

# Construction Management, MS

MS-COMG

Submit Date: Feb 17, 2020

Last Updated: Jan 21, 2020 at 1:48PM by Elizabeth Piwonka

## Mission of the Academic Program

- 1 Briefly state the purpose of the academic program(s) covered in the Assessment Plan/Report. The mission statement should (1) explicitly state the name and level of the program(s) covered; (2) be clear and concise; and, (3) summarize the purpose/value of the program. NOTE: If the program is offered at multiple locations and/or online, information regarding mode of delivery and/or geographic location(s) of the program(s) should be included as well.

The Construction Science Department is dedicated to education, discovery, development and application of knowledge in the field of construction while fulfilling the land grant mission of Texas A&M University and enhancing the economic development of the State of Texas. Our mission of providing the highest quality academic programs is inseparable from our mission of developing new understanding through teaching, research and service. We prepare students to assume roles in leadership, responsibility, and service to society.

## Internal Feedback on Mission of the Academic Program

- 1 The degree(s)/certificate is/are explicitly stated:

Select an Option ▼

- 2 Mission Statement is clear and concise:

Select an Option ▼

- 3 Mission Statement addresses the overall purpose of the program:

Select an Option ▼

- 4 Feedback on Mission Statement:

## Feedback on Mission of the Academic Program by Office of Institutional Effectiveness & Evaluation (IE&E)

- 1 The degree(s)/certificate is/are explicitly stated:

No ▼

2 Mission Statement is clear and concise:

Yes ▼

3 Mission Statement addresses the overall purpose of the program:

No ▼

4 Feedback on Mission Statement:

This mission statement is specific to the department, not the masters program.

## Assessment Plan (Outcomes, Measures, and Targets)

1 Associations, Measures, and Targets

2 **MS-COMG-CT - Critical Thinking**

Students will apply critical thinking.

### Relevant Associations

1 Please select the University and/or System-level learning outcome(s) that most closely align(s) with the program learning outcome above. Undergraduate programs/certificates should select relevant associations from the University baccalaureate outcomes (TAMU-UG) and from the EmpowerU outcomes (TAMU-S). Combined assessment plans that include both masters-level and doctoral-level programs should select from both sets of University-level outcomes (TAMU-Masters, TAMU-Doctoral).

Selected Outcomes:

- TAMU-Masters-APK - Apply knowledge to solve problems
- TAMU-Masters-COMM - Communicate effectively
- TAMU-Masters-DOK - Master the depth of knowledge required for a degree
- TAMU-Masters-Ethics - Choose ethical course of action
- TAMU-Masters-INT - Integrate information
- TAMU-Masters-RES - Demonstrate research skills

### Internal Feedback on Outcomes

1 Outcome is clearly written, reflecting what students are expected to learn upon completion of the program:

Select an Option ▼

2 Outcome is measurable

Select an Option ▼

3 Outcome is mapped appropriately to university-level outcome(s):

Select an Option ▼

- 4 Outcome reflects program expectation/graduation requirement rather than student learning:

Select an Option ▼

- 5 Feedback on Outcomes:

## Feedback on Outcomes by Office of Institutional Effectiveness & Evaluation (IE&E)

- 1 Outcome is clearly written, reflecting what students are expected to learn upon completion of the program:

Yes ▼

- 2 Outcome is measurable

Yes ▼

- 3 Outcome is mapped appropriately to university-level outcome(s):

No ▼

- 4 Outcome reflects program expectation/graduation requirement rather than student learning:

No ▼

- 5 Feedback on Outcomes:

This outcome is vague. Can "critical thinking" be operationalized a bit more? Also, make sure the mapping to the insitutional learning outcomes is meaningful - there will likely only be one or two linkages.

## Related Measures

1

Measure Name:

GSLO \_ 2 \_ Apply critical thinking \_ IA \_ Confidence

Measure Description:

As an indirect assessment of the student learning outcomes, an exit survey will be administered to all graduate 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 apply each of the student learning outcomes. Responses will utilize a four point Likert-

type scale (1 = Very Confident; 2 = Confident; 3 = Somewhat Confident; 4 = Not Confident).

#### Supporting Documentation:

Supporting Documentation would include referenced documents such as scoring/grading rubrics, surveys, assignment descriptions, etc.

The selected document artifact is attached to this form.

Select Document Artifacts ▼



#### Internal Feedback on Measure

Measure is a direct measure of student learning:

Select an Option ▼

Data collection is clear (i.e., where the data are coming from):

Select an Option ▼

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

Select an Option ▼

Measure clearly aligns with the outcome as defined:

Select an Option ▼

All referenced rubrics/surveys are attached or sufficiently described:

Select an Option ▼

Feedback on Measure:

#### Feedback on Measure by Office of Institutional Effectiveness & Evaluation (IE&E)

Measure is a direct measure of student learning:

No ▼

Data collection is clear (i.e., where the data are coming from):

Yes ▼

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

Yes ▼

Measure clearly aligns with the outcome as defined:

Yes ▼

All referenced rubrics/surveys are attached or sufficiently described:

Yes ▼

Feedback on Measure:

## Targets

For each measure, provide a description of the standard (the minimally acceptable student performance) as well as the target (the minimum proportion of students the faculty aspire to have meet the standard in order to be confident that the program is meeting the outcome).

