

Texas A&M University

Detailed Assessment Report

2017-2018 Construction Management, MS

As of: 5/09/2019 01:48 PM CENTRAL

(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request.*)

Mission / Purpose

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.

Goals

G 1: Cycle 1

Objectives 3, 6, & 8

G 2: Cycle 2

Objectives 1, 4, & 7

G 3: Cycle 3

Objectives 2, 5, & 9

Student Learning Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Demonstrate critical thinking and creativity

Students will demonstrate critical thinking and creativity. This outcome is to be measured once every three years.

Relevant Associations:

Graduate Outcome Associations

1.3 Use a variety of sources and evaluate multiple points of view to analyze and integrate information and to conduct critical, reasoned arguments.

Related Measures

M 1: Thesis Rubric

Review of completed theses using outcome specific rubric. Scores range from a minimum of 1 ("Unsatisfactory performance") to 5 ("Excellent performance") points. Assessment is conducted by at least two reviewers who are members of the Graduate Instruction Committee in the department. Source of Evidence: Senior thesis or culminating major project

Target:

Students will achieve an average score of at least 3.5 (out of 5) on all criteria of the rubric. At least 80% of the students score 3 or above. This is a new measure. Targets will be adjusted at the end of two full cycles of data collection (each cycle occurs once every three years) in order to establish baseline data upon more than one data collection event.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle.

M 6: Graduate Student Exit Survey

Graduating students are asked to self-assess how well they believe the program met each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points. Source of Evidence: Student satisfaction survey at end of the program

Connected Document

Target:

Average score of at least 3.25 (out of 5). At least 70% of the students score this outcome as 3 or above. This is a new measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle

M 7: Former Student Survey

Former students of the program are asked to self-assess how well they believe the program prepared them for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Alumni survey or tracking of alumni achievements

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle

M 8: Construction Industry Advisory Council (CIAC) Survey

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Advisory board or community feedback on program

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

SLO 2: Demonstrate complex problem solving and decision making

Students will demonstrate complex problem solving and decision making. This outcome is to be measured once every three years.

Relevant Associations:**Graduate Outcome Associations**

1.2 Apply subject matter knowledge in a range of contexts to solve problems and make decisions.

Related Measures**M 1: Thesis Rubric**

Review of completed theses using outcome specific rubric. Scores range from a minimum of 1 ("Unsatisfactory performance") to 5 ("Excellent performance") points. Assessment is conducted by at least two reviewers who are members of the Graduate Instruction Committee in the department.

Source of Evidence: Senior thesis or culminating major project

Target:

Students will achieve an average score of at least 3.5 (out of 5) on all criteria of the rubric. At least 80% of the students score 3 or above. This is a new measure. Targets will be adjusted at the end of two full cycles of data collection (each cycle occurs once every three years) in order to establish baseline data upon more than one data collection event.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle.

Related Action Plans (by Established cycle, then alpha):

For full information, see the *Details of Action Plans* section of this report.

Reduce Size of Graduate Program

Established in Cycle: 2014-2015

In order to improve the quality of our product, the graduate faculty in the department decided to reduce the size of the...

Thesis Reviews

Established in Cycle: 2015-2016

Ensure all thesis reviews are completed.

M 6: Graduate Student Exit Survey

Graduating students are asked to self-assess how well they believe the program met each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points
Source of Evidence: Student satisfaction survey at end of the program

Connected Document

Target:

Average score of at least 3.25 (out of 5). At least 70% of the students score this outcome as 3 or above. This is a new measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle

Related Action Plans (by Established cycle, then alpha):

For full information, see the *Details of Action Plans* section of this report.

Reduce Size of Graduate Program

Established in Cycle: 2014-2015

In order to improve the quality of our product, the graduate faculty in the department decided to reduce the size of the...

M 7: Former Student Survey

Former students of the program are asked to self-assess how well they believe the program prepared them for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Alumni survey or tracking of alumni achievements

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

M 8: Construction Industry Advisory Council (CIAC) Survey

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Advisory board or community feedback on program

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

Related Action Plans (by Established cycle, then alpha):

For full information, see the *Details of Action Plans* section of this report.

Reduce Size of Graduate Program

Established in Cycle: 2014-2015

In order to improve the quality of our product, the graduate faculty in the department decided to reduce the size of the...

SLO 3: *Demonstrate effective professional oral and written communication

Students will demonstrate effective professional oral and written communication. This outcome is to be measured once every three years.

