



Construction Science, BS

BS-COSC

Program Description

Please fill in the fields below. Refer to the [Academic Program Assessment Guidelines](#) manual for more information.

1 Discipline-specific purpose and focus of program(s) (Be sure to address ALL academic programs/credentials included in this assessment plan):

The Construction Science Department undergraduate program will maintain a strong general, relevant, current, comprehensive, and broad based undergraduate degree program, founded in construction fundamentals applicable to all sectors of the industry and responsive to the ever evolving industry and industry trends.

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2 List the campus/approved location where the program(s) is/are delivered. Indicate if the program(s) is/are delivered through distance education technology (synchronous, asynchronous, or both):

College Station - main campus. Traditional course, Synchronous delivery

McAllen Campus _ Higher Education Center, Traditional face-to-face courses, some with Synchronous delivery from College Station: Web Based course with asynchronous delivery

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3 During which academic year were students first enrolled in this program? (If more than one program is included in this plan, select the appropriate response for the newest program.)

Prior to AY19-20

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Internal Feedback on Program Description

1 Feedback & Recommendations for Revision:

Isn't the BS offered at McAllen as well? I think that would need to be listed on question 2 as well.

Assessment Plan

1 Select one or more Program Learning Outcomes (PLOs) to enter Measures and Targets (and/or Findings). The checkbox appears to the left of each PLO. You may also add new PLOs by clicking the +Add Outcome button.

2 BS-COSC-ETHICS - Ethical Analysis

Students will analyze professional decisions based on ethical principles

Relevant Associations

1 Select Relevant Associations from the menu. Select only the associations that directly align with the PLO. If multiple sets of associations are listed, please select the appropriate association(s) from each set.

Selected Outcomes:

- o CORE-PR - Personal responsibility
- o CORE-SR - Social responsibility
- o TAMU-S-EthicsandSR - Ethical & Social Responsibility
- o TAMU-UG-PRandSR - Personal & Social Responsibility

Internal Feedback on Program Learning Outcome

1 PLO reflects what students are expected to learn by the end of the program (i.e., program-level, not course-level):

Yes

2 PLO is mapped appropriately to Relevant Association(s):



3 Feedback & Recommendations for Revision:

Measures, Targets & Findings

1

Measure Name:

Data collection (what data are gathered, how it is gathered, and from/by who):

Direct assessment will occur for SLO 6 using an assignment from COSC 463 (Construction Law I). The assessment instrument will be administered by course instructors in class to students as part of the regular course curriculum.

Methodology or data analysis strategy:

Data reported will be the average performance of all students on the ethics portion of the assignment rubric.

Target(s)
Target Description:

The cumulative class average of student scores for SLO 6 will be a 70% or higher class average score on the ethics portion of the rubrics.

Supporting Documentation:

[COSC 381 - Team Ethics Report Instructions - Rubric.docx](#)

[COSC 381 - Team Ethics Report Instructions - Rubric.docx](#)

[AIC Code of Ethics\(1\).docx](#)

[Ethics Team Scenarios I to VI.docx](#)

Internal Feedback on Measure and Target(s)
Type of measure:

Direct

Measure aligns with PLO as defined:

Yes

Both data collection and methodology are clear:

Data collection not clear

Target(s) is/are clear and specific:

Yes

All referenced or relevant rubrics/surveys are attached or sufficiently described:

Yes

Feedback and Recommendations for Revision on Measure and Target(s):


Target Status Indicator:

Met

Findings:

The assignment called for students to explore the legal risks of a construction-related dispute that has not yet been litigated by applying what they have learned over the semester about construction law and writing. They are also required to analyze the behavior of the party/parties in the dispute to determine whether the party/parties acted ethically. Students understand that the construction industry is high risk, both physically and financially. They understand that the contract is of the utmost importance and that the executed contract along with statutory, common, and regulatory laws establish the limits of risk within the industry. They are able to identify major legal issues.