Target Description:

For each student learning outcome students' average score will be a mean score of 2.50 or below indicating students are, at minimum, "confident" applying individual student learning outcomes, as students graduating from the program should be confident applying the knowledge and skills gained from their degree program in their future careers.

### Internal Feedback on Target

Standard (the minimally acceptable performance) is clearly presented and justified:

Select an Option ▼

Target is specific (the proportion that needs to meet the standard):

Select an Option ▼

The target clearly aligns with the measure as described:

Select an Option ▼

Feedback on Target:

### Feedback on Target by Office of Institutional Effectiveness & Evaluation (IE&E)

Standard (the minimally acceptable performance) is clearly presented and justified:

Yes ▼

Target is specific (the proportion that needs to meet the standard):

Yes ▼

The target clearly aligns with the measure as described:

Yes ▼

Feedback on Target:

## Findings

When reporting findings, indicate whether or not a given target was MET, PARTIALLY MET, or NOT MET. Also include a brief discussion regarding the meaning/value of the findings for purposes of continuous improvement. IF findings are not being reported in a given cycle for a particular measure, include a brief explanation as to why not.

### Finding Description:

#### Target Met:

During the 2018/19 academic year Spring 2019 and Summer 2019 Graduate Exit Surveys had 6 and 2 respondents, respectively, for a total of 8 respondents. Students responded to the question: "As a result of your COSC degree program, how confident do you feel in your ability to apply critical thinking?" The average score for AY 2018/19 was 1.17 (Very Confident) meeting the target of a mean score of 2.50 or below. The scale used was: Very Confident = 1.00 – 1.50; Confident = 1.51 – 2.50; Somewhat Confident = 2.51 – 3.50; Not Confident = 3.51 – 4.00.

While students were very confident in their ability to apply critical thinking skills (indirect assessment) their direct assessment score of 85%, although it meets the minimum target of 80%, indicates a need for improvement to a minimum score of 90% in order to more closely align with students' self-perception of ability. This gap between actual and perceived may be addressed through increased emphasis on the application of critical thinking skills in the curriculum.

#### Target:

Select an Option ▼

### Internal Feedback on Finding

Findings align with the measure and target as described:

Yes ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Yes ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

No ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

### Feedback on Finding by Office of Institutional Effectiveness & Evaluation (IE&E)

Findings align with the measure and target as described:

Yes ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

...

Yes ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

No ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

[Do not forget to select the option of "met" from the dropdown.](#)

### Data-informed Actions

For each of the findings reported, the program should indicate how it is going to use/act on the assessment findings in the upcoming academic year. A brief summary of the proposed action(s) should be provided, including a tentative timeline for implementation and the party or group responsible for carrying out the action(s). Also include a rationale for why program faculty believe the action(s) should lead to improvements in the identified outcome. IF no actions are being taken based on a given finding, a brief statement of explanation should be provided.

#### Data-informed Action Description:

During AY 19/20, COSC graduate faculty will provide greater emphasis on critical thinking skills and provide targeted feedback. Increased targeted instruction with appropriate instructor feedback is anticipated to help students develop competency in the actual application of critical thinking skills, thus decreasing the gap between actual performance and self-perceived competency. We expect to see increased student ability reflected in SLO reporting at the end of the AY 19/20 data collection cycle.

#### Internal Feedback on Data-informed Action

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Yes ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Yes ▼

Data-informed Action includes a timeline:

Yes ▼

Data-informed Action identifies a responsible party or group:

Yes ▼

Feedback on Data-informed Action:

Feedback on Data-informed Action by Office of Institutional Effectiveness & Evaluation (IE&E)

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Yes ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Yes ▼

Data-informed Action includes a timeline:

Yes ▼

Data-informed Action identifies a responsible party or group:

Yes ▼

Feedback on Data-informed Action:

Measure Name:

GSLO \_ 2 \_ Apply critical thinking \_ DA \_ COSC 608

Measure Description:

Direct assessment will occur for GSLO 2 using the full assignment from COSC 608 (Structural Principles and Practices). The assessment instrument(s) will be administered by the course instructor in class to students as part of the regular course curriculum. Data reported will be class-level average performance on the full assignment. The assessment instrument requires students to use critical thinking skills to determine methodology to follow in order to solve calculations and determine the most effective option. Reported once every three years.

Supporting Documentation:

Supporting Documentation would include referenced documents such as scoring/grading rubrics, surveys, assignment descriptions, etc.

The selected document artifact is attached to this form.