Relevant Associations:

Graduate Outcome Associations

1.4 Communicate effectively.

Related Measures

M 1: Thesis Rubric

Review of completed theses using outcome specific rubric. Scores range from a minimum of 1 ("Unsatisfactory performance") to 5 ("Excellent performance") points. Assessment is conducted by at least two reviewers who are members of the Graduate Instruction Committee in the department. Source of Evidence: Senior thesis or culminating major project

Target:

Students will achieve an average score of at least 3.5 (out of 5) on all criteria of the rubric. At least 80% of the students score 3 or above. This is a new measure. Targets will be adjusted at the end of two full cycles of data collection (each cycle occurs once every three years) in order to establish baseline data upon more than one data collection event.

Finding (2017-2018) - Target: Not Reported This Cycle

No Theses were evaluated during the 2017/18 Academic Year, therefore this SLO using the Thesis rubric will be assessed during the 2018/19 Academic Year.

M 6: Graduate Student Exit Survey

Graduating students are asked to self-assess how well they believe the program met each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points. Source of Evidence: Student satisfaction survey at end of the program

Connected Document

Target:

Average score of at least 3.25 (out of 5). At least 70% of the students score this outcome as 3 or above. This is a new measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Met

Each graduating student was solicited to participate in a departmental exit survey online. Out of the 16 students who graduated in Fall 2017 (8), and Spring 2018 (8), eleven responses were collected equaling a 69% response rate. An average score of 3.89 (Scale: 1 = Very Weak; 2 = Weak; 3 = Average; 4 = Strong; 5 = Very Strong) was achieved, meeting the target. Also, 10 out of 11 (91%) responses were 3 or above, meeting the target as well. These results indicate students believe the Masters of Construction Management degree program was strong in how well it met the student learning outcome of demonstrating effective professional oral and written communication. (Cut Points: 0 - 1.50 = Very Weak; 1.51 - 2.50 = Weak; 2.51 - 3.50 = Average; 3.51 - 4.50 = Strong; 4.51 - 5.0 = Very Strong)

M 7: Former Student Survey

Former students of the program are asked to self-assess how well they believe the program prepared them for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Alumni survey or tracking of alumni achievements

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

The Former Student Survey was not administered during the 2017-18 Academic year, therefore there are no data to report for this student learning outcome. Former Student Survey data will be reported after the next administration of the Former Student Survey.

M 8: Construction Industry Advisory Council (CIAC) Survey

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Advisory board or community feedback on program

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Met

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine SLOs. An average score of .2.67 (out of 5) was achieved, Therefore the target was not met, indicating a greater need by the Graduate program to emphasize appropriate and effective oral and written communications during instruction. This may be accomplished by increased use of student presentations with constructive instructor and peer feedback, and targeted instruction on grammar and writing conventions with constructive instructor and peer feedback.

SLO 4: Use information and communication technology

Students will effectively use information and communication technology. This outcome is to be measured once every three years.

Relevant Associations:

Graduate Outcome Associations

1.5 Use appropriate technologies to communicate, collaborate, conduct research, and solve problems.

Related Measures

M 5: COSC Course Assignments - Information and Communication Technology

Assessment is based on input from instructors of four (4) different classes: COSC 642 ("Construction Information Technology"), COSC 644 ("Advanced Construction Systems"), COSC 648 ("Graduate Capstone"), and COSC 650 ("Advanced Construction Visualization"). Each instructor is to identify one component of the class which requires students to investigate or implement knowledge of advanced construction technology and practices. Each instructor is asked to provide a narrative as of the objective(s) of the assignment (in relation to advanced project management principles and practices), what students were asked to do, and how students were graded on (criteria).

Source of Evidence: Project, either individual or group

Target:

At least 80% of the students score a letter grade of “B” or above in each of the components identified in COSC 642 (“Construction Information Technology”), COSC 644 (“Advanced Construction Systems”), COSC 648 (“Graduate Capstone”), and COSC 650 (“Advanced Construction Visualization”).

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle.

M 6: Graduate Student Exit Survey

Graduating students are asked to self-assess how well they believe the program met each of the nine learning outcomes. Scores range from a minimum of 1 (“Very weak”) to 5 (“Very strong”) points

Source of Evidence: Student satisfaction survey at end of the program

Connected Document**Target:**

Average score of at least 3.25 (out of 5). At least 70% of the students score this outcome as 3 or above. This is a new measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle

M 7: Former Student Survey

Former students of the program are asked to self-assess how well they believe the program prepared them for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 (“Very weak”) to 5 (“Very strong”) points.