Implications and/or how these data compare to the last time the PLO was measured:

SLO 6	Analyze professional decisions based on ethical principles						
Type	Semester	Course Group	No. of students	Assessment Tool	Desired performance	Class Average	Percentage of students getting more than 70%
DA	Fall 21	COSC 463: Introduction to Construction Law	124	Legal analysis	Class average will be 70% or more	78.12%	87.22%
Spring 22	151	Legal analysis	72.61%	69%			

If applicable, provide a brief explanation as to why no data were collected/reported for this measure:

Feedback on Findings

Target status indicator is accurate based on reported findings:

Findings statement includes information regarding implications and/or comparison with past findings:

Where appropriate, findings are disaggregated (e.g., by program, by mode of delivery, by geographic location):

Feedback and Recommendations for Revision on Findings:

Measure Name:

SLO 6 _ Senior Exit Survey _ Confidence Level

Data collection (what data are gathered, how it is gathered, and from/by who):

As an indirect assessment of the student learning outcomes, an exit survey will be administered to all COSC students immediately prior to their graduation, soliciting their opinions with respect to their educational experiences at TAMU. One section of the exit survey will ask students to indicate their confidence levels to perform each of the 20 degree program student learning outcomes at the appropriate Bloom's Taxonomy level. One item (SLO #6) of this section asks students to indicate how confident they are in their ability analyze professional decisions based on ethical principles. Responses will utilize a four point Likert-type scale (4 = Very Confident; 3 = Confident; 2 = Somewhat Confident; 1 = Not Confident). Data collected and reported for the outcome reported here will come from student responses to item 6 (SLO #6) in the SLO section of senior exit survey.

Methodology or data analysis strategy:

The targeted performance criteria for SLO #6 *Students will be able to analyze professional decisions based on ethical principles* will be set at a minimum average score of student responses of 2.51, indicating students are, at minimum, "confident" in their ability analyze professional decisions based on ethical principles. The cut points will be: 0 - 1.5 = Not Confident; 1.51 - 2.50 = Somewhat Confident; 2.51 - 3.50 = Confident; and 3.51 - 4.0 = Very Confident.

Target(s)

Target Description:

For the student learning outcome "*Analyze professional decisions based on ethical principles*" the cumulative mean score of all student responses will be a minimum score of 2.51 or higher indicating students are, at minimum, "confident" analyzing professional decisions based on ethical principles.

Supporting Documentation:

[Senior Exit Survey Questionnaire _ Fall 2018.pdf](#)

Internal Feedback on Measure and Target(s)

Type of measure:

Indirect

Measure aligns with PLO as defined:

Yes

Both data collection and methodology are clear:

Yes

Target(s) is/are clear and specific:

Yes

All referenced or relevant rubrics/surveys are attached or sufficiently described:

Yes

Feedback and Recommendations for Revision on Measure and Target(s):

Target Status Indicator:

Met

Findings:

Implications and/or how these data compare to the last time the PLO was measured:

If applicable, provide a brief explanation as to why no data were collected/reported for this measure:

Feedback on Findings

Target status indicator is accurate based on reported findings:

Findings statement includes information regarding implications and/or comparison with past findings:

Where appropriate, findings are disaggregated (e.g., by program, by mode of delivery, by geographic location):

Feedback and Recommendations for Revision on Findings:

3 BS-COSC-OCOMM - Oral Communications

Create oral presentations appropriate to the construction discipline

Relevant Associations

1 Select Relevant Associations from the menu. Select only the associations that directly align with the PLO. If multiple sets of associations are listed, please select the appropriate association(s) from each set.

Selected Outcomes:

- o CORE-OCOMM - Communication skills (Oral)
- o TAMU-S-COMM - Communication
- o TAMU-UG-COMM - Communicate effectively

Internal Feedback on Program Learning Outcome

1 PLO reflects what students are expected to learn by the end of the program (i.e., program-level, not course-level):

2 PLO is mapped appropriately to Relevant Association(s):

3 Feedback & Recommendations for Revision:

Measures, Targets & Findings

1

Measure Name:

Data collection (what data are gathered, how it is gathered, and from/by who):

Direct assessment will occur for SLO 2 using an assignment from COSC courses 440, 441, 442, 443, and/or 446 (Capstone). The assessment instruments will be administered by course instructors in class to students as part of the regular course curriculum.

