

**Construction Science and Management Program Taylor  
School of Architecture and Construction Science  
Tuskegee University**

**Quality Improvement Plan**



## **Robert R. Taylor School of Architecture and Construction Science (TSACS)**

TSACS is dedicated to a holistic student-centered and mentoring atmosphere. Students are our first priority. My vision is to take student learning a step further by moving towards a 21st century culturally relevant environment and renewing Washington's mission to educate the whole person. We will not only train our students to have more culturally adaptive hands, but we will cultivate the mind, and ultimately strive to purify the hearts of the entire TSACS family. TSACS brand will be reintroduced to the academic community by building on the four RE's: renewing best practices to recruit and retain stellar students, revitalizing multicultural and global understanding, re-branding the scholarly footprint of the school, and re-connecting professional collaborations with alumni and corporations to acquire support. Going forward, these RE-building strategies will ultimately strengthen ties with alumni firms and funding agencies to increase enrollment and support for scholarships, internships, and faculty development outcomes.

### **Department of Construction Science and Management**

#### **Departmental Mission**

The Construction Science and Management Department's mission is to produce “Project Ready” construction professionals who are managers of people, finance, time and physical resources, and who are knowledgeable of the standards of quality and safety requirements of all trades employed during the construction process.

#### **Background and Overview**

The Construction Science and Management Program at Tuskegee University was founded in 1933 as a four-year degree program within the Department of Mechanical Industries. The name of the program has been changing over the times to meet the ever-changing demands of construction project clients and to reflect the common dynamics that are characteristic of construction projects and the overall construction industry. The program was originally called Building Contracting (1933-1940), Building Construction (1941-1970), Building Science and Building Construction (1971-1972), Industrial Technology and Building Science (1973), Industrial Technology and Building Technology (1974- 1982), Construction (1983-1986), and Construction Science and Management (1987-present). Additionally, the curriculum of the program has changed considering its inception days when it used to focus on specific trades such as masonry, plumbing, brickmaking, to the present time where its recently revised curriculum (Fall 2015) focuses on producing all-round construction professionals while continuing to reinforce the founding policy of Tuskegee University—“Learning to do by doing.”

The revised CSM curriculum provides professional training in construction project management. The coursework can be completed in four years and offers a wide variety of course offerings including construction methods, sustainability principles, surveying, project controls management, building information modeling, business, humanities, physical sciences, and general studies. Specifically, the four-year program in construction science and management produces “Project Ready” construction professionals who are managers of people, finance, time and physical resources, and who are knowledgeable of the standards of quality required of all trades employed during the construction process.

Tuskegee University has graduated more than 120,000 graduates in its 140+ years of service, of which approximately .5 percent have a building construction trade or a degree in construction science and management. Its living alumni today number more than 45,000 and are found worldwide. Currently graduates about 10 students per semester on average. The program continues to improve its core goals of providing best education and professional training to students as well as exceeding the overall goals of Tuskegee University. This is through a close review of its quality improvement plan.

The quality improvement plan provides the assessment plan upon which the Department of Construction Science and Management (CSM) in the Taylor School of Architecture and Construction Science at Tuskegee University (TU) will operate to improve its academic excellence and professionalism. It will be reviewed periodically to ensure that the goals, vision and mission are being accomplished and improved. The plan aligns with the overall mission of the university as well as the new mission of the Taylor School of Architecture and Construction Science (TSACS). TSACS mission is to renew Booker T. Washington's mission to educate the whole person. TSACS is a premier School for the education and training of African American architects and contractors – and to create a stronger model to nurture a new generation of socially and culturally responsive designers and builders. We take student learning a step further by moving towards the 21st century and prepare them to become citizen architects, builders, and community leaders who provide a vision of a better-built environment.

This quality improvement plan is organized into mission and vision, assessment tools and plan for the degree program, and assessment implementation plan for the degree program that also highlights the details of the strategic plan of the program, performance criteria and measures of achievement of the degree program objectives, and the assessment implementation cycles.

### **Tuskegee University's 2021-2026 Strategic Plan *"Embracing the Legacy, Transforming the Future"***

The new Strategic Plan serves as our guide as we advance our institution forward. The priorities identified and the goals, objectives, and initiatives outline a plan for Tuskegee's growth toward academic excellence. Our success depends on our collective commitment to implement this plan through strategic initiatives that honor our history and mission while striving to achieve our vision for the future.