Source of Evidence: Alumni survey or tracking of alumni achievements

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

M 8: Construction Industry Advisory Council (CIAC) Survey

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 (“Very weak”) to 5 (“Very strong”) points.

Source of Evidence: Advisory board or community feedback on program

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

SLO 5: Understand and apply principles of leadership in business and management

Students will understand and apply principles of leadership in business and management. This outcome is to be measured once every three years.

Relevant Associations:**Graduate Outcome Associations**

1.1 Master degree program requirements, including theories, concepts, principles, and practice, and develop a coherent understanding of the subject matter through synthesis across courses and experiences.

Related Measures

M 1: Thesis Rubric

Review of completed theses using outcome specific rubric. Scores range from a minimum of 1 (“Unsatisfactory performance”) to 5 (“Excellent performance”) points. Assessment is conducted by at least two reviewers who are members of the Graduate Instruction Committee in the department.
Source of Evidence: Senior thesis or culminating major project

Target:

Students will achieve an average score of at least 3.5 (out of 5) on all criteria of the rubric. At least 80% of the students score 3 or above. This is a new measure. Targets will be adjusted at the end of two full cycles of data collection (each cycle occurs once every three years) in order to establish baseline data upon more than one data collection event.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle.

Related Action Plans (by Established cycle, then alpha):

For full information, see the *Details of Action Plans* section of this report.

Reduce Size of Graduate Program

Established in Cycle: 2014-2015

In order to improve the quality of our product, the graduate faculty in the department decided to reduce the size of the...

Thesis Reviews

Established in Cycle: 2015-2016

Ensure all thesis reviews are completed.

M 6: Graduate Student Exit Survey

Graduating students are asked to self-assess how well they believe the program met each of the nine learning outcomes. Scores range from a minimum of 1 (“Very weak”) to 5 (“Very strong”) points
Source of Evidence: Student satisfaction survey at end of the program

Connected Document

Target:

Average score of at least 3.25 (out of 5). At least 70% of the students score this outcome as 3 or above. This is a new measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle

Related Action Plans (by Established cycle, then alpha):

For full information, see the *Details of Action Plans* section of this report.

Reduce Size of Graduate Program

Established in Cycle: 2014-2015

In order to improve the quality of our product, the graduate faculty in the department decided to reduce the size of the...

New Student Boot Camp

Established in Cycle: 2016-2017

Based on the finding of Measure 6/Objective 9 that some students did not believe the program was strong in application of advanc...

M 7: Former Student Survey

Former students of the program are asked to self-assess how well they believe the program prepared them for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Alumni survey or tracking of alumni achievements

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

M 8: Construction Industry Advisory Council (CIAC) Survey

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Advisory board or community feedback on program

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

Related Action Plans (by Established cycle, then alpha):

For full information, see the *Details of Action Plans* section of this report.

Reduce Size of Graduate Program

Established in Cycle: 2014-2015

In order to improve the quality of our product, the graduate faculty in the department decided to reduce the size of the...

New Student Boot Camp

Established in Cycle: 2016-2017

Based on the finding of Measure 6/Objective 9 that some students did not believe the program was strong in application of advanc...

SLO 6: *Demonstrate a working knowledge of current issues in construction

Students will demonstrate a working knowledge of current issues in construction. This outcome is to be measured once every three years.

Relevant Associations:

Graduate Outcome Associations

1.1 Master degree program requirements, including theories, concepts, principles, and practice, and develop a coherent understanding of the subject matter through synthesis across courses and experiences.

Related Measures

M 2: Proposal Review

Review of the literature review and problem statement of students' individual proposals. Assessment is based on the students' individual proposals in COSC 690 ("Theory of Research in Construction Management") and/or COSC 644 ("Advanced Construction Systems") and is to be conducted by the course instructor.

Source of Evidence: Project, either individual or group

Connected Document

Target:

Students will achieve an average score of at least 3.5 (out of 5) on all criteria of the rubric. At least 80% of the students score 3 or above. This is a new measure. Targets will be adjusted at the end of two full cycles of data collection (each cycle occurs once every three years) in order to establish baseline data upon more than one data collection event.