Select Document Artifacts ▼



### Internal Feedback on Measure

Measure is a direct measure of student learning:

Select an Option ▼

Data collection is clear (i.e., where the data are coming from):

Select an Option ▼

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

Select an Option ▼

Measure clearly aligns with the outcome as defined:

Select an Option ▼

All referenced rubrics/surveys are attached or sufficiently described:

Select an Option ▼

Feedback on Measure:

#### Feedback on Measure by Office of Institutional Effectiveness & Evaluation (IE&E)

Measure is a direct measure of student learning:

Yes ▼

Data collection is clear (i.e., where the data are coming from):

Yes ▼

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

No ▼

Measure clearly aligns with the outcome as defined:

Yes ▼

All referenced rubrics/surveys are attached or sufficiently described:

Yes ▼

Feedback on Measure:

Is the measure an average of the four questions in the attachment? It is difficult to tell based on the description provided, as it seems to leave open a lot of different possibilities.

#### Targets

For each measure, provide a description of the standard (the minimally acceptable student performance) as well as the target (the minimum proportion of students the faculty aspire to have meet the standard in order to be confident that the program is meeting the outcome).

Target Description:

Students cumulative average score for GSLO 2 will be 80% or higher. In order to set a target score during initial data collection of new GSLO data collection system and establishment of baseline date, 80% (letter grade "B") was deemed appropriate as minimum target as students must have a minimum GPA of 3.0 "B" in order to qualify for graduation from the program. Baseline

data will be evaluated after at least 3 years' of data collection have occurred in order to determine if adjustment of new targets is warranted based on trend data and ,if so, the new appropriate minimum targets will be established.

#### Internal Feedback on Target

Standard (the minimally acceptable performance) is clearly presented and justified:

Select an Option ▼

Target is specific (the proportion that needs to meet the standard):

Select an Option ▼

The target clearly aligns with the measure as described:

Select an Option ▼

Feedback on Target:

#### Feedback on Target by Office of Institutional Effectiveness & Evaluation (IE&E)

Standard (the minimally acceptable performance) is clearly presented and justified:

Yes ▼

Target is specific (the proportion that needs to meet the standard):

Yes ▼

The target clearly aligns with the measure as described:

Yes ▼

Feedback on Target:

#### Findings

When reporting findings, indicate whether or not a given target was MET, PARTIALLY MET, or NOT MET. Also include a brief discussion regarding the meaning/value of the findings for purposes of continuous improvement. IF findings are not being reported in a given cycle for a particular measure, include a brief explanation as to why not.

Finding Description:

Target Met:

Students' cumulative average score for GSLO 2, Apply critical thinking during academic year (AY) 2018/19 was 85.0 ( $n = 16$ ). Therefore the target of 80% or greater GSLO cumulative average was met.

While students were very confident in their ability to apply critical thinking skills (indirect assessment) their direct assessment score of 85%, although it meets the minimum target of 80%, indicates a need for improvement to a minimum score of 90% in order to more closely align with students' self-perception of ability. This gap between actual and perceived may be addressed through increased emphasis on the application of critical thinking skills in the curriculum.

Target:

Select an Option ▼

### Internal Feedback on Finding

Findings align with the measure and target as described:

Yes ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Yes ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

No ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

### Feedback on Finding by Office of Institutional Effectiveness & Evaluation (IE&E)

Findings align with the measure and target as described:

Yes ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Yes ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

No ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

### Data-informed Actions

For each of the findings reported, the program should indicate how it is going to use/act on the assessment findings in the upcoming academic year. A brief summary of the proposed action(s) should be provided, including a tentative timeline for implementation and the party or group responsible for carrying out the action(s). Also include a rationale for why program faculty believe the action(s) should

lead to improvements in the identified outcome. IF no actions are being taken based on a given finding, a brief statement of explanation should be provided.

#### Data-informed Action Description:

During AY 19/20, COSC graduate faculty will provide greater emphasis on critical thinking skills and provide targeted feedback. Increased targeted instruction with appropriate instructor feedback is anticipated to help students develop competency in the actual application of critical thinking skills, thus decreasing the gap between actual performance and self-perceived competency. We expect to see increased student ability reflected in SLO reporting at the end of the AY 19/20 data collection cycle.

#### Internal Feedback on Data-informed Action

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Yes ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Yes ▼

Data-informed Action includes a timeline:

Yes ▼

Data-informed Action identifies a responsible party or group:

Yes ▼

Feedback on Data-informed Action:

#### Feedback on Data-informed Action by Office of Institutional Effectiveness & Evaluation (IE&E)

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Yes ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Yes ▼

Data-informed Action includes a timeline:

Yes ▼

Data-informed Action identifies a responsible party or group:

Yes ▼

Feedback on Data-informed Action:

**3 MS-COMG-MGMTPRAC - Management Practices**

Students will apply advanced construction management practices (For example skills and knowledge may include, but not be limited to: Compare different project delivery methods and select the most effective method, and Use project control procedures and inputs)

### Relevant Associations

- 1 Please select the University and/or System-level learning outcome(s) that most closely align(s) with the program learning outcome above. Undergraduate programs/certificates should select relevant associations from the University baccalaureate outcomes (TAMU-UG) and from the EmpowerU outcomes (TAMU-S). Combined assessment plans that include both masters-level and doctoral-level programs should select from both sets of University-level outcomes (TAMU-Masters, TAMU-Doctoral).

