

Texas A&M University

Detailed Assessment Report 2016-2017 Construction Science, BS

As of: 10/03/2017 09:59 AM 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 AM University and enhancing the economic development of the State of Texas. Our mission of providing the highest quality undergraduate and graduate 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: BS Construction Science Goal

The department will maintain a strong general, comprehensive, broad based undergraduate degree program, founded in construction fundamentals applicable to all sectors of the industry and responsive to the ever evolving industry and industry trends. Through its learning environment, the department of will foster responsible, reflective, and respectful lifelong learners as demonstrated by achieving the learning outcomes as stated in the Departmental Strategic Plan.

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

SLO 1: Cycle 1: MMDA SLO 8

Students are able to analyze methods, material, and equipment used to construct projects: Cycle 1 _ Reported once every three years.

Relevant Associations:

General Education/Core Curriculum Associations

- 1 Master the depth of knowledge required for a degree

Strategic Plan Associations

Texas A&M University

- 3 Enhance the Undergraduate Academic Experience.

Related Measures

M 1: Direct Assessment _ SLO 8

Direct assessment for SLO 8 will occur using a combination of assignments, and/or exams (in whole or in part) from COSC courses 254 (Construction Materials and Methods II), and 321 (Structural Systems I). The assessment instruments will be administered by course instructors in class to students as part of the regular course curriculum. Data reported will be class-level average performance on either the full assignment/exam or targeted questions. Data reported for targeted questions in COSC 254 are the percentage of students correctly answering targeted questions (scale of 100%: 0=incorrect 1=correct). Data for student assignment in COSC 321 are the class average of correct inclusion of necessary information in assignment. Attached rubric contains the points possible for each type of question and the points possible for each component of question type. Point deductions accrue as components are missed in each question type according to the system outlined in the rubric. Cycle 1 _ Reported once every three years.

Source of Evidence: Project, either individual or group

Connected Documents

[SLO 8 _ COSC 321 Assignment 2 Rubrics](#)

[SLO 8 _ COSC 321 Assignment 3 Rubrics](#)

[SLO 8 _ COSC 254 _ Targeted Questions](#)

Target:

Students cumulative average score for SLO 8 will be 70% or higher. In order to set a target score during initial data collection of new SLO data collection system and establishment of baseline date, 70% was deemed appropriate as minimum target as students must have a grade of "C" (70) or better 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.

Finding (2016-2017) - Target: Met

Students Cumulative average scores for SLO 8 during the Fall 2016 and Spring 2017 semesters were 75.25 and 73.61, respectively. Therefore students cumulative SLO 8 average score for the 2016-17 academic year was 74.43, therefore the target of 70% or greater SLO average was met. While meeting the target of 70%, the relatively low score for SLO 8 was surprising and may indicate a need for greater emphasis during instruction by methods such as greater use of video, physical samples, etc. Breakdown of semester SLO 8 Scores illustrated in table below. SLO 8 Fall 2016 Assessment Data Course Assignment Number of Students Question/Assignment Class Average SLO 8 Average Score COSC 254 Exam 2 160 Question #10 67.6 Question #28 32.4 Question #39 36.6 Exam 3 160 Question #9 98.7 Question #11 98.7 Question #16 92.9 Final Exam 160 Question #10 56.8 Question #11 88.3 Question #14 77.8 COSC 254 SLO 8 Student Average Score 72.2 COSC 321 Exam 2 89 Full Exam 78.29 SLO 8 Average Score 75.25 Performance Measure Minimum of 70% Target Met SLO 8 Spring 2017 Assessment Data Course Assignment Number of Students Question/Assignment Class Average SLO 8 Average Score COSC 254 Exam 2 160 Question #10 74.7 Question #28 52.4 Question #39 33.7 Exam 3 166 Question #9 100 Question #11 97.3 Question #16 92.0

Final Exam 166 Question #10 39.5 Question #11 92.6 Question #14 71.6 COSC 254 SLO 8 Student Average Score 72.64 COSC 321 Exam 2 68 Full Exam 74.58 SLO 8 Average Score 73.61 BrePerformance Measure Minimum of 70% Target Met

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

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

SLO 8 Action Plan

Established in Cycle: 2016-2017

Based on the Direct Assessment average score (74.43) and Indirect Assessment mean score from the Senior Exit Survey (3.25) of st...