Finding (2017-2018) - Target: Met

The instructor of COSC 644 (“Advanced Construction Systems”) was asked to identify one component of the course in which students have the ability to demonstrate their working knowledge of current issues in construction. Assessment was conducted based on 12 students who completed an assignment identified by the instructor of COSC 644. An average score of 95.58% (out of 100%) was obtained, where 12 out of 12 students (100.0%) graded an “A” (A = 90 - 100) or better in this assignment. The target scale should be corrected from a 5-point scale to a 100-point scale. Overall, target was achieved.

M 6: Graduate Student Exit Survey

Graduating students are asked to self-assess how well they believe the program met each of the nine learning outcomes. Scores range from a minimum of 1 (“Very weak”) to 5 (“Very strong”) points
Source of Evidence: Student satisfaction survey at end of the program

Connected Document**Target:**

Average score of at least 3.25 (out of 5). At least 70% of the students score this outcome as 3 or above. This is a new measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Met

Each graduating student was solicited to participate in a departmental exit survey online. Out of the 16 students who graduated in Fall 2017 (8), and Spring 2018 (8), eleven responses were collected equaling a 69% response rate. An average score of 3.27 (Scale: 1 = Very Weak; 2 = Weak; 3 = Average; 4 = Strong; 5 = Very Strong) was achieved, meeting the target. Also, 10 out of 11 (91%) responses were 3 or above, meeting the target as well. These results indicate students believe the Masters of Construction Management degree program was Average in how well it met the student learning outcome of students having a working knowledge of current issues in construction. (Cut Points: 0 - 1.50 = Very Weak; 1.51 - 2.50 = Weak; 2.51 - 3.50 = Average; 3.51 - 4.50 = Strong; 4.51 - 5.0 = Very Strong) indicating a need to increase instructional emphasis on current issues in construction within the graduate curriculum.

M 7: Former Student Survey

Former students of the program are asked to self-assess how well they believe the program prepared them for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 (“Very weak”) to 5 (“Very strong”) points.

Source of Evidence: Alumni survey or tracking of alumni achievements

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

The Former Student Survey was not administered during the 2017/18 Academic year, therefore there are no data to report for this student learning outcome. Former Student Survey data will be reported after the next administration of the Former Student Survey.

M 8: Construction Industry Advisory Council (CIAC) Survey

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 (“Very weak”) to 5 (“Very strong”) points.

Source of Evidence: Advisory board or community feedback on program

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Met

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine SLOs. An average score of 3.33 (out of 5) was achieved, meeting the target.

SLO 7: Demonstrate the ability to solve complex construction problems taking into account associate risk management issues

Students will demonstrate the ability to solve complex construction problems taking into account associate risk management issues. This outcome is to be measured once every three years.

Relevant Associations:**Graduate Outcome Associations**

1.1 Master degree program requirements, including theories, concepts, principles, and practice, and develop a coherent understanding of the subject matter through synthesis across courses and experiences.

1.2 Apply subject matter knowledge in a range of contexts to solve problems and make decisions.

Related Measures**M 1: Thesis Rubric**

Review of completed theses using outcome specific rubric. Scores range from a minimum of 1 ("Unsatisfactory performance") to 5 ("Excellent performance") points. Assessment is conducted by at least two reviewers who are members of the Graduate Instruction Committee in the department.

Source of Evidence: Senior thesis or culminating major project

Target:

Students will achieve an average score of at least 3.5 (out of 5) on all criteria of the rubric. At least 80% of the students score 3 or above. This is a new measure. Targets will be adjusted at the end of two full cycles of data collection (each cycle occurs once every three years) in order to establish baseline data upon more than one data collection event.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle.

M 6: Graduate Student Exit Survey

Graduating students are asked to self-assess how well they believe the program met each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points

Source of Evidence: Student satisfaction survey at end of the program

Connected Document**Target:**

Average score of at least 3.25 (out of 5). At least 70% of the students score this outcome as 3 or above. This is a new measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle

M 7: Former Student Survey

Former students of the program are asked to self-assess how well they believe the program prepared them for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Alumni survey or tracking of alumni achievements

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

M 8: Construction Industry Advisory Council (CIAC) Survey

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.
Source of Evidence: Advisory board or community feedback on program

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

SLO 8: *Demonstrate knowledge of construction contracts, risks, construction laws and ethics

Students will demonstrate knowledge of construction contracts, risks, construction laws and ethics. This outcome is to be measured once every three years.