Selected Outcomes:

- TAMU-Masters-APK - Apply knowledge to solve problems
- TAMU-Masters-DOK - Master the depth of knowledge required for a degree

### Internal Feedback on Outcomes

- 1 Outcome is clearly written, reflecting what students are expected to learn upon completion of the program:

Select an Option ▼

- 2 Outcome is measurable

Select an Option ▼

- 3 Outcome is mapped appropriately to university-level outcome(s):

Select an Option ▼

- 4 Outcome reflects program expectation/graduation requirement rather than student learning:

Select an Option ▼

- 5 Feedback on Outcomes:

### Feedback on Outcomes by Office of Institutional Effectiveness & Evaluation (IE&E)

- 1 Outcome is clearly written, reflecting what students are expected to learn upon completion of the program:

Yes ▼

- 2 Outcome is measurable

Yes ▼

3 Outcome is mapped appropriately to university-level outcome(s):

Yes ▼

4 Outcome reflects program expectation/graduation requirement rather than student learning:

No ▼

5 Feedback on Outcomes:

Consider providing examples, as this is a vague outcome - particularly to a reader outside of the field.

## Related Measures

1

Measure Name:

GSLO \_ 8 \_ Apply advanced construction management practices \_ IA \_ Confidence

Measure Description:

As an indirect assessment of the student learning outcomes, an exit survey will be administered to all graduate 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 apply each of the student learning outcomes. Responses will utilize a four point Likert-type scale (1 = Very Confident; 2 = Confident; 3 = Somewhat Confident; 4 = Not Confident).

Supporting Documentation:

Supporting Documentation would include referenced documents such as scoring/grading rubrics, surveys, assignment descriptions, etc.

The selected document artifact is attached to this form.

Select Document Artifacts ▼



### Internal Feedback on Measure

Measure is a direct measure of student learning:

Select an Option ▼

Data collection is clear (i.e., where the data are coming from):

Select an Option ▼

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

Select an Option ▼

Measure clearly aligns with the outcome as defined:

Select an Option ▼

All referenced rubrics/surveys are attached or sufficiently described:

Select an Option ▼

Feedback on Measure:

#### Feedback on Measure by Office of Institutional Effectiveness & Evaluation (IE&E)

Measure is a direct measure of student learning:

No ▼

Data collection is clear (i.e., where the data are coming from):

Yes ▼

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

Yes ▼

Measure clearly aligns with the outcome as defined:

Yes ▼

All referenced rubrics/surveys are attached or sufficiently described:

Yes ▼

Feedback on Measure:

#### Targets

For each measure, provide a description of the standard (the minimally acceptable student performance) as well as the target (the minimum proportion of students the faculty aspire to have meet the standard in order to be confident that the program is meeting the outcome).

Target Description:

For each student learning outcome students' average score will be a mean score of 2.50 or below indicating students are, at minimum, "confident" applying individual student learning outcomes, as students graduating from the program should be confident applying the knowledge and skills gained from their degree program in their future careers.

Internal Feedback on Target

Standard (the minimally acceptable performance) is clearly presented and justified:

Select an Option ▼

Target is specific (the proportion that needs to meet the standard):

Select an Option ▼

The target clearly aligns with the measure as described:

Select an Option ▼

Feedback on Target:

#### Feedback on Target by Office of Institutional Effectiveness & Evaluation (IE&E)

Standard (the minimally acceptable performance) is clearly presented and justified:

Yes ▼

Target is specific (the proportion that needs to meet the standard):

Yes ▼

The target clearly aligns with the measure as described:

Yes ▼

Feedback on Target:

#### Findings

When reporting findings, indicate whether or not a given target was MET, PARTIALLY MET, or NOT MET. Also include a brief discussion regarding the meaning/value of the findings for purposes of continuous improvement. IF findings are not being reported in a given cycle for a particular measure, include a brief explanation as to why not.

##### Finding Description:

Target Met: During the 2018/19 academic year Spring 2019 and Summer 2019 Graduate Exit Surveys had 6 and 2 respondents, respectively, a for a total of 8 respondents. Students responded to the question: "As a result of your COSC degree program, how confident do you feel in your ability to apply advanced construction management practices?" The average score for AY 2018/19 was 1.92 (Confident) meeting the target of a mean score of 2.50 or below. The scale used was: Very Confident = 1.00 – 1.50; Confident = 1.51 – 2.50; Somewhat Confident = 2.51 – 3.50; Not Confident = 3.51 – 4.00.

While both direct assessment of students' actual performance (83.73%) and indirect assessment of students' self-perceived ability (1.92) met targets and are in alignment, both scores indicate opportunities to improve student ability and self-perception to a higher level of attainment (i.e. above 90% for direct assessment and into the "Very Confident" range for the indirect assessment. This indicates an opportunity for significant growth in both students' actual ability and self-perceived ability which may be addressed through greater emphasis on the application of advanced construction management practices in the graduate curriculum.