M 9: Senior Exit Survey _ Confidence

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

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

Connected Document

[Senior Exit Survey Questionnaire _ AY2016_17](#)

Target:

For each student learning outcome students' average score will be a minimum score of 2.51 or higher 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.

Finding (2016-2017) - Target: Met

During the 2016/17 academic year, the Fall 2016 and Spring 2017 Senior Exit Survey had a total of 247 respondents. In Fall 2016 102 students responded to the question: "As a result of your COSC degree program, how confident do you feel in your ability to understand the basic principles of mechanical, electrical, and piping systems?" with a mean score of 3.2. and 140 students responded to the same question in Spring 2017 with a mean score of 3.26. Therefore a total of 241 students responded to SLO 20 with an overall mean score of 3.25 (Confident), meeting the target of a minimum mean score of 2.51. The scale used was: Very Confident = 3.51 – 4.00; Confident = 2.51 – 3.50; Somewhat Confident = 1.51 – 2.50; Not Confident = 1.00 – 1.50. Below are the Individual Fall 2016 and Spring 2017 SLO 8 mean scores. Fall 2016 Senior Exit survey had had a total of 104 respondents. 102 students responded to the question: "As a result of your COSC degree program, how confident do you feel in your ability to analyze methods, materials, and equipment used to construct projects?" Students mean response was 3.23 (Confident). The scale used was: Very Confident = 3.51 – 4.00; Confident + 2.51 – 3.50; Somewhat Confident = 1.51 – 2.50; Not Confident = 1.00 – 1.50. SLO # Student Learning Outcome n M SD Confidence 8. Analyze methods, materials, and equipment used to construct projects 102 3.23 .757 Confident Spring 2017 Senior Exit survey had had a total of 143 respondents. 140 students responded to the question: "As a result of your COSC degree program, how confident do you feel in your ability to analyze methods, materials, and equipment used to construct projects?" Students mean response was 3.26 (Confident). The scale used was: Very Confident = 3.51 – 4.00; Confident + 2.51 – 3.50; Somewhat Confident = 1.51 – 2.50; Not Confident = 1.00 – 1.50. SLO # Student Learning Outcome n M SD Confidence 8. Analyze methods, materials, and equipment used to construct projects 140 3.26 .682 Confident

SLO 2: Cycle 1: MMDA SLO 20

Students understand the basic principles of mechanical, electrical, and piping systems: Cycle 1 _ Reported once every three years.

Relevant Associations:

General Education/Core Curriculum Associations

- 1 Master the depth of knowledge required for a degree

Strategic Plan Associations

Texas A&M University

- 2 Strengthen our graduate programs.

Related Measures

M 2: Direct Assessment _ SLO 20

Direct assessment for SLO 20 will occur using a combination of exams (in whole or in part) from COSC courses 325 (MEP Systems in Construction I) and 326 (MEP Systems in Construction II). The assessment instruments will be administered by course instructors in class to students as part of the regular course curriculum. Data reported will be class-level average performance on either the full assignment/exam or targeted questions. Cycle 1 _ Reported once every three years.

Source of Evidence: Writing exam to assure certain proficiency level

Connected Document

[SLO 20 Assignment 2 Example](#)

Target:

Students cumulative average score for SLO 20 will be 70% or higher. In order to set a target score during initial data collection of new SLO data collection system and establishment of baseline date, 70% was deemed appropriate as minimum target as students must have a grade of "C" (70) or better 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.