Relevant Associations:**Graduate Outcome Associations**

1.7 Choose ethical courses of action in research and practice.

Related Measures**M 3: COSC Course Assignments - Ethics**

Assessment is based on input from instructors of four (4) different classes: COSC 620 ("Construction Company Operations"), COSC 628 ("Construction Contracts and Risk Management"), COSC 648 ("Graduate Capstone"), and COSC 684 ("Professional Internship"). Each instructor is to identify one component of the class which requires students to investigate or implement knowledge of construction contracts, risks, construction laws and ethics. Each instructor is asked to provide a narrative as of the objective(s) of the assignment (in relation to construction contracts, risks, construction laws and ethics), what students were asked to do, and how students were graded on (criteria).

Source of Evidence: Written assignment(s), usually scored by a rubric

Target:

At least 80% of the students score a letter grade of "B" or above in each of the components identified in the four classes.

Finding (2017-2018) - Target: Not Reported This Cycle

Data were not collected in AY 2017/18. This measure will be reported in AY2018/19.

M 6: Graduate Student Exit Survey

Graduating students are asked to self-assess how well they believe the program met each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points
Source of Evidence: Student satisfaction survey at end of the program

Connected Document**Target:**

Average score of at least 3.25 (out of 5). At least 70% of the students score this outcome as 3 or above. This is a new measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Met

Each graduating student was solicited to participate in a departmental exit survey online. Out of the 16 students who graduated in Fall 2017 (8), and Spring 2018 (8), eleven responses were collected equaling a 69% response rate. An average score of 2.77 (Scale: 1 = Very Weak; 2 = Weak; 3 = Average; 4 = Strong; 5 = Very Strong) was achieved, therefore the target of a minimum score of 3.25 was not met. Also, 7 out of 11 (64%) responses were 3 or above, again not meeting the target of 70% or greater of student scores equaling 3 or higher. These results indicate students believe the Masters of Construction Management degree program was Average in how well it met the student learning outcome of demonstrating knowledge of construction contracts, risks, construction laws, and ethics. (Cut Points: 0 - 1.50 = Very Weak; 1.51 - 2.50 = Weak; 2.51 - 3.50 = Average; 3.51 - 4.50 = Strong; 4.51 - 5.0 = Very Strong) indicating a need to increase instructional emphasis on construction contracts, risks, construction laws, and ethics within the graduate curriculum.

M 7: Former Student Survey

Former students of the program are asked to self-assess how well they believe the program prepared them for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Alumni survey or tracking of alumni achievements

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

The Former Student Survey was not administered during the 2017/18 Academic year, therefore there are no data to report for this student learning outcome. Former Student Survey data will be reported after the next administration of the Former Student Survey.

M 8: Construction Industry Advisory Council (CIAC) Survey

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Advisory board or community feedback on program

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Met

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine SLOs. An average score of 4.00 (out of 5) was achieved, meeting the target.

SLO 9: Apply advanced project management principles and practices to construction projects

Students will apply advanced project management principles and practices to construction projects. This outcome is to be measured once every three years.

Relevant Associations:

Graduate Outcome Associations

1.1 Master degree program requirements, including theories, concepts, principles, and practice, and develop a coherent understanding of the subject matter through synthesis across courses and experiences.

1.2 Apply subject matter knowledge in a range of contexts to solve problems and make decisions.

1.3 Use a variety of sources and evaluate multiple points of view to analyze and integrate information and to conduct critical, reasoned arguments.

Related Measures

M 4: COSC Course Assignments - Project Management

Assessment is based on input from instructors of four (4) different classes: COSC 621 ("Advanced Project Management"), COSC 624 ("Construction Business Development"), COSC 631 ("Advanced Productivity and Lean"), and COSC 648 ("Graduate Capstone"). Each instructor is to identify one component of the class which requires students to investigate or implement knowledge of advanced project management principles and practices. Each instructor is asked to provide a narrative as of the objective(s) of the assignment (in relation to advanced project management principles and practices), what students were asked to do, and how students were graded on (criteria).

Source of Evidence: Project, either individual or group

Target:

At least 80% of the students score a letter grade of "B" or above in each of the components identified in the four classes.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle.

Related Action Plans (by Established cycle, then alpha):

For full information, see the *Details of Action Plans* section of this report.