Target:

Select an Option ▼

### Internal Feedback on Finding

Findings align with the measure and target as described:

Select an Option ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Select an Option ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

Select an Option ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

### Feedback on Finding by Office of Institutional Effectiveness & Evaluation (IE&E)

Findings align with the measure and target as described:

Yes ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Yes ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

No ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

### Data-informed Actions

For each of the findings reported, the program should indicate how it is going to use/act on the assessment findings in the upcoming academic year. A brief summary of the proposed action(s) should be provided, including a tentative timeline for implementation and the party or group responsible for carrying out the action(s). Also include a rationale for why program faculty believe the action(s) should lead to improvements in the identified outcome. IF no actions are being taken based on a given finding, a brief statement of explanation should be provided.

## Data-informed Action Description:

During AY 19/20, COSC graduate faculty will provide greater emphasis on the practical application of advanced construction management practices and provide targeted feedback. Increased targeted instruction with appropriate instructor feedback is anticipated to help students develop competency in the actual application, thus increasing both student actual performance and self-perceived competency to a higher level of attainment. We expect to see increased student ability and confidence levels reflected in SLO reporting at the end of the AY 19/20 data collection cycle.

## Internal Feedback on Data-informed Action

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Select an Option ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Select an Option ▼

Data-informed Action includes a timeline:

Select an Option ▼

Data-informed Action identifies a responsible party or group:

Select an Option ▼

Feedback on Data-informed Action:

## Feedback on Data-informed Action by Office of Institutional Effectiveness &amp; Evaluation (IE&amp;E)

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Yes ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Yes ▼

Data-informed Action includes a timeline:

Yes ▼

Data-informed Action identifies a responsible party or group:

Yes ▼

Feedback on Data-informed Action:

Measure Name:

GSLO \_ 8 \_ Apply advanced construction management practices \_ DA \_ COSC 603

Measure Description:

Direct assessment will occur for GSLO 8 using Exam 1 from COSC 603 (Construction Scheduling). The assessment instrument will be administered by the course instructor in class to students as part of the regular course curriculum. Data reported will be class-level average performance on either the full exam. Reported once every three years.

Supporting Documentation:

Supporting Documentation would include referenced documents such as scoring/grading rubrics, surveys, assignment descriptions, etc.

The selected document artifact is attached to this form.

Select Document Artifacts



### Internal Feedback on Measure

Measure is a direct measure of student learning:

Select an Option ▼

Data collection is clear (i.e., where the data are coming from):

Select an Option ▼

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

Select an Option ▼

Measure clearly aligns with the outcome as defined:

Select an Option ▼

All referenced rubrics/surveys are attached or sufficiently described:

Select an Option ▼

Feedback on Measure:

### Feedback on Measure by Office of Institutional Effectiveness & Evaluation (IE&E)

Measure is a direct measure of student learning:

Yes ▼

Data collection is clear (i.e., where the data are coming from):

Yes ▼

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

Measure clearly aligns with the outcome as defined:

All referenced rubrics/surveys are attached or sufficiently described:

Feedback on Measure:

[Same concern as above - it is difficult to interpret what data will be reported.](#)

[Also, while there is a file connected to this measure, it appears to be corrupted. Try uploading the document again.](#)

## Targets

For each measure, provide a description of the standard (the minimally acceptable student performance) as well as the target (the minimum proportion of students the faculty aspire to have meet the standard in order to be confident that the program is meeting the outcome).

Target Description:

Students cumulative average score for SLO 8 will be 80% or higher. In order to set a target score during initial data collection of new SLO data collection system and establishment of baseline date, 80% (letter grade "B") was deemed appropriate as minimum target as students must have a minimum GPA of 3.0 "B" in order to qualify for graduation from the program. Baseline data will be evaluated after at least 3 years' of data collection have occurred in order to determine if adjustment of new targets is warranted based on trend data and ,if so, the new appropriate minimum targets will be established.

### Internal Feedback on Target

Standard (the minimally acceptable performance) is clearly presented and justified:

Target is specific (the proportion that needs to meet the standard):

The target clearly aligns with the measure as described:

Feedback on Target:

### Feedback on Target by Office of Institutional Effectiveness & Evaluation (IE&E)

Standard (the minimally acceptable performance) is clearly presented and justified:

Target is specific (the proportion that needs to meet the standard):

Yes ▼

The target clearly aligns with the measure as described:

Yes ▼

Feedback on Target:

## Findings

When reporting findings, indicate whether or not a given target was MET, PARTIALLY MET, or NOT MET. Also include a brief discussion regarding the meaning/value of the findings for purposes of continuous improvement. IF findings are not being reported in a given cycle for a particular measure, include a brief explanation as to why not.

Finding Description:

Target Met:

Students' cumulative average score for GSLO 8, *Apply advanced construction management practices* during academic year (AY) 2018/19 was 83.73 ( $n = 16$ ). Therefore the target of 80% or greater GSLO cumulative average was met.

While both direct assessment of students' actual performance (83.73%) and indirect assessment of students' self-perceived ability (1.92) met targets and are in alignment, both scores indicate opportunities to improve student ability and self-perception to a higher level of attainment (i.e. above 90% for direct assessment and into the "Very Confident" range for the indirect assessment. This indicates an opportunity for significant growth in both students' actual ability and self-perceived ability which may be addressed through greater emphasis on the application of advanced construction management practices in the graduate curriculum.