The Tuskegee faculty and staff committees lead the development of strategic goals, objectives, initiatives, and performance measures to align with the Board of Trustees' transformative vision and mission for the University. The defined goals and objectives are inspirational and challenging; the initiatives are action-oriented and designed to move the University forward as a pre-eminent educational and research institution.

\*See the Construction Science and Management's (CSMT) 2022-2026 Strategic Plan in Appendix

The goal areas established to achieve the University's vision and mission are:

1. Academic Excellence
2. Operational Efficiency
3. Student Engagement
4. Research, Innovation and Entrepreneurship
5. Advancements in Infrastructure and Resources
6. World-Class Faculty and Staff
7. Athletics
8. Community and Strategic Partnerships

### **Construction Science and Management's (CSMT) 2022-2026 Draft Strategic Plan**

The Construction Science and Management department head and dean are in the developmental stage for a new comprehensive assessment plan to monitor performance and progress toward academic and non-academic goals as embodied in student learning outcomes, and the strategic plan goals and objectives. This plan will be created with the intent of implementing aspects of **Tuskegee University's 2021-2026 Strategic Plan** and providing continuous evaluation and feedback to implement changes to the program relative to the vision, mission, and goals of the program. A summary of the CSM program strategic plan strategic pillars and priorities for meeting the goals are shown below.

## STRATEGIC PILLAR 1: EDUCATIONAL EXPERIENCE

### **GOAL-1**

TSACS **Re-newing** best practices to recruit and retain stellar students and **re-connecting** professional collaborations with alumni and corporations to acquire support.

*CSMT will produce graduates of distinction who are practical, intellectually curious, socially aware, and future-ready.*

### **Goal-1 Priorities**

#### **Priority 1.1: Curriculum Excellence**

##### Related Strategies:

1. Facilitate continuous curriculum improvement to stay technology-focused and address new trends towards smart and digital design and construction (e.g., electives, specialization tracks, micro credentials)
2. Benchmark with peer institutions
3. Remain fully accredited by ACCE

#### **Priority 1.2: Learning Opportunities for Students**

##### Related Strategies:

1. Build on our strength in online education; the future is hybrid
2. Promote experiential learning strategies
3. Increase use of flexible learning spaces and virtual learning environments
4. Increase team learning and cooperative interdependence in classrooms
5. Facilitate enhancement of soft skills
6. Promote peer-to-peer mentoring/tutoring
7. Improve support for participation in student competitions
8. Support existing and encourage new student organizations
9. Develop a study-abroad program
10. Establish Student Achievement Awards recognizing contributions to Tuskegee and the community

#### **Priority 1.3: Industry Involvement**

##### Related Strategies:

1. Enhance the Industry Advisory Council and establish subcommittees
2. Increase industry involvement in teaching (guest speakers, site visits, etc.)
3. Improve industry-inspired content in core courses
4. Assign industry champion(s) for each core course
5. Increase number of industry-based final year (capstone) projects
6. Establish an Industry Mentorship Program
7. Establish BELL (Built Environment Learning Laboratory – industry funded)
8. Establish at least one industry endowed professorship
9. Establish an industry/alumni endowed scholarship program
10. Organize annual fundraiser for the Department
11. Organize on-campus career expos and job fairs

### **Priority 1.4: Community Engagement**

#### Related Strategies:

1. Increase number of community-engaged classes
2. Include a community outreach section on our Department's website
3. Cooperate with local organizations to perform community-based activities and research
4. Enhance summer camp and other co-curricular activities for K-12 students
5. Establish a certificate program to provide noncredit-bearing educational opportunities for the public

## **STRATEGIC PILLAR 2: STUDENT SUCCESS**

### **GOAL-2**

**Revitalizing** multicultural and global understanding

*CSMT will expand our student body and demonstrate our commitment to the success of our students through innovative engagement and retention efforts.*

#### **Goal-2 Priorities**

### **Priority 2.1: Outreach and Marketing**

#### Related Strategies:

1. Improve existing and develop new marketing materials
2. Increase presence on social media
3. Publish a Department newsletter
4. Maintain and update our Department's website to include latest news and achievements
5. Improve relationships with community colleges
6. Improve relationships with high school guidance counselors
7. Help prospective transfer students with the process
8. Develop a targeted outreach plan for LA, AL, GA, FL, TX, and TN