Reduce Size of Graduate Program

Established in Cycle: 2014-2015

In order to improve the quality of our product, the graduate faculty in the department decided to reduce the size of the...

New Student Boot Camp

Established in Cycle: 2016-2017

Based on the finding of Measure 6/Objective 9 that some students did not believe the program was strong in application of advanc...

M 6: Graduate Student Exit Survey

Graduating students are asked to self-assess how well they believe the program met each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points
Source of Evidence: Student satisfaction survey at end of the program

Connected Document

Target:

Average score of at least 3.25 (out of 5). At least 70% of the students score this outcome as 3 or above. This is a new measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

SLO not reported this cycle

Related Action Plans (by Established cycle, then alpha):

For full information, see the *Details of Action Plans* section of this report.

Reduce Size of Graduate Program

Established in Cycle: 2014-2015

In order to improve the quality of our product, the graduate faculty in the department decided to reduce the size of the...

New Student Boot Camp

Established in Cycle: 2016-2017

Based on the finding of Measure 6/Objective 9 that some students did not believe the program was strong in application of advanc...

M 7: Former Student Survey

Former students of the program are asked to self-assess how well they believe the program prepared them for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Alumni survey or tracking of alumni achievements

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

M 8: Construction Industry Advisory Council (CIAC) Survey

Members of the Construction Industry Advisory Council (CIAC) are asked to self-assess how well they believe the program prepares the students for the industry in each of the nine learning outcomes. Scores range from a minimum of 1 ("Very weak") to 5 ("Very strong") points.

Source of Evidence: Advisory board or community feedback on program

Target:

Average score of at least 3.25 (out of 5). This is a new Measure. Targets will be adjusted once baseline data has been collected.

Finding (2017-2018) - Target: Not Reported This Cycle

Not reported this cycle.

Related Action Plans (by Established cycle, then alpha):

For full information, see the *Details of Action Plans* section of this report.

Reduce Size of Graduate Program

Established in Cycle: 2014-2015

In order to improve the quality of our product, the graduate faculty in the department decided to reduce the size of the...

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Reduce Size of Graduate Program

In order to improve the quality of our product, the graduate faculty in the department decided to reduce the size of the graduate program and be much more selective in our admission of new graduate students into the program. Implementation of this started during the 2015/16 admission cycle, where only 33 applicants were admitted into the program (compared to almost 100 in the last two admission cycles). This trend continues during the 2016/17 admission cycle with only 42 new students admitted to the MSCM program and 18 students admitted. The Graduate Instruction Committee made some significant changes in the admission process in order for us to be able to identify who the best candidates are, and will continue monitoring this over the next year for possible improvements in future admission cycles.

Established in Cycle: 2014-2015

Implementation Status: Terminated

Priority: High

Relationships (Measure | Outcome/Objective):

- **Measure:** Construction Industry Advisory Council (CIAC) Survey
| **Outcome/Objective:** Apply advanced project management principles and practices to construction projects

| Demonstrate complex problem solving and decision making | Understand and apply principles of leadership in business and management

- **Measure:** COSC Course Assignments - Project Management | **Outcome/Objective:** Apply advanced project management principles and practices to construction projects
- **Measure:** Graduate Student Exit Survey | **Outcome/Objective:** Apply advanced project management principles and practices to construction projects

| Demonstrate complex problem solving and decision making | Understand and apply principles of leadership in business and management

- **Measure:** Thesis Rubric | **Outcome/Objective:** Demonstrate complex problem solving and decision making

| Understand and apply principles of leadership in business and management

Implementation Description: Due to the university and college's desire to increase the size of graduate programs, we terminated this action plan.

Require graduate students to work with the chair of their research advisory committee for major tasks in COSC 690

Based on finding for SLO's #3 and 6 during the 2015/16 assessment cycle and the findings for SLOs # 2, 5, & 9 during the 2016/17 assessment cycle, the Graduate Instruction Committee will continue to ask the instructor of COSC 690 ("Theory of Research in Construction Management") require students to work more closely with their committee chair on major assignments/tasks (to be identified) for this class during the 2017/18 assessment cycle. This, however, will not take the place of the instructor of COSC 690 in grading each proposal and providing the students feedback about their writing.

Established in Cycle: 2014-2015

Implementation Status: In-Progress

Priority: Medium

Implementation Description: The department hired a Research Coordinator starting Fall 2018 to help monitor the efforts of the research faculty including working closely with students.