Target:

Select an Option ▼

## Internal Feedback on Finding

Findings align with the measure and target as described:

Select an Option ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Select an Option ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

Select an Option ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

#### Feedback on Finding by Office of Institutional Effectiveness & Evaluation (IE&E)

Findings align with the measure and target as described:

Yes ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Yes ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

No ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

#### Data-informed Actions

For each of the findings reported, the program should indicate how it is going to use/act on the assessment findings in the upcoming academic year. A brief summary of the proposed action(s) should be provided, including a tentative timeline for implementation and the party or group responsible for carrying out the action(s). Also include a rationale for why program faculty believe the action(s) should lead to improvements in the identified outcome. IF no actions are being taken based on a given finding, a brief statement of explanation should be provided.

Data-informed Action Description:

During AY 19/20, COSC graduate faculty will provide greater emphasis on the practical application of advanced construction management practices and provide targeted feedback. Increased targeted instruction with appropriate instructor feedback is anticipated to help students develop competency in the actual application, thus increasing both student actual performance and self-perceived competency to a higher level of attainment. We expect to see increased student ability and confidence levels reflected in SLO reporting at the end of the AY 19/20 data collection cycle.

#### Internal Feedback on Data-informed Action

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Select an Option ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Select an Option ▼

Data-informed Action includes a timeline:

Select an Option ▼

Data-informed Action identifies a responsible party or group:

Feedback on Data-informed Action:

**Feedback on Data-informed Action by Office of Institutional Effectiveness & Evaluation (IE&E)**

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Data-informed Action includes a timeline:

Data-informed Action identifies a responsible party or group:

Feedback on Data-informed Action:

#### 4 **MS-COMG-PROBSOLV - Problem Solving**

Student will apply problem solving techniques (For example skills and knowledge may include, but not be limited to: Apply subject matter knowledge in a range of contexts to solve problems.)

### Relevant Associations

- 1 Please select the University and/or System-level learning outcome(s) that most closely align(s) with the program learning outcome above. Undergraduate programs/certificates should select relevant associations from the University baccalaureate outcomes (TAMU-UG) and from the EmpowerU outcomes (TAMU-S). Combined assessment plans that include both masters-level and doctoral-level programs should select from both sets of University-level outcomes (TAMU-Masters, TAMU-Doctoral).

Selected Outcomes:

- TAMU-Masters-APK - Apply knowledge to solve problems
- TAMU-Masters-DOK - Master the depth of knowledge required for a degree
- TAMU-Masters-Ethics - Choose ethical course of action
- TAMU-Masters-INT - Integrate information
- TAMU-Masters-RES - Demonstrate research skills

### Internal Feedback on Outcomes

- 1 Outcome is clearly written, reflecting what students are expected to learn upon completion of the program:

Select an Option ▼

2 Outcome is measurable

Select an Option ▼

3 Outcome is mapped appropriately to university-level outcome(s):

Select an Option ▼

4 Outcome reflects program expectation/graduation requirement rather than student learning:

Select an Option ▼

5 Feedback on Outcomes:

### Feedback on Outcomes by Office of Institutional Effectiveness & Evaluation (IE&E)

1 Outcome is clearly written, reflecting what students are expected to learn upon completion of the program:

Select an Option ▼

2 Outcome is measurable

Select an Option ▼

3 Outcome is mapped appropriately to university-level outcome(s):

Select an Option ▼

4 Outcome reflects program expectation/graduation requirement rather than student learning:

Select an Option ▼

5 Feedback on Outcomes:

Make sure the mapping to the insitutional learning outcomes is meaningful - there will likely only be one or two linkages. Also, as with the critical thinking outcome, consider providing examples to operationalize the outcome.

### Related Measures

1

Measure Name:

GSLO \_ 3 \_ Apply problem solving techniques \_ ID \_ Confidence

Measure Description:

As an indirect assessment of the student learning outcomes, an exit survey will be administered to all graduate 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 apply each of the student learning outcomes. Responses will utilize a four point Likert-type scale (1 = Very Confident; 2 = Confident; 3 = Somewhat Confident; 4 = Not Confident).

Supporting Documentation:

Supporting Documentation would include referenced documents such as scoring/grading rubrics, surveys, assignment descriptions, etc.

The selected document artifact is attached to this form.

Select Document Artifacts



#### Internal Feedback on Measure

Measure is a direct measure of student learning:

Select an Option

Data collection is clear (i.e., where the data are coming from):

Select an Option

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

Select an Option

Measure clearly aligns with the outcome as defined:

Select an Option

All referenced rubrics/surveys are attached or sufficiently described:

Select an Option

Feedback on Measure:

#### Feedback on Measure by Office of Institutional Effectiveness & Evaluation (IE&E)

Measure is a direct measure of student learning:

No

Data collection is clear (i.e., where the data are coming from):

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

Measure clearly aligns with the outcome as defined:

All referenced rubrics/surveys are attached or sufficiently described:

Feedback on Measure:

## Targets

For each measure, provide a description of the standard (the minimally acceptable student performance) as well as the target (the minimum proportion of students the faculty aspire to have meet the standard in order to be confident that the program is meeting the outcome).