Methodology or data analysis strategy:

Data reported will be the average performance of all students on the assignment.

Target(s)

Target Description:

The cumulative class average of student scores for SLO 2 will be a 70% or higher class average score on the assessment instrument.

Supporting Documentation:

[COSC 440 Presentation Judging Rubric.pdf](#)

Internal Feedback on Measure and Target(s)

Type of measure:

Direct

Measure aligns with PLO as defined:

No

Both data collection and methodology are clear:

Yes

Target(s) is/are clear and specific:

Yes

All referenced or relevant rubrics/surveys are attached or sufficiently described:

Yes

Feedback and Recommendations for Revision on Measure and Target(s):

I see that this rubric will be used when students are giving an oral presentation, but I don't see that the rubric really evaluates oral communication; instead, most of the dimensions are related to the construction content of the presentation. Content is part of oral communication ability, but I would think other dimensions of oral communication itself would be included on the rubric, such as organization, delivery, language choice, etc.

Target Status Indicator:

Met

Findings:

Students understand how to think about construction site logistics and create a site logistics plan that manages the competing priorities of materials, deliveries, equipment, traffic control, etc. Students understand the project and detail required to propose an acceptable solution to the project for an Owner to select the best team. The students experience team dynamics and how a production homebuilder enterprise operates as both an owner and a contractor at the project level. The students learn how sensitive cash flow projections are and how many decisions go into a RDP.

Implications and/or how these data compare to the last time the PLO was measured:

Type	Semester	Course Group	No. of students	Assessment Tool	Desired performance	Class Average	Percentage of students getting more than 70%
DA	Fall 21	COSC 440: Interdisciplinary Capstone	21	Student Oral Presentation	Class average will be 70% or more	72%	100%
Spring 22	48	Presentation of Project Analysis	80.24%	75%			
Fall 21	COSC 441: Residential Capstone	25	Student Oral Presentation	79.80%	100%		
Spring 22	48	Presentation of Project Analysis	80.24%	75%			
Fall 21	COSC 442: Commercial Capstone	51	Student Oral Presentation	87.12%	100%		
Spring 22	54	89.75%	100%				
COSC 443: Industrial Capstone	20	Student Oral Presentation	96.00%	100%			

COSC 446: Specialty Capstone	25	Student Oral Presentation	92.00%	100%
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If applicable, provide a brief explanation as to why no data were collected/reported for this measure:

Feedback on Findings

Target status indicator is accurate based on reported findings:

Findings statement includes information regarding implications and/or comparison with past findings:

Where appropriate, findings are disaggregated (e.g., by program, by mode of delivery, by geographic location):

Feedback and Recommendations for Revision on Findings:

Measure Name:

SLO 2 _ Senior Exit Survey _ Confidence Level

Data collection (what data are gathered, how it is gathered, and from/by who):

As an indirect assessment of the student learning outcomes, an online exit survey will be administered to all COSC students as part of their Capstone course in students last semester of coursework prior to graduation. The exit survey solicits students' opinion with respect to their educational experiences at TAMU. Students will be asked to indicate how confident they are in their ability to create oral presentations appropriate to the construction discipline. Responses will utilize a four point Likert-type scale (4 = Very Confident; 3 = Confident; 2 = Somewhat Confident; 1 = Not Confident).

Methodology or data analysis strategy:

For each student learning outcome, the targeted performance criteria will be set at a minimum average score of cumulative student responses of 2.51, indicating students are, at minimum, "confident" in their ability for SLO 2 to create oral presentations appropriate to the construction discipline. The cut points will be: 0 - 1.5 = Not Confident; 1.51 - 2.50 = Somewhat Confident; 2.51 - 3.50 = Confident; and 3.51 - 4.0 = Very Confident.

Target(s)

Target Description:

For the student learning outcome "Create oral presentations appropriate to the construction discipline" students' average score will be a minimum score of 2.51 or higher indicating students are, at minimum, "confident" creating oral presentations appropriate to the construction discipline, as students graduating from the program should be confident applying the knowledge and skills gained from their degree program in their future careers.

Supporting Documentation:

[Senior Exit Survey Questionnaire _ Fall 2018.pdf](#)

Internal Feedback on Measure and Target(s)

Type of measure:

Indirect

Measure aligns with PLO as defined:

Yes

Both data collection and methodology are clear:

Yes

Target(s) is/are clear and specific:

Yes

All referenced or relevant rubrics/surveys are attached or sufficiently described:

Yes

Feedback and Recommendations for Revision on Measure and Target(s):

Target Status Indicator:

Findings:

Implications and/or how these data compare to the last time the PLO was measured:

If applicable, provide a brief explanation as to why no data were collected/reported for this measure:

Feedback on Findings

Target status indicator is accurate based on reported findings:

Findings statement includes information regarding implications and/or comparison with past findings:

Where appropriate, findings are disaggregated (e.g., by program, by mode of delivery, by geographic location):

Feedback and Recommendations for Revision on Findings:

4 BS-COSC-WCOMM - Written Communications

Create written communications appropriate to the construction discipline

Relevant Associations

- 1 Select Relevant Associations from the menu. Select only the associations that directly align with the PLO. If multiple sets of associations are listed, please select the appropriate association(s) from each set.

Selected Outcomes:

- o CORE-WCOMM - Communication skills (Written)
- o TAMU-S-COMM - Communication
- o TAMU-UG-COMM - Communicate effectively

Internal Feedback on Program Learning Outcome

- 1 PLO reflects what students are expected to learn by the end of the program (i.e., program-level, not course-level):

Yes ▾

- 2 PLO is mapped appropriately to Relevant Association(s):

Yes ▾

Measures, Targets & Findings

1

Measure Name:

SLO 1 _ Written Communication _ DA

Data collection (what data are gathered, how it is gathered, and from/by who):

Direct assessment will occur for SLO 1 using assignments from COSC 494 (Internship). The assessment instruments will be administered by course instructors in class to students as part of the regular course curriculum.

Methodology or data analysis strategy:

Data reported will be the average performance of all students on the assignment.

Target(s)

Target Description:

The cumulative class average of student scores for SLO 1 will be a 70% or higher class average score on the assessment instrument.

Supporting Documentation:

[COSC 494 Final Internship Report Outline Rubric.pdf](#)

Internal Feedback on Measure and Target(s)

Type of measure:

Direct

Measure aligns with PLO as defined:

No

Both data collection and methodology are clear:

Yes

Target(s) is/are clear and specific:

Yes

All referenced or relevant rubrics/surveys are attached or sufficiently described:

Yes

Feedback and Recommendations for Revision on Measure and Target(s):

My feedback is similar to the oral communication feedback. I see that this rubric will be used when students are writing a paper, but I don't see that the rubric really evaluates written communication; instead, most of the dimensions are related to the content of the paper. Content is part of written communication ability, but I would think other dimensions such as syntax, organization/structure, tone, etc. would be included.

Target Status Indicator:

Met

Findings:

The students seem to understand how to describe the activities and experiences, the application of technology used, progress with their communication skills, and the lessons learned during their internship following spelling and grammatical guidelines.