Finding (2016-2017) - Target: Met

Students Cumulative average scores for SLO 20 during the Fall 2016 and Spring 2017 semesters were 88.45 and 85.41, respectively - yielding a student cumulative SLO 20 average score for the 2016-17 academic year of 86.93. Therefore the target of 70% or greater SLO average was met. While there is room for improvement,

student average performance on SLO 20 indicates students have an adequate foundation understanding of HVAC systems that may benefit from increased focus during classroom instruction. Breakdown of semester SLO 20 Scores illustrated in the tables below. SLO 20 Fall 2016 Assessment Data Course Assignment Number of Students Question/Assignment Class Average SLO 20 Average Score COSC 325 Exam 1 88 Full Exam 93.75 Exam 2 88 Full Exam 84.4 Exam 3 88 Full Exam 90.3 COSC 326 Exam 2 167 Targeted Questions 84.0 Exam 3 164 Targeted Questions 78.0 Exam 4 159 Targeted Questions 94.0 COSC 326 cumulative SLO 20 Score 85.33 SLO 20 Average Score 88.45 Performance Measure Minimum of 70% Target Met SLO 20 Spring 2017 Assessment Data Course Assignment Number of Students Question/Assignment Class Average SLO 20 Average Score COSC 325 Exam 1 135 Full Exam 80.0 Exam 2 136 Full Exam 82.45 Exam 3 134 Full Exam 88.20 COSC 326 Exam 1 153 Question 92.20 Exam 2 152 Question 93.5 Exam 3 150 Question 90.0 Exam 4 146 Question 88.30 COSC 326 cumulative SLO 20 Score 91.0 SLO 20 Average Score 85.41 Performance Measure Minimum of 70% Target Met

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

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

SLO 20 Action Plan

Established in Cycle: 2016-2017

Based on the Direct Assessment average score (86.93) and Indirect Assessment mean score from the Senior Exit Survey (2.77) of st...

M 9: Senior Exit Survey _ Confidence

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

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

Connected Document

[Senior Exit Survey Questionnaire _ AY2016 _17](#)

Target:

For each student learning outcome students' average score will be a minimum score of 2.51 or higher indicating students are, at minimum, "confident" applying individual student learning outcomes.

Finding (2016-2017) - Target: Met

During the 2016/17 academic year, the Fall 2016 and Spring 2017 Senior Exit Survey had a total of 247 respondents. In Fall 2016 102 students responded to the question: "As a result of your COSC degree program, how confident do you feel in your ability to understand the basic principles of mechanical, electrical, and piping systems?" with a mean score of 2.72 and 139 students responded to the same question in Spring 2017 with a mean score of 2.81. Therefore a total of 241 students responded to SLO 20 with an overall mean score of 2.77 (Confident), meeting the target of a minimum mean score of 2.51. The scale used was: Very Confident = 3.51 – 4.00; Confident = 2.51 – 3.50; Somewhat Confident = 1.51 – 2.50; Not Confident = 1.00 – 1.50. Below are the Individual Fall 2016 and Spring 2017 SLO 20 mean scores. Fall 2016 Senior Exit survey had a total of 104 respondents. 102 students responded to the question: "As a result of your COSC degree program, how confident do you feel in your ability to understand the basic principles of mechanical, electrical, and piping systems?" Students mean response was 2.72 (Confident). The scale used was: Very Confident = 3.51 – 4.00; Confident = 2.51 – 3.50; Somewhat Confident = 1.51 – 2.50; Not Confident = 1.00 – 1.50. SLO # Student Learning Outcome n M SD Confidence 20. Understand the basic principles of mechanical, electrical and piping systems 102 2.72 .937 Confident Spring 2017 Senior Exit survey had had a total of 143 respondents. 140 students responded to the question: "As a result of your COSC degree program, how confident do you feel in your ability to analyze methods, materials, and equipment used to construct projects?" Students mean response was 2.81 (Confident). The scale used was: Very Confident = 3.51 – 4.00; Confident = 2.51 – 3.50; Somewhat Confident = 1.51 – 2.50; Not Confident = 1.00 – 1.50. SLO # Student Learning Outcome n M SD Confidence 20. Understand the basic principles of mechanical, electrical and piping systems 139 2.81 .848 Confident

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

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

SLO 20 Action Plan

Established in Cycle: 2016-2017

Based on the Direct Assessment average score (86.93) and Indirect Assessment mean score from the Senior Exit Survey (2.77) of st...