### **Priority 2.2: Proactive Retention**

#### Related Strategies:

1. Design extra-curricular activities for first-year students
2. Improve relationships with alumni and engage alumni as role models
3. Make use of alumni success stories
4. Review and improve early identification/alert and intervention strategies
5. Improve departmental tutoring opportunities

## STRATEGIC PILLAR 3: SCHOLARSHIP, CREATIVITY, AND RESEARCH

### **GOAL-3**

**Re-branding** the scholarly footprint of the school

*CSMT will perform creative and scholarly activities to keep our Department at the forefront of the built environment education.*

### **Goal-3 Priorities**

#### **Priority 3.1: Scholarly Activity**

##### Related Strategies:

1. Encourage faculty to work closely with the Tuskegee University research office
2. Provide grant writing assistance for competitive proposal submissions
3. Establish a special travel fund for faculty to visit funding agencies
4. Provide support for participation in regional, national, and international conferences
5. Establish faculty release time procedures for competitive grants
6. Encourage publishing in peer-reviewed journals
7. Learn the strengths of our colleagues across campus and team up for opportunities

#### **Priority 3.2: Graduate Program**

##### Related Strategies:

1. Design a Construction Management MS graduate program (online and on-campus)
2. Develop a proposal addressing the need, feasibility, and enrollment projections
3. Receive approval from the dean, the graduate council, and the provost
4. Recruit high quality applicants
5. Gradually increase course offerings for graduate students
6. Gradually increase the number of undergraduate Tuskegee students to continue on to graduate school
7. Establish paid research assistant positions (thesis option/on-campus)
8. Facilitate collaboration of undergraduate and graduate students on scholarly activities
9. Offer *Executive Construction Management Graduate Certificate* (12 credits/online)

## STRATEGIC PILLAR 4: FACULTY DEVELOPMENT

### **GOAL-4**

**Re-branding** the scholarly footprint of the school

*CSMT will help our faculty members flourish as teachers, scholars, and leaders in a productive and collegial academic environment.*

### **Goal-4 Priorities Priority 4.1: Faculty Recruitment and Retention**

##### Related Strategies:

1. Recruit faculty to enhance existing strengths
2. Recruit faculty to invest in emerging areas
3. Increase faculty diversity with an intentional focus on women
4. Recognize and celebrate faculty achievements
5. Administer annual surveys measuring job satisfaction and expectations

6. Apply shared governance for annual evaluations
7. Ensure transparency in tenure and promotion decisions

#### **Priority 4.2: Support for Faculty Development**

##### Related Strategies:

1. Support faculty development for continued improvement in teaching practices
2. Encourage participation in continuing professional development
3. Provide support for our faculty to engage with industry
4. Encourage professional registration, licensure, and certifications
5. Increase number of our faculty receiving ACCE accreditation visiting team training
6. Support faculty to think through and plan their sabbaticals

#### **Assessment Tools and Plan for the Degree Program**

The Construction Science and Management Program has developed a comprehensive assessment plan to monitor performance and progress toward academic and non-academic goals as embodied in student learning outcomes, and the strategic plan goals and objectives. This plan was created with the intent of providing continuous evaluation and feedback in order to implement changes to the program relative to the vision, mission, and goals of the program.

The assessment plan links the course learning objectives, the student learning outcomes and the program learning outcomes in a matrix that describes the instruments used, the frequency of administration, and the procedures for data collection (Table 9.1.1.3). Additionally, assessment tools used to measure the CSM program student learning outcomes can be found in the SLO Evaluation Summary (Appendix 3.1.4.10). The specific assessment tools used are included in the Google Drive – Compliance Assist – Planning Module via Electronic Guest Access. The tools are used for data collection and review based on the assessment cycle shown in Table 9.1.1.3 Assessment Implementation Plan. The SLO Evaluation spreadsheet tool is updated at the completion of each semester. The Google Drive – Compliance Assist – Planning Module database is used continuously throughout the semester to gather data and for review at the end of the semester and at the spring semester faculty meeting and the fall semester CSM Industry Advisory Board (CSM-IAB) meeting.

The assessment plan includes a thorough assessment of various CSMT courses, however terminal assessments have been identified in courses that directly relate to the goals of the ACCE Outcome Based Standards. Indirect assessment measures include senior exit surveys.