Target Description:

For each student learning outcome students' average score will be a mean score of 2.50 or below indicating students are, at minimum, "confident" applying individual student learning outcomes, as students graduating from the program should be confident applying the knowledge and skills gained from their degree program in their future careers.

### Internal Feedback on Target

Standard (the minimally acceptable performance) is clearly presented and justified:

Target is specific (the proportion that needs to meet the standard):

The target clearly aligns with the measure as described:

Feedback on Target:

### Feedback on Target by Office of Institutional Effectiveness & Evaluation (IE&E)

Standard (the minimally acceptable performance) is clearly presented and justified:

Target is specific (the proportion that needs to meet the standard):

Yes ▼

The target clearly aligns with the measure as described:

Yes ▼

Feedback on Target:

## Findings

When reporting findings, indicate whether or not a given target was MET, PARTIALLY MET, or NOT MET. Also include a brief discussion regarding the meaning/value of the findings for purposes of continuous improvement. IF findings are not being reported in a given cycle for a particular measure, include a brief explanation as to why not.

### Finding Description:

Target Met: During the 2018/19 academic year Spring 2019 and Summer 2019 Graduate Exit Surveys had 6 and 2 respondents, respectively, for a total of 8 respondents. Students responded to the question: "As a result of your COSC degree program, how confident do you feel in your ability to apply problem solving techniques?" The average score for AY 2018/19 was 1.50 (Very Confident) meeting the target of a mean score of 2.50 or below. The scale used was: Very Confident = 1.00 – 1.50; Confident = 1.51 – 2.50; Somewhat Confident = 2.51 – 3.50; Not Confident = 3.51 – 4.00.

Both actual performance (Direct Assessment) and self-perceived ability (indirect assessment) for the GSLO students will be able to apply problem-solving techniques met targets and are at mastery level. Recommend continued monitoring during AY 19/20 to determine areas of improvement and to ensure actual ability and self-perceived ability remain in alignment at mastery level.

Target:

Select an Option ▼

### Internal Feedback on Finding

Findings align with the measure and target as described:

Select an Option ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Select an Option ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

Select an Option ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

### Feedback on Finding by Office of Institutional Effectiveness & Evaluation (IE&E)

Findings align with the measure and target as described:

Yes ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Yes ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

No ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

### Data-informed Actions

For each of the findings reported, the program should indicate how it is going to use/act on the assessment findings in the upcoming academic year. A brief summary of the proposed action(s) should be provided, including a tentative timeline for implementation and the party or group responsible for carrying out the action(s). Also include a rationale for why program faculty believe the action(s) should lead to improvements in the identified outcome. IF no actions are being taken based on a given finding, a brief statement of explanation should be provided.

Data-informed Action Description:

During AY 19/20 COSC faculty will continue to implement normal instruction and assessment of students' ability to apply problem-solving techniques and identify areas for potential improvement. The assessment coordinator will monitor student achievement of the stated GSLO and report results to the graduate coordinator at the end of the academic year. The Graduate coordinator and graduate faculty will monitor student direct and indirect assessments to ensure student ability and self-perceived ability levels remain in alignment at mastery levels.

### Internal Feedback on Data-informed Action

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Select an Option ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Select an Option ▼

Data-informed Action includes a timeline:

Select an Option ▼

Data-informed Action identifies a responsible party or group:

Select an Option ▼

Feedback on Data-informed Action:

#### Feedback on Data-informed Action by Office of Institutional Effectiveness & Evaluation (IE&E)

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Yes ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Yes ▼

Data-informed Action includes a timeline:

Yes ▼

Data-informed Action identifies a responsible party or group:

Select an Option ▼

Feedback on Data-informed Action:

Measure Name:

GSLO \_ 3 \_ Apply problem solving techniques \_ DA \_ COSC 608

Measure Description:

Direct assessment will occur for GSLO 3 using an assignment from COSC 608 (Structural Principles and Practices). The assessment instrument will be administered by the course instructor in class to students as part of the regular course curriculum. Data reported will be class-level average performance on the full assignment. The assessment instrument used requires students to perform calculations and use the results to make decision on whether or not the results meet specified criteria (See GSLO 3 \_ COSC 608 \_ Rubric.pdf This document is the answer key to the assignment and contains written in italics the correct calculations and conclusions students should draw based on information provided in the assignment). Reported once every three years.

Supporting Documentation:

Supporting Documentation would include referenced documents such as scoring/grading rubrics, surveys, assignment descriptions, etc.

The selected document artifact is attached to this form.