SLO 3: Cycle 2: Project Admin. _ SLO 1

Students are able to create written communications appropriate to the construction discipline: Cycle 2 _ Reported once every three years.

Relevant Associations:

General Education/Core Curriculum Associations

3 Communicate effectively

Strategic Plan Associations

Texas A&M University

3 Enhance the Undergraduate Academic Experience.

Related Measures

M 3: Direct Assessment _ SLO 1

Direct assessment will occur for SLO 1 using a combination of assignments (in whole or in part) from COSC courses 463 (Introduction to Construction Law), 440, 441, 442, 443, and/or 446 (Capstone), and 494 (Internship). The assessment instruments will be administered by course instructors in class to students as part of the regular course curriculum. Data reported will be class-level average performance on either the full assignment/exam or targeted questions. Cycle 2 _ Reported once every three years.

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

Target:

Students cumulative average score for SLO 1 will be 70% or higher. In order to set a target score during initial data collection of new SLO data collection system and establishment of baseline date, 70% was deemed appropriate as minimum target as students must have a grade of "C" (70) or better 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.

Finding (2016-2017) - 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.

SLO 8 Action Plan

Established in Cycle: 2016-2017

Based on the Direct Assessment average score (74.43) and Indirect Assessment mean score from the Senior Exit Survey (3.25) of st...

M 9: Senior Exit Survey _ Confidence

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

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

Connected Document

[Senior Exit Survey Questionnaire _ AY2016_17](#)

Target:

For each student learning outcome students' average score will be a minimum score of 2.51 or higher indicating students are, at minimum, "confident" applying individual student learning outcomes.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

SLO 4: Cycle 2: Project Admin _ SLO 2

Students are able to create oral presentations appropriate to the construction discipline: Cycle 2 _ Reported once every three years.

Relevant Associations:

General Education/Core Curriculum Associations

3 Communicate effectively

Strategic Plan Associations

Texas A&M University

3 Enhance the Undergraduate Academic Experience.

Related Measures

M 4: Direct Assessment _ SLO 2

Direct assessment will occur for SLO 2 using a combination of assignment and project (in whole or in part) from COSC courses 353 (Construction Project Management) and 440, 441, 442, 443, and/or 446 (Capstone). The assessment instruments will be administered by course instructors in class to students as part of the regular course curriculum. Data reported will be class-level average performance on either the full assignment/exam or targeted questions. Cycle 2 _ Reported once every three years.

Source of Evidence: Presentation, either individual or group

Target:

Students cumulative average score for SLO 2 will be 70% or higher. In order to set a target score during initial data collection of new SLO data collection system and establishment of baseline date, 70% was deemed appropriate as minimum target as students must have a grade of "C" (70) or better 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.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

M 9: Senior Exit Survey _ Confidence

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

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

Connected Document

[Senior Exit Survey Questionnaire _ AY2016_17](#)

Target:

For each student learning outcome students' average score will be a minimum score of 2.51 or higher indicating students are, at minimum, "confident" applying individual student learning outcomes.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

SLO 5: Cycle 2: Project Admin. - SLO 6

Students are able to analyze professional decisions based on ethical principles: Cycle 2 _ Reported once every three years.

Relevant Associations:**General Education/Core Curriculum Associations**

- 4 Practice personal and social responsibility
- 5 Demonstrate social, cultural, and global competence
- 6 Prepare to engage in lifelong learning

Strategic Plan Associations**Texas A&M University**

- 3 Enhance the Undergraduate Academic Experience.