Implications and/or how these data compare to the last time the PLO was measured:

SLO 1		Create communication appropriate to the construction discipline					
Type	Semester	Course Group	No. of students	Assessment Tool	Desired performance	Class Average	Percentage of students getting more than 70%
DA	Fall 21	COSC 494: Internship	131	Final Internship Report	Class average will be 70% or more	92%	98.40%
Spring 22	COSC 494: Internship	132	93%	98%			

If applicable, provide a brief explanation as to why no data were collected/reported for this measure:

Feedback on Findings

Target status indicator is accurate based on reported findings:

Findings statement includes information regarding implications and/or comparison with past findings:

Where appropriate, findings are disaggregated (e.g., by program, by mode of delivery, by geographic location):

Feedback and Recommendations for Revision on Findings:

Measure Name:

SLO 1 _ Senior Exit Survey _ Confidence Level

Data collection (what data are gathered, how it is gathered, and from/by who):

As an indirect assessment of the student learning outcomes, an exit survey will be administered to all COSC students immediately prior to their graduation, soliciting their opinions with respect to their educational experiences at TAMU. Students will be asked to indicate how confident they are in their ability to create written communications appropriate to the construction discipline. Responses will utilize a four point Likert-type scale (4 = Very Confident; 3 = Confident; 2 = Somewhat Confident; 1 = Not Confident).

Methodology or data analysis strategy:

For each student learning outcome, the targeted performance criteria will be set at a minimum average score of student responses of 2.51, indicating students are, at minimum, "confident" in their ability to create written communications appropriate to the construction discipline.. The cut points will be: 0 - 1.5 = Not Confident; 1.51 - 2.50 = Somewhat Confident; 2.51 - 3.50 = Confident; and 3.51 - 4.0 = Very Confident.

Target(s)

Target Description:

For the student learning outcome "Create written communications appropriate to the construction discipline" students' average score will be a minimum score of 2.51 or higher indicating students are, at minimum, "confident" creating written communications appropriate to the construction discipline, as students graduating from the program should be confident applying the knowledge and skills gained from their degree program in their future careers.

Supporting Documentation:

[Senior Exit Survey Questionnaire _ Fall 2018.pdf](#)

Internal Feedback on Measure and Target(s)

Type of measure:

Indirect

Measure aligns with PLO as defined:

Yes

Both data collection and methodology are clear:

Yes

Target(s) is/are clear and specific:

Yes

All referenced or relevant rubrics/surveys are attached or sufficiently described:

Yes

Feedback and Recommendations for Revision on Measure and Target(s):

Target Status Indicator:

Findings:

Implications and/or how these data compare to the last time the PLO was measured:

If applicable, provide a brief explanation as to why no data were collected/reported for this measure:

Feedback on Findings

Target status indicator is accurate based on reported findings:

Findings statement includes information regarding implications and/or comparison with past findings:

Where appropriate, findings are disaggregated (e.g., by program, by mode of delivery, by geographic location):

Feedback and Recommendations for Revision on Findings:

Use of Results for Seeking Improvement

Please refer to the [OIE&E website](#) for additional resources.

1

Type of action:



Based on the findings reported above, what action has been identified by program faculty for the purpose of improving student learning? Include a tentative timeline for implementation, the party or group responsible for implementation, and the rationale for why program faculty believe this will lead to improvements in the identified PLO.

How will you know whether the action improved learning? Be specific.

How were faculty and program leadership involved in the development of this action?

Internal Feedback on Use of Results

Action is designed to improve student learning:

Includes consideration of how faculty know the action will have worked:

Explains how faculty and program leadership were involved in the development of the action:

Feedback and Recommendations for Revision:

Status Update on a Previously Identified Action

1

1. Provide an update on a curricular change or content-based action from a previous program assessment report.
2. What changes, if any, have occurred in PLO achievement since the action was taken?

Supporting Documentation (Optional):

No document was selected.

Internal Feedback on Status Update

Status update on a previously identified action is provided:

Action is content-based/curricular in nature (i.e., NOT a change to the assessment process):

Discusses the impact of the action to date:

Feedback and Recommendations for Revision:

Final Approver (Department) Comments

1

I have reviewed and approve this Assessment Report.

Yes

No

2

Comments:

OIE&E Comments

1

Sufficient description provided for use of results for continuous improvement:



No ▾

2 Assessment Report overall rating:

Noncompliant ▾

3 Explanation of rating & recommendations for future assessment plans/reports:

Some but not all of the findings were reported. No use of seeking improvement documented, nor is there a status update.

CLOSE AND EXIT