Thesis Reviews

Ensure all thesis reviews are completed.

Established in Cycle: 2015-2016

Implementation Status: In-Progress

Priority: Low

Relationships (Measure | Outcome/Objective):

- **Measure:** Thesis Rubric | **Outcome/Objective:** Demonstrate complex problem solving and decision making

| Understand and apply principles of leadership in business and management

Implementation Description: Continuing to work with faculty to ensure Thesis reviews are completed in a timely manner.

New Student Boot Camp

Based on the finding of Measure 6/Objective 9 that some students did not believe the program was strong in application of advanced project management principles and practices to construction projects, the department will implement in Fall 2017 a 2-week intensive "Boot Camp" for all new Master of Science in Construction Management (MSCM) students. The intent of the Boot Camp is to address the weakness in construction management knowledge of new MSCM students by increasing students' baseline knowledge at the beginning of their degree program in order for the MSCM program to decrease the amount of instructional time on fundamental principles in order to provide students a foundation for more advanced topics and therefore provide more instructional

time for advanced project management principles and practices. This Boot Camp will replace the Graduate Entrance Survey.

Established in Cycle: 2016-2017

Implementation Status: In-Progress

Priority: Low

Relationships (Measure | Outcome/Objective):

- **Measure:** Construction Industry Advisory Council (CIAC) Survey | **Outcome/Objective:** Understand and apply principles of leadership in business and management
- **Measure:** COSC Course Assignments - Project Management | **Outcome/Objective:** Apply advanced project management principles and practices to construction projects
- **Measure:** Graduate Student Exit Survey | **Outcome/Objective:** Apply advanced project management principles and practices to construction projects

| Understand and apply principles of leadership in business and management

Implementation Description: Boot Camp was offered in Fall 2017 and again in Fall 2018. Effectiveness of the Boot Camp is currently being monitored and evaluated.

Construction Contracts and Risk Management

In Fall of 2018, the Department re-instituted the graduate Course COSC 628 Construction Contracts and Risk Management. The course addresses risk management, ethics, and formulation of contracts. This course will provide students the opportunity to increase their knowledge and skills pertaining to risk management, ethics, and formulation of contracts in construction. Offering this course should address the need to increase instructional emphasis on construction contracts and risk management as identified by student responses in the Graduate Exit Survey. It is anticipated the re-institution of this course will address students' self-reported deficiency in the Graduate Exit survey of 2.77 (weak) and only 64% of responses scored at 3 or better (Average or above) as to how well the program met the student learning outcome "Demonstrate knowledge of construction contracts, risks, construction laws, and ethics."

Established in Cycle: 2017-2018

Implementation Status: Planned

Priority: High

Increasing Graduate Enrollment

Due to the university and college's desire to increase the size of graduate programs, the Department will start to offer both a Thesis and Non-Thesis option for our Master's program. It is anticipated the increased size of the graduate program will increase the number and quality of Theses submitted, increase the number of students interested, and enrolled, in new and/or re-instituted courses such as Course COSC 628 Construction Contracts and Risk Management. The ability to offer and conduct a wider range of graduate courses will help the program address student perceptions of program deficiencies such as students' self-reported deficiency in the Graduate Exit survey of 2.77 (weak) and only 64% of responses scored at 3 or better (Average or above) as to how well the program met the student learning outcome "Demonstrate knowledge of construction contracts, risks, construction laws, and ethics."

Established in Cycle: 2017-2018

Implementation Status: Planned

Priority: High

Analysis Questions and Analysis Answers

Consider the Findings and the Action Plan(s) established this cycle. How did the program/unit identify these next steps for action? Why does the program/unit believe this Action Plan(s) should improve future assessment results?