At the program level, assessment is measured by the capstone course that includes senior level student exit surveys, and CSM IAB review of capstone presentations. At the course level, review of course folders, advisory council critique of courses, and student course evaluations are the primary means of assessment. The matrix given in Table 9.1.1.3 outlines the assessment process. Student learning outcomes are evaluated by at least two assessment methods, using both direct and indirect assessment for each. Direct measure of SLOs is performed in the individual courses as outlined in the curriculum map. Indirect measure of SLOs is performed in the senior exit survey.

The department head and faculty collect all the data for the degree program objectives. The curriculum committee, the department head, and the full faculty then review the data. Data for SLOs are collected every semester by faculty and the department head and entered into the database. They are then evaluated in accordance with the assessment implementation plan matrix (Table 9.1.1.3.), undergraduate program measures, targets, and sequence of their collection (Table 9.1.3.5.), and SLO Evaluation summary.

## **Assessment Implementation Plan for the Degree Program**

The Assessment Implementation Plan for the CSM program is detailed in Table 9.1.1.3 and it links with the strategic plan of the program. A summary of the CSM program strategic plan goals and tactics for meeting the goals are shown below.

### **CSM Strategic Plan Goals**

**Goal 1:** Promote Academic Excellence and Professionalism (2021-2026 TU Strategic Plan Goal 1: Academic Excellence)

**Goal 2:** Provide Industry Relevant Curriculum (2021-2026 TU Strategic Plan Goal 3: Student Experience)

**Goal 3:** Promote Faculty Productivity and Development (2021-2026 TU Strategic Plan Goal 5: World Class Faculty and Staff)

**Goal 4:** Recruitment of Stellar CSM Students (2021-2026 TU Strategic Plan Goal 3: Student Experience)

**Goal 5:** Increase Research and Recurring Funding Opportunities (2021-2026 TU Strategic Plan Goal 4: Research, Innovation and Entrepreneurship)

**Goal 6:** Rebrand the scholarly footprint of the CSM department (2021-2026 TU Strategic Plan Goal 5: World-Class Faculty and Staff) (new goal in the next assessment cycle)

### **CSM Strategic Plan Tactics**

**1.1** Expect 2.75 GPA for all CSMT Students

**1.2** Expect 80% participation in Co-op or Internship Program

**1.3** Expect 80% Job Placements prior to graduation

**1.4** Provide Industry Certifications

**1.5** Participation in Student Competitions

**1.6** Ten percent increase in certificate programs; Ten percent increase of degree programs are offered online (new tactic in the next assessment cycle)

**2.1** Construction Industry Advisory Board

**2.2** ACCE Re-Accreditation 2022

**2.3** Use of Technology

**2.4** Facilities Planning and Development

**2.5** Increase retention rates and reduce withdrawal, and dropout rates (new tactic in the next assessment cycle)

**3.1** Encourage Faculty Development

**3.2** Tenure Track Faculty

**3.3** Course Evaluation

**4.1** Active Student Recruitment

**5.1** Research & Outreach

**5.2** Private Funding

**6.1** Upgrade faculty evaluations; yearly orientation for faculty on promotion and tenure processes (new tactic in the next assessment cycle)

The systematic and sustained effort for fulfilling the mission of the degree program is outlined in the educational unit's strategic plan. Evaluation of the program's objectives and learning outcomes are compared to the stated performance goals for each criterion to determine whether stated objectives and learning outcomes were achieved and if there is a validated need for improvement in any area. In addition, the strategic plan process is focused on a sustained effort primarily by active involvement of faculty and staff in the planning, review, and execution of the strategic plan through the continuous review of goals and measures in the ongoing assessment cycle. The strategic plan may be reviewed and updated annually by the CSM faculty and CSM-IAB.