Related Measures**M 5: Direct Assessment _ SLO 6**

Direct assessment will occur for SLO 6 using a combination of assignments (in whole or in part) from COSC courses 381 (Professional Ethics in Construction) and 463 (Introduction to Construction Law). The assessment instruments will be administered by course instructors in class to students as part of the regular course curriculum. Data reported will be class-level average performance on either the full assignment/exam or targeted questions. Cycle 2 _ Reported once every three years.

Source of Evidence: Academic direct measure of learning - other

Target:

Students cumulative average score for SLO 6 will be 70% or higher. In order to set a target score during initial data collection of new SLO data collection system and establishment of baseline date, 70% was deemed appropriate as minimum target as students must have a grade of "C" (70) or better 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.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

M 9: Senior Exit Survey _ Confidence

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

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

Connected Document

[Senior Exit Survey Questionnaire _ AY2016_17](#)

Target:

For each student learning outcome students' average score will be a minimum score of 2.51 or higher indicating students are, at minimum, "confident" applying individual student learning outcomes.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

SLO 6: Cycle 2: Project Admin. _ SLO 9

Students are able to apply construction management skills as a member of a multi-disciplinary team: Cycle 2 _ Reported once every three years.

Relevant Associations:**General Education/Core Curriculum Associations**

- 7 Work collaboratively

Strategic Plan Associations**Texas A&M University**

- 3 Enhance the Undergraduate Academic Experience.

Related Measures**M 6: Direct Assessment _ SLO 9**

Direct assessment will occur for SLO 9 using a combination of assignments and/or project (in whole or in part) from COSC courses 494 (Internship) and 440, 441, 442, 443, and/or 446 (Capstone). The assessment instruments will be administered by course instructors in class to students as part of the regular course curriculum. Data reported will be class-level average performance on either the full assignment/exam or targeted questions. Cycle 2 _ Reported once every three years.

Source of Evidence: Academic direct measure of learning - other

Target:

Students cumulative average score for SLO 9 will be 70% or higher.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

M 9: Senior Exit Survey _ Confidence

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

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

Connected Document

[Senior Exit Survey Questionnaire _AY2016_17](#)

Target:

For each student learning outcome students' average score will be a minimum score of 2.51 or higher indicating students are, at minimum, "confident" applying individual student learning outcomes.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

SLO 7: Cycle 3: Project Controls _ SLO 5

Students are able to create construction project schedules: Cycle 3 _ Reported once every three years.

Relevant Associations:

General Education/Core Curriculum Associations

2 Demonstrate critical thinking

Strategic Plan Associations

Texas A&M University

3 Enhance the Undergraduate Academic Experience.

Related Measures

M 7: Direct Assessment _ SLO 5

Direct assessment will occur for SLO 5 using a combination of assignment and project (in whole or in part) from COSC courses 475 (Construction Project Planning) and 440, 441, 442, 443, and/or 446 (Capstone). The assessment instruments will be administered by course instructors in class to students as part of the regular course curriculum. Data reported will be class-level average performance on either the full assignment/exam or targeted questions. Cycle 3 _ Reported once every three years.

Source of Evidence: Project, either individual or group

Target:

Students cumulative average score for SLO 5 will be 70% or higher. In order to set a target score during initial data collection of new SLO data collection system and establishment of baseline date, 70% was deemed appropriate as minimum target as students must have a grade of "C" (70) or better 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.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

M 9: Senior Exit Survey _ Confidence

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

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

Connected Document

[Senior Exit Survey Questionnaire _AY2016_17](#)

Target:

For each student learning outcome students' average score will be a minimum score of 2.51 or higher indicating students are, at minimum, "confident" applying individual student learning outcomes.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

SLO 8: Cycle 3: Project Controls _ SLO 10

Students are able to apply electronic-based technology to manage the construction process: Cycle 3 _ Reported once every three years.