Select Document Artifacts ▼



## Internal Feedback on Measure

Measure is a direct measure of student learning:

Select an Option ▼

Data collection is clear (i.e., where the data are coming from):

Select an Option ▼

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

Select an Option ▼

Measure clearly aligns with the outcome as defined:

Select an Option ▼

All referenced rubrics/surveys are attached or sufficiently described:

Select an Option ▼

Feedback on Measure:

## Feedback on Measure by Office of Institutional Effectiveness &amp; Evaluation (IE&amp;E)

Measure is a direct measure of student learning:

Yes ▼

Data collection is clear (i.e., where the data are coming from):

Yes ▼

Methodological processes are clear (i.e., how the data are to be evaluated and reported):

No ▼

Measure clearly aligns with the outcome as defined:

Yes ▼

All referenced rubrics/surveys are attached or sufficiently described:

Yes ▼

Feedback on Measure:

As with previous measures, it is difficult to determine how data are analyzed. The document included is not a rubric, but appears to be prompts.

## Targets

For each measure, provide a description of the standard (the minimally acceptable student performance) as well as the target (the minimum proportion of students the faculty aspire to have meet the standard in order to be confident that the program is meeting the outcome).

### Target Description:

Students cumulative average score for SLO 3 will be 80% or higher. In order to set a target score during initial data collection of new SLO data collection system and establishment of baseline date, 80% (letter grade "B") was deemed appropriate as minimum target as students must have a minimum GPA of 3.0 "B" in order to qualify for graduation from the program. Baseline data will be evaluated after at least 3 years' of data collection have occurred in order to determine if adjustment of new targets is warranted based on trend data and ,if so, the new appropriate minimum targets will be established.

### Internal Feedback on Target

Standard (the minimally acceptable performance) is clearly presented and justified:

Select an Option ▼

Target is specific (the proportion that needs to meet the standard):

Select an Option ▼

The target clearly aligns with the measure as described:

Select an Option ▼

Feedback on Target:

### Feedback on Target by Office of Institutional Effectiveness & Evaluation (IE&E)

Standard (the minimally acceptable performance) is clearly presented and justified:

Yes ▼

Target is specific (the proportion that needs to meet the standard):

Yes ▼

The target clearly aligns with the measure as described:

Yes ▼

Feedback on Target:

## Findings

When reporting findings, indicate whether or not a given target was MET, PARTIALLY MET, or NOT MET. Also include a brief discussion regarding the meaning/value of the findings for purposes of continuous improvement. IF findings are not being reported in a given cycle for a particular measure, include a brief explanation as to why not.

## Finding Description:

## Target Met:

Students' cumulative average score for GSLO 3, *Apply problem solving techniques* during academic year (AY) 2018/19 was 95.6 ( $n = 16$ ). Therefore the target of 80% or greater GSLO cumulative average was met.

Both actual performance (Direct Assessment) and self-perceived ability (indirect assessment) for the GSLO *students will be able to apply problem-solving techniques* met targets and are at mastery level. Recommend continued monitoring during AY 19/20 to determine areas of improvement and to ensure actual ability and self-perceived ability remain in alignment at mastery level.

## Target:

Select an Option ▼

## Internal Feedback on Finding

Findings align with the measure and target as described:

Select an Option ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Select an Option ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

Select an Option ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

## Feedback on Finding by Office of Institutional Effectiveness &amp; Evaluation (IE&amp;E)

Findings align with the measure and target as described:

Yes ▼

Findings include a brief discussion regarding the meaning/value of results for purposes of continuous improvement:

Yes ▼

Target status indicator (i.e., Met, Partially Met, Not Met, Not Reported This Cycle) is used appropriately:

No ▼

Where appropriate, findings are disaggregated for each program reflected in the assessment plan:

Select an Option ▼

Feedback on Finding:

### Data-informed Actions

For each of the findings reported, the program should indicate how it is going to use/act on the assessment findings in the upcoming academic year. A brief summary of the proposed action(s) should be provided, including a tentative timeline for implementation and the party or group responsible for carrying out the action(s). Also include a rationale for why program faculty believe the action(s) should lead to improvements in the identified outcome. IF no actions are being taken based on a given finding, a brief statement of explanation should be provided.

#### Data-informed Action Description:

During AY 19/20 COSC faculty will continue to implement normal instruction and assessment of students' ability to apply problem-solving techniques and identify areas for potential improvement. The assessment coordinator will monitor student achievement of the stated GSLO and report results to the graduate coordinator at the end of the academic year. The Graduate coordinator and graduate faculty will monitor student direct and indirect assessments to ensure student ability and self-perceived ability levels remain in alignment at mastery levels.

#### Internal Feedback on Data-informed Action

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Select an Option ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Select an Option ▼

Data-informed Action includes a timeline:

Select an Option ▼

Data-informed Action identifies a responsible party or group:

Select an Option ▼

Feedback on Data-informed Action:

#### Feedback on Data-informed Action by Office of Institutional Effectiveness & Evaluation (IE&E)

Data-informed Action outlines a specific course of action designed to improve/strengthen student learning:

Yes ▼

Data-informed Action description addresses why the program believes the action will lead to improvements in learning:

Yes ▼

Data-informed Action includes a timeline:

No ▼

Data-informed Action identifies a responsible party or group:

Select an Option ▼

Feedback on Data-informed Action:

## Approver Comments

- 1 Feedback on Measures and Targets:
- 2 Feedback on Findings and Data-informed Action: