Development	Need additional emphasis on site development	3, 4, 7, 8, 10, 11, 16
2600	Construction Safety & Health	Have student develop and present tool box talks; discuss site specific safety plans	1, 2, 3, 13, 16, 17
3450	Estimating	Discuss differences in levels of Estimates (ie. Conceptual, SD, DD, CD); Discuss differences in GMP vs. Hard Bid; Discuss self-perform vs. subcontract estimates; Include General Conditions and Direct Personnel Expense; add interactive estimate review with AE and Owner teams	4, 7, 8, 9, 10, 14, 20
3451	Scheduling	Use and actual project schedule and show how it was developed as first part of class time; Discuss Lean Last Planner (pull scheduling)	1, 2, 5, 7, 9, 10, 16
3545	Structures for Construction Managers I	Tie problem solving to real world designs	6, 7, 8, 9, 15, 19
3546	Structures for Construction Managers II	Review early signs of structural fatigue and failure	6, 7, 8, 9, 15, 19
4605	Professional Development II	Have students attend meetings of local construction organizations (AGC, MCA, NECA, Builders Exchange, etc.)	1, 2, 6, 9, 10, 16
4641	Construction Project Management	Too much information to cover in one course	ALL
4642	Construction Contracts/Documents	Use real world exercise to determine what delivery method is best for project type; Discussion of contract language pitfalls; Discuss differences between public and private Owners	6, 7, 9, 12, 13, 14, 15, 16, 17
4660	Heavy Construction Management	Does there need to be additional course(s) in Horizontal Construction?	3, 7, 8, 11, 16
4900	Capstone	Include a site specific safety plan; include contract and bid clarifications (used with Private Owners)	ALL

The Ohio State University

Construction Systems Management
Industry Advisory Council Survey Results



<u>WHAT WE ARE TEACHING BEST</u>	<u>BELOW</u> <u>EXPECTATIONS</u>	<u>AS EXPECTED</u>	<u>ABOVE</u> <u>EXPECTATIONS</u>	<u>N/A</u>	<u>AT OR ABOVE</u> <u>EXPECTATIONS</u>
Communicate with supervisors	6.67%	40.00%	53.33%	0.00%	93.33%
Project document management	6.67%	53.33%	40.00%	0.00%	93.33%
Awareness of basic ethical business practices	6.67%	60.00%	33.33%	0.00%	93.33%
Coordinate as-built drawings	6.67%	66.67%	26.67%	0.00%	93.33%
Read drawings	6.67%	80.00%	13.33%	0.00%	93.33%
Active involvement in Safety Program	0.00%	46.67%	40.00%	13.33%	86.67%
Communicate with Architect/Engineers	0.00%	60.00%	26.67%	13.33%	86.67%
Compile Operation & Maintenance (O&M) manual:	0.00%	66.67%	20.00%	13.33%	86.67%
Prepare quantity estimates	0.00%	86.67%	0.00%	13.33%	86.67%
Process submittals	6.67%	53.33%	33.33%	6.67%	86.66%
Ensure job security	7.14%	71.43%	14.29%	7.14%	85.72%
Check shop drawings/submittals	20.00%	40.00%	40.00%	0.00%	80.00%
Prepare/track Requests for Information (RFI)	13.33%	46.67%	33.33%	6.67%	80.00%
Price materials	6.67%	60.00%	20.00%	13.33%	80.00%
Communicate with Owners	6.67%	60.00%	20.00%	13.33%	80.00%
Prepare/review punchlists	6.67%	60.00%	20.00%	13.33%	80.00%
Price change orders	6.67%	73.33%	6.67%	13.33%	80.00%
Price labor	0.00%	78.57%	0.00%	21.43%	78.57%
Evaluate quality of in-place construction	13.33%	66.67%	6.67%	13.33%	73.34%
Prepare sketches or drawings	6.67%	60.00%	13.33%	20.00%	73.33%
Control materials on site	6.67%	60.00%	13.33%	20.00%	73.33%
Understand basic sustainability concepts	0.00%	60.00%	13.33%	26.67%	73.33%
Examine technical specifications	26.67%	40.00%	26.67%	6.67%	66.67%
Write letters of correspondence	13.33%	40.00%	26.67%	20.00%	66.67%
Supervise field personnel	13.33%	53.33%	13.33%	20.00%	66.66%
Assist with contract award	6.67%	53.33%	13.33%	26.67%	66.66%
Negotiate with subcontractors	20.00%	33.33%	26.67%	20.00%	60.00%
Understanding of project delivery methods (GC, CM)	26.67%	53.33%	6.67%	13.33%	60.00%
Prepare job schedules	20.00%	46.67%	6.67%	26.67%	53.34%
Prepare or Revise project budgets	13.33%	53.33%	0.00%	33.33%	53.33%
Basic survey and layout	26.67%	33.33%	0.00%	40.00%	33.33%

The Ohio State University

Construction Systems Management

Survey Results Comments

Prepared by IAC Education Committee



May 30, 2019

GENERAL INFORMATION

The vast majority of the respondents represented larger construction firms (82.35% of firms averaging more than \$60 million in annual revenue). Not surprisingly, the majority of respondents (82.35%) employ more than 51 full-time staff. Of the respondents, 88.24% have hired CSM students in an intern role, and the same percentage have hired CSM graduates for full-time employment. Of the CSM graduates hired to full-time positions, the most common initial position filled is that of project (or field) engineer.

WHAT CSM STUDENTS ARE LEARNING BEST

1. Communication Skills – Communications with supervisors, architects/engineers and owners.
2. Document Control – Project document management, as-built drawing coordination, compile O&M manuals, process submittals
3. Awareness of basic business ethics
4. Read drawings
5. Project Safety – actively involved with safety program
6. Basic quantity take-off
7. Project site security

WHAT CSM STUDENTS ARE LEARNING, BUT COULD BE IMPROVED

1. Checking shop drawings and submittals
2. Preparing RFI's
3. Cost Estimating – pricing labor, material, change orders
4. Prepare and review of punch lists
5. Evaluate quality of in-place construction
6. Preparation of sketches and drawings
7. Control of materials on site
8. Understand basic sustainability concepts

WHAT CONCEPTS THE CSM PROGRAM NEEDS TO IMPROVE UPON IMMEDIATELY

1. Survey and Layout
2. Project Budget Management
3. Scheduling
4. Comprehension of Project Delivery Methods

5. Negotiation skills
6. Supervision of field labor
7. Business letter writing
8. Technical specification comprehension
9. Contract award process