Relevant Associations:

General Education/Core Curriculum Associations

2 Demonstrate critical thinking

Strategic Plan Associations

Texas A&M University

3 Enhance the Undergraduate Academic Experience.

Related Measures

M 8: Direct Assessment _ SLO 10

Direct assessment will occur for SLO 10 using a combination of assignments (in whole or in part) from COSC courses 275 (Estimating I), 375 (Estimating II), and 475 (Construction Project Planning). The assessment instruments will be administered by course instructors in class to students as part of the regular course curriculum. Data reported will be class-level average performance on either the full assignment/exam or targeted questions. Cycle 3 _ Reported once every three years.

Source of Evidence: Academic direct measure of learning - other

Target:

Students cumulative average score for SLO 10 will be 70% or higher. In order to set a target score during initial data collection of new SLO data collection system and establishment of baseline date, 70% was deemed appropriate as minimum target as students must have a grade of "C" (70) or better 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.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

M 9: Senior Exit Survey _ Confidence

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

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

Connected Document

[Senior Exit Survey Questionnaire _ AY2016_17](#)

Target:

For each student learning outcome students' average score will be a minimum score of 2.51 or higher indicating students are, at minimum, "confident" applying individual student learning outcomes.

Finding (2016-2017) - Target: Not Reported This Cycle

Not Reported This Cycle

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

Undergraduate Competition Teams

The Undergraduate Committee is aware that the goal was not completely met and is meeting regularly and diligently working to develop a workable solution.

Established in Cycle: 2012-2013

Implementation Status: Finished

Priority: High

Implementation Description: During the 2013-2014 academic year two of our three teams placed and the third team advanced to the final round of competition.

SLO 20 Action Plan

Based on the Direct Assessment average score (86.93) and Indirect Assessment mean score from the Senior Exit Survey (2.77) of students' ability to understand the basic principles of mechanical, electrical, and piping systems, greater emphasis will be placed on helping students make the connection between the material and its practical application - this may be accomplished through increased use of problem solving, examples, and real-world scenarios. Because many students no longer come from construction backgrounds with pre-existing knowledge/familiarity of concept application, the increased emphasis between content and practical application in addition to increased use of teaching practices such as problem-solving, examples, and real-world scenarios should enhance and reinforce student understanding of the material and its application.

Established in Cycle: 2016-2017

Implementation Status: Planned

Priority: Medium

Relationships (Measure | Outcome/Objective):

Measure: Direct Assessment _ SLO 20 | **Outcome/Objective:** Cycle 1: MMDA SLO 20

Measure: Senior Exit Survey _ Confidence | **Outcome/Objective:** Cycle 1: MMDA SLO 20

SLO 8 Action Plan

Based on the Direct Assessment average score (74.43) and Indirect Assessment mean score from the Senior Exit Survey (3.25) of students' ability to analyze methods, materials, and equipment used to construct projects, greater emphasis will be placed on helping students make the connection between the material and its application and factors that influence it - this may be accomplished through increased use of problem solving, examples, and real-world scenarios. Because many students no longer come from construction backgrounds with pre-existing knowledge/familiarity of concept application, the increased emphasis between content and practical application in addition to increased use of teaching practices such as problem-solving, examples, and real-world scenarios should enhance and reinforce student understanding of the material and its application.

Established in Cycle: 2016-2017

Implementation Status: Planned

Priority: Medium

Relationships (Measure | Outcome/Objective):

Measure: Direct Assessment _ SLO 1 | **Outcome/Objective:** Cycle 2: Project Admin. _ SLO 1

Measure: Direct Assessment _ SLO 8 | **Outcome/Objective:** Cycle 1: MMDA SLO 8

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?