The Assessment Plan is a three-year cycle, and therefore, our input only refers to three SLO's that are reported during AY 2017/18, Cycle 1 - namely SLO's #3, 6, and 8. SLO #3 – Demonstrate effective professional oral and written communication: No direct assessment occurred for SLO 3 during AY 2017/18 because no Theses were evaluated during this year, therefore Thesis rubric will be assessed during the 2018/19 Academic Year. The target score of 3.25 or higher for the indirect assessment of SLO 3 in the Graduate Exit Survey was met (3.89). The target score of 3.25 or higher for the indirect assessment of SLO 3 in the Construction Industry Advisory Council (CIAC) survey was not met (2.67). Measure 7 (Former Student Survey) will be administered during the 2017/18 assessment cycle so no SLO data were available for this measure. The department is recommending a core curriculum for the Master's program which is anticipated to negate the need for a Boot Camp as a vehicle for providing base-line content knowledge. The department re-established a Thesis and Non-Thesis option to the Master's program in order to increase graduate program enrollment, graduate student learning opportunities, and quality research. Students will be required to have a final oral presentation in both the Thesis and Non-Thesis options. At least one core course of the restructured Graduate Program will include a required oral presentation with appropriate visuals. These visuals will also demonstrate student written communication capabilities. SLO #6 – Demonstrate a working knowledge of current issues in construction: The direct assessment target for SLO 9 was met, where an average score of 95.58% (out of 100%) was obtained. For the targeted assessment 12 out of 12 students (100.0%) graded an "A" (A = 90 - 100) or better. The target score of 3.25 or higher for the indirect assessment of SLO 6 in the Graduate Exit Survey was met (3.27). The target score of 3.25 or higher for the indirect assessment of SLO 6 in the Construction Industry Advisory Council (CIAC) survey was met (3.33). Measure 7 (Former Student Survey) will be administered during the 2017/18 assessment cycle so no SLO data were available for this measure. SLO #8 – Demonstrate knowledge of construction contracts, risks, construction laws and ethics: The direct assessment target for SLO 8 was not reported this cycle. The measure for this SLO will be reported in AY 2018/19 after the re-institution of the graduate course COSC 628: Construction Contracts and Risk Management. The target score of 3.25 or higher for the indirect assessment of SLO 8 in the Graduate Exit Survey was not met (2.77). The target score of 3.25 or higher for the indirect assessment of SLO 8 in the Construction Industry Advisory Council (CIAC) survey was met (4.00). Measure 7 (Former Student Survey) will be administered during the 2017/18 assessment cycle so no SLO data were available for this measure. The re-instituted graduate Course COSC 628 Construction Contracts and Risk Management addresses risk management, ethics, and formulation of contracts. Offering this course should address the self-identified gap in student confidence identified in the Graduate Exit Survey for SLO #8, because there were no courses offered that addressed this gap.

***CRITICAL* Provide an update for completed or ongoing action plans from the previous year(s). Discuss any successes, challenges, and/or obstacles the program/unit has experienced while implementing the Action Plan(s). Address whether or not the program/unit has seen any improvement in assessment results for the targeted Outcome(s) the Action Plan(s) were designed to address and why the action plan may/may not have resulted in improvements.**

Reduce the size of the graduate program: Terminated – Due to the university and college's desire to increase the size of graduate programs, this action plan was terminated. The Department has restructured the Graduate program in an effort to increase enrollment. Use of Construction Management Jumpstart text in Graduate Seminar: Terminated - This action plan was terminated due to the graduate program restructuring to include core courses in order to address student knowledge gaps. New Student Boot Camp: In progress - The continuation of the week-long, intensive "Boot Camp" for incoming graduate students is anticipated to address weakness in construction management knowledge of new MSCM students by increasing students' baseline knowledge at the beginning of their degree program in order for the MSCM program to decrease the amount of instructional time on fundamental principles in order to provide students a foundation for more advanced topics and therefore provide more instructional time for advanced project management principles and practices. The effectiveness of the Boot Camp is currently being monitored and

evaluated. Early data indicates the Boot Camp has value increasing short-term subject matter knowledge, providing an orientation to the program and providing networking opportunities among new students. Due to the restructuring of the Graduate program to include a core curriculum, the current purpose of the Boot Camp as a leveling mechanism is no longer needed. The Boot Camp may be restructured in the future to serve as an orientation and networking vehicle for new graduate students. Require graduate students to work with the chair of their research advisory committee for major tasks in COSC 690: In Progress – The Department hired a Research Coordinator starting Fall 2018 to help monitor the efforts of research faculty – including working closely with students. Both the Graduate and Research Coordinators are also available to advise students. Thesis Review – In-Progress: Stronger emphasis and follow-up with graduate faculty to complete all Theses reviews and return scores in a timely manner will be implemented during the 2017/18 academic year. No Thesis reviews were conducted during the 2017/18 academic year. Reviews will be conducted during the 2018/19 academic year. The Graduate and Research Coordinators will continue to work with faculty to ensure Thesis reviews are completed in a timely manner.