Table 9.1.1.3 Assessment Implementation Plan

Instrument#	Instrument	Directive	Where/When Implemented	Frequency	Feedback	Implementation of Change	Goals (Strategic Plan)
6	Course Evaluations	I	Completed by all students in every course	Fall, 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 1,2
2	Course Folders	D	Faculty are to evaluate each course taught and upload syllabus, adoptions, SLO assessments, findings, and improvements into electronic course folders at the end of each semester	Fall, Spring	Folders are reviewed by Department Head and department curriculum committee with feedback provided to faculty	Department Head and curriculum committee formally request course changes and monitor for corrections	Goal 1,2,3
4	IAB Course Review	D	All courses folders are evaluated by the advisory board curriculum subcommittee.	5- Year Rotation, 4 SLOs per year	Advisory board provides feedback	Department Head reviews suggestions individually with impacted faculty and corrective strategy is formulated	Goal 2,3
1	Capstone Course	D	Presentation and submission completed by all students in senior capstone course	Spring	Results are reviewed and discussed by faculty and industry panel during spring IAB meeting	Weaknesses are identified by grading matrix and panel survey and a strategy is discussed at the fall faculty meeting	Goal 1,2

5	Strategic Plan Progress Review	D	Fall 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 and CSM-IAB	Goal 1-6
9	Co-op Survey	I	Completed by employers hiring students for Co-ops	Fall, Spring, Summer	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 1,2
7	Senior Exit Survey	I	Completed by all graduating seniors	Fall, 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 and monitored.	Goal 1

**Degree Program Objectives Evaluation and Corrective Action**  
(Section 9.5.3 / 9.5.4)

The performance measures for the degree program objectives are listed below along with the associated measures. The targets and performance actuals assess the degree of meeting the goals (as of 2022) so that the corrective actions can be developed in an event of not meeting the goals or targets.

**Undergraduate program measures, targets, actuals, sequence of data collection and corrective actions**

<b>Measure</b>	<b>Target</b>	<b>Actuals (2022)</b>	<b>Person responsible for data collection</b>	<b>Sequence</b>	<b>Corrective Action Taken</b>
Average ACT/SAT score and entering GPA	(21/1000) 3.0	(20/957)  3.02	University Registrar	Semester	Goal met. No action required.
Cumulative GPA	3.0	2.87	Department Head	Semester	Goal not met. Remedial work provided early in course to improve student learning.
Graduation Rate	100%	90%	Department Head	6 years	Goal not met. Students will be STRONGLY encouraged to attend REACH Center tutoring and faculty will seek to provide additional advisement and student engagement..
Retention Rate	100%	90%	Department Head	4 years	Goal not met. Hire fulltime department head to assist with course advisement and student engagement.
Direct Student Learning Outcome Assessment Average	80%	85%	Faculty	Semester	Goal met. No action required.
AC exam results	Average area score => 70%	AC exam not taken / not currently used as an assessment measure	Department Head	Semester	AC Exam suspended indefinitely (TBD) for students.
Competition teams event participation	2 events per year	1	Department Head	Annual	Goal not met. Hire faculty to assist competition team with additional IAB support.

Number of courses with hands-on learning.	4	2	Department Head	Annual	Goal not met. Full-time faculty encouraged to find opportunities for hands-on learning.
Number of courses that effectively integrate technology	4	4	Department Head	Annual	Goal met. No action required.
Number of construction jobsite visits per year	4	1	Department Head	Annual	Goal not met. Faculty encouraged to find on-campus and local construction jobsite opportunities to visit in person, as well as, incorporate virtual visits.
Graduating seniors exit survey	3.5/5	3.34	Department Head or Program Coordinator	Annual	Goal not met. Students to be required to complete exit survey as part of Capstone class course.
One and five-year alumni survey	3.5/5	3.37	Department Head or Program Coordinator	Annual	Goal not met. Department head/Program Coordinator to ensure distribution of survey.
Co-op / Internship Survey	3.5/5	No Co-op for 2021-22	Department Head or Program Coordinator	Annual	Goal not met. Department head/Program Coordinator to ensure distribution of survey.
Assessment of the quality of instruction in each course by students	Above College Average	TBD	SACSCOC Coord.	Semester	Goal not met. CSM Department Head to work closely with SACSCOC Coord. to obtain information.
Permanent Placement rate within 3 months after graduation	100%	100%	Department Head or Program Coordinator	Semester	Goal met. No action required.