Academic Year (AY) 2016/17 is the first year in which a new COSC Undergraduate Assessment Plan was implemented. The new assessment plan contains new Outcomes/Objectives; Measures; and Findings which are now aligned with the COSC degree program's accrediting body the American Council for Construction Education (ACCE) Student Learning Outcomes. The Assessment Plan follows a three-year cycle, therefore not all objectives are assessed every year. Cycle 1 containing SLOs #8 and 20 will be the only SLOs reported during the 2016/17 WEAVE assessment cycle. SLO 8: Analyze methods, materials, and equipment used to construct projects. The targets for SLO 8 were all met. Measure 1 (Direct Assessment _ SLO 8) met the target of a cumulative average score of 70% or higher (74.43%). Measure 9 (Senior Exit Survey _ Confidence) met the target mean score of 2.51 or higher (3.25). SLO 20: Understand the basic principles of mechanical, electrical, and piping systems. Measure 2 (Direct Assessment _ SLO 20) met the target of a cumulative average score of 70% or higher (86.93%). Measure 9 (Senior Exit Survey _ Confidence) met the target mean score of

2.51 or higher (2.77). The SLO 8 and 10 action plans were identified by faculty members of the course group with responsibility of teaching those courses with primary emphasis on the targeted SLOs. Because many students no longer come from construction backgrounds with pre-existing knowledge/familiarity of concept application, the increased emphasis between content and practical application in addition to increased use of teaching practices such as problem-solving, examples, and real-world scenarios should enhance and reinforce student understanding of the material and its application.

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.

· Introduce and Implement Good Writing Skills – In Progress: Writing skills are emphasized in both COSC 175 - Construction Graphics and COSC 463 - Intro to Construction Law. COSC 175 includes at least 5 separate writing assignments including: a personal essay, business letters, and summary reports. COSC 463 includes multiple writing assignments including: an ethics paper; business letters, and outlining assignments. · Sustainability and Ethics Emphasis – Finished: COSC 463 and 381 were identified as courses in which ethics and social responsibility are emphasized in the curriculum and align with the newly adopted SLO 6 (analyze professional decisions based on ethical principles) in AY 2016/17. Direct Assessment of Fall 2016 student scores on targeted of SLO data indicates the increased emphasis on ethical considerations has effectively increased student competence and the target of 70% competence or greater has been met (87.56%). COSC 326 and COSC 254 were identified as courses in which sustainability are emphasized in the curriculum and align with the newly adopted SLO 18 (Understand the basic principles of sustainable construction) in AY 2016/17. Direct Assessment of Fall 2016 student scores on targeted of SLO data indicates the increased emphasis on ethical considerations has effectively increased student competence and the target of 70% competence or greater has been met (77.88%). · Competition Team Preparation – Terminated: The objectives have been changed to align with the new COSC Assessment Plan and Student Learning Outcomes that were adopted AY 2016/17. Therefore this Action Plan is no longer relevant to the current objectives. During AY 2016/17 only three competition teams were fielded at regional or national competition. No teams qualified. Although competition teams are no longer a measure, the department will continue to increase the use of scenarios for team preparation to simulate competition conditions during team practice to train students in rapid problem identification and problem solving would increase student performance during actual competitions. New Action Plan Items: · SLO 8 Action Plan – Planned: Although based on the Direct Assessment average score (74.43) and Indirect Assessment mean score from the Senior Exit Survey (3.25) of students' ability to analyze methods, materials, and equipment used to construct projects the target has been met, the department will still place greater emphasis on helping students make the connection between the material and its practical application - this may be accomplished through increased use of problem solving, examples, and real-world scenarios. · SLO 20 Action Plan – Planned: Although based on the Direct Assessment average score (86.93) and Indirect Assessment mean score from the Senior Exit Survey (2.77) of students' ability to understand the basic principles of mechanical, electrical, and piping systems the target has been met, the department will still place greater emphasis on helping students make the connection between the material and its practical application - this may be accomplished through increased use of problem solving, examples, and real-world scenarios.