Average Salary (Internship) / (Permanent Placement)	\$15/hr.   \$55k/yr	\$15/hr   \$71k/yr	Department Head or Program Coordinator	Annual	Goal met. No action required.
Percentage of Students completing an internship	95%	60%	Department Head or Program Coordinator	Annual	Goal not met Department Head/Program Coordinator will engage IAB members and other industry partners to ensure internship opportunities.
Percentage of students completing a co-op	15%	0%	Department Head or Program Coordinator	Annual	Department Head/Program Coordinator will engage IAB members and other industry partners to ensure Co-op opportunities.
Number of companies attending the career fairs and/or Meet & Greets	20	20	Department Head or Program Coordinator	Annual	Goal met. No action required.

## Assessment Implementation Cycle

The CSM program conducts a continuous and comprehensive assessment of its academic and non-academic performance on an annual basis. Student learning outcomes are assessed through assignments or exam questions in each course, and the results are reported and tracked on the SLO Evaluation Summary.

The SLO Evaluation Summary will summarize the direct assessment of the 20 SLOs. The faculty has established a target of 70% of all students scoring 80% or greater on the tools used to assess SLO. Failure to meet marked improvement from evaluations of the degree program objectives and learning compared to the stated performance criteria over two evaluation cycles (2 academic years) triggers an action by the faculty to review the teaching methodology and make changes aimed at improving student learning.

The results and outcomes of assessments are documented using the assessment tools. Evaluation of the degree program objectives and learning outcomes are being 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 area. Table 9.1.4.2 shows due dates for data collection, comparison with targets, suggested changes, and implementation of the suggested changes.

Table 9.1.4.2 Due dates for data collection and evaluation of new and implemented changes

Data collection completed	Review by the curriculum committee	Proposed Action items developed	Review by CSM faculty; implementation plan created for approved actions	Implement changes (minor)	Implement changes (major)
Fall- December 12 Spr. – April 29	May 30	May 30	August 15	Current academic year	Next academic year

The current version of the assessment cycle was initiated in Fall 2020 for the academic year 2020- 2021. The CSM program has continued an annual review of its assessment plan by the CSM-IAB and the department head through the cycle which will be completed in the year 2025. After reviewing the data, it was determined that some goals needed to be readjusted. These adjusted goals were reflected starting Fall 2021.

## CSM Program SLO to Curriculum Map

Course Number	Course Title	Create					Analyze			Apply			Understand							
		SLO 1 Write	SLO 2 Oral	SLO 3 Safety	SLO 4 Estimate	SLO 5 Sched	SLO 6 Ethics	SLO 7 Docs	SLO 8 Meth.	SLO 9 Team	SLO 10 IT	SLO 11 Survey	SLO 12 Deliver	SLO 13 Risk	SLO 14 Account	SLO 15 QA/QC	SLO 16 Control	SLO 17 Contract	SLO 18 Sustain	SLO 19 Structure
CSMT 101	Intro to Construction I																			
CSMT 102	Intro. to Construction II																			
CSMT 331	Materials & Structures in Residential Construction		D1																	D1
CSMT 332	Materials & Structures in Commercial/Industrial Construction								D1						D1					
CSMT 341	Environmental Control Systems I																			D1
CSMT 342	Environmental Control Systems II																			
CSMT 345	Construction Layout and Surveying										D1									
CSMT 348	Construction Methods											D1								
CSMT 350	Green Building Design and Construction																	D1		
CSMT 352	Construction Safety			D1																
CSMT 360	Construction Finance & Accounting													D1						
CSMT 401	Advanced Construction I	D1														D1				
CSMT 402	Advanced Construction II					D1														
CSMT 431	Construction Management I																			
CSMT 432	Construction Management II						D1													
CSMT 441	Cost & Estimating I									D1										
CSMT 442	Cost & Estimating II				D1															
CSMT 480	Construction Capstone												D1				D1			
Exit Survey	Min 3.5 on 1 to 5 Scale	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA

*DA1=Direct Assessment - 1st Yr through 4th Yr CSM Courses, IA=Indirect Assessment – Senior Exit Survey*

Upon graduation from an accredited ACCE 4-year program a graduate shall be able to:

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1 Create written communications appropriate to the construction discipline</li> <li>2 Create oral presentations appropriate to the construction discipline</li> <li>3 Create a construction project safety plan</li> <li>4 Create construction project cost estimates</li> <li>5 Create construction project schedules</li> <li>6 Analyze professional decisions based on ethical principles</li> <li>7 Analyze construction documents for planning and management of construction processes</li> <li>8 Analyze methods, materials, and equipment used to construct projects</li> <li>9 Apply construction management skills as a member of a multi-disciplinary team</li> <li>10 Apply electronic-based technology to manage the construction process</li> </ol> | <ol style="list-style-type: none"> <li>11 Apply basic surveying techniques for construction layout and control</li> <li>12 Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.</li> <li>13 Understand construction risk management</li> <li>14 Understand construction accounting and cost control</li> <li>15 Understand construction quality assurance and control</li> <li>16 Understand construction project control processes</li> <li>17 Understand the legal implications of contract, common, and regulatory law to manage a construction project</li> <li>18 Understand the basic principles of sustainable construction</li> <li>19 Understand the basic principles of structural behavior</li> <li>20 Understand the basic principles of mechanical, electrical, and piping systems</li> </ol> |
|--|--|

School of Architecture and Construction Science - CSM Department - Student Learning Outcomes - Course Assessment Evaluation									
CSMT 480 - CONSTRUCTION MANAGEMENT CAPSTONE									
Goal: 70% of students to achieve a minimum outcome score of 70%		Learning Outcome					Student Scores		
Joel Wao Instructor Name		SLO 2	SLO 4	SLO 5	SLO 7	SLO 10	SLO 18	Student SLO Average	Course Grade (A,B,C,D,F)
SPRING 2020 Semester		Create oral presentations appropriate to the construction discipline	Create construction project estimates	Create construction project schedule	Analyze construction documents for planning and management of construction processes	Apply electronic based technology to manage the construction process	Understand the basic principles of sustainable construction		
CSMT 480-01 Course Number		Presentation 1, 2 and Final presentation	Conceptual estimate (assign. 1-2); Detailed estimate (assign 2-1); Detailed estimate after value engineering (assign. 2-3);	Completed schedule (assign. 2-4)	Scheduling (documents)-assign 2-4; Estimating (documents)-assign. 2-1	Estimating (assign. 2-1); Scheduling(assign. 2-4); Change order(Assign. 3-3)	Green Building (assg. 2A)		
Student Assessment Method									
1	86.0%	98.0%	95.0%	96.0%	97.0%	92.0%	91%	A	
2	86.0%	97.0%	95.0%	96.0%	97.0%	91.0%	90%	A	
3	81.0%	98.0%	93.0%	97.0%	98.0%	92.0%	91%	A	
4	86.0%	97.0%	95.0%	96.0%	97.0%	89.0%	90%	A	
5	81.0%	98.0%	93.0%	97.0%	98.0%	89.0%	91%	B	
6	81.0%	98.0%	93.0%	97.0%	98.0%	92.0%	91%	B	
7	81.0%	98.0%	93.0%	97.0%	98.0%	81.0%	91%	A	
8	80.0%	72.0%	73.0%	81.0%	87.0%	81.0%	80%	B	
9	80.0%	72.0%	73.0%	97.0%	87.0%	91.0%	81%	B	
10	81%	98%	93%	97%	98%	89%	91%	A	
11	81%	98%	93%	96%	98%	92%	90%	B	
12	86%	97%	95%	96%	97%	92%	90%	A	
13	86%	97%	95%	81%	97%	94%	89%	A	
14	80%	72%	73%	81%	87%	78%	77%	C	
15	80%	72%	73%	81%	87%	78%	78%	C	
16	80%	72%	73%	81%	87%	78%	77%	C	
17	80%	72%	73%	81%	87%	78%	78%	C	
Class Average		82%	89%	87%	91%	94%	87%	86%	
%of students meeting goal		100%	65%	65%	100%	100%	87%	76%	
<b>Use this chart to complete the student learning outcome evaluation for each of your students. Please give a score of 0% to 100%</b>									
17									
Total students in Course		0%= fully failed to met SLO requirement				100%=fully met SLO requirement			
<b>Please return this form to the Department Head at the end of each semester along with grading rubric for non-exam assessments</b>									
<b>ACTIONS TAKEN IF GOALS NOT MET.</b>									
SLO 4 - Less than 70% of students met SLO 4 goal. Faculty encouraged to introduce and reinforce creating estimating concepts in earlier courses to increase mastery in senior level course thus, enhance student learning.									
SLO 5 - Less than 70% of students met SLO 5 goal. Faculty encouraged to introduce and reinforce scheduling concepts in earlier courses to increase mastery in senior level course thus, enhance student learning.									



