The University of Southern Mississippi

Detailed Assessment Report

As of: 9/24/2019 09:54 AM EDT

2018-2019 Construction Engineering Technology BS*

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

Mission / Purpose

The University of Southern Mississippi Construction Engineering Technology (CET) program is committed to producing graduates who possess the necessary skills to enter the A/E/C industry fully capable of performing entry-level tasks at the office and in the field. The graduates' critical thinking, discipline and work ethics will be such that a short

Target:
The achievement target will have been met if 80 percent or more assessed students achieve a 70% or better on the project.

Findings (2018-2019) - Target: Met
Spring 2019: Hattiesburg On-

The BCT 400 course has not met SLO target for two cycles as related to students creating a construction project cost estimate. T...

SLO 3:Understand methods of project delivery.

Students will be able to understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.

Related Measures:

M 5:M1 (Direct): AEC 380-AIA-201 Test

The Fall 2016 AEC 380 (Specifications & Contract Documents) course includes content about the Construction Project Life Cycle and the roles and responsibilities of all entities and parties involved in the project. Week 6 covers Conditions of the Contract which includes a thorough review of the AIA-A201 document defining duties and responsibilities of all parties of the contract. Students complete a test assessing the content.

Source of Evidence: Writing exam to assure certain proficiency level

Target:

There are a total of 63 questions on the test. Each question is worth 1 point. Using the following grading scale, a student's performance will be assessed as either an F (0-37 points), D (38-43 points), C (44-50 points), B (51-56 points), A (57-63). The achievement target will have been met if 80 percent or more assessed students achieve a C or better.

Findings (2018-2019) - Target: Met

Spring 2019: Hattiesburg On-Campus: 95.5% (N=22) 21/22 on-campus students received a 70% or better on the test. Spring 2019: On-Line: 97.2% (N=36) 35/36 on-line students received a 70% or better on the test.

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

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

AEC 380 AIA-A201 Test

Established in Cycle: 2017-2018

The on-campus section students achieved only 73.3% out of the targeted 80% minimum. The instructor of the course will review the...

M 6:M2 (Direct): BCT 174 Delivery Methods

The Fall 2016 BCT 174 (Construction Organization) course is an introductory course for the construction industry. In this course, students learn about different constituencies involved in the construction projects. In addition, they learn about different project delivery methods. In the course students are required to complete an assignment in which they compare 3 major types of project delivery and draw the organizational chart of each. Students also describe the relationship between major constituencies. The BCT 174 course was removed from the curriculum in Fall 2018 and will no longer be part of the Construction Engineering Technology (as of 7/1/2019 the prog[m)-380.09 Tmering Technolas reing T[ )]TJETQ EMC /P /MCID 12>BDC

Target:
M2 used in 2016-2017 Cycle and 2017-2018 Cycle: Using a Pass/Fail grading criteria, students either have all information correct or they fail the assignment. The achievement target will have been met if 80 percent or more assessed students achieve a "Pass." M2 used in 2018-2019 Cycle: Students complete a timed 25 question multiple choice quiz that includes questions relating to methods of project delivery and roles and responsibilities of architecture and construciton project participants.

Findings (2018-2019) - Target: Met
Spring 2019: Hattiesburg On-Campus: 86.4% (N=22) 19/22 on-campus students received a 70% or better on the the quiz. Spring 2019: On-Line: 94.4% (N=36) 34/36 on-line students received a 70% or better on the quiz.

SLO 4:Utilize electronic-based technology.
Students will be able to utilize electronic-based technology to manage the AEC (Architecture/Engineering/Construction) process.

Related Measures:

M 7:M1 (Direct): AEC 132 Final Project
The AEC 132 (Architectural Graphics) course is where students use AutoCAD to develop a partial set of working drawings (plans). The Final Project for the course is evaluated using a rubric developed to access the components of the submission.

Source of Evidence: Project, either individual or group

Target:
The achievement target will have been met if 80 percent or more assessed students achieve a 70% or better on the project.

Findings (2018-2019) - Target: Met
Fall 2018: Hattiesburg On-Campus: 92.6% (N=27) 25/27 on-campus students received a 70% or better on the project. Fall 2018: On-Line: 80.6% (N= 31) 25/31 on-line students received a 70% or better on the project.

M 8:M2 (Direct): AEC 254 Estimating Assignment
The Fall 2016 AEC 254 (Estimating 1) course requires students to submit an assignment using OnScreen Takeoff software to estimate the quantity of concrete, CMU, and brick based on a set of drawings of a Coastal Wildlife Recovery Center. The assignment is scored based on 150 points total. A student earns the 150 points if they are successful in developing the estimate using the software and submit the assignment by the deadline.

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

Target:
A student's performance will be assessed as either unacceptable (below 90 points), poor (90-104 points), acceptable (105-119 points), or good (120-134 points) or excellent (135-150 points). The achievement target will have been met if 80 percent or more assessed students achieve an acceptable or better score.

Findings (2018-2019) - Target: Met
Fall 2018: Hattiesburg On-Campus: 88% (N=24) 21/24 on-campus students achieved a 70%

or better on the assignment. Fall 2018: On-Line: 90% (N=40) 36/40 on-line students achieved a 70% or better on the assignment.

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

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

AEC 254 Use of Technology
Established in Cycle: 2017-2018
Only 72.7% of on-campus AEC 254 students achieved the target related to technology use on an assignment in the course.

SLO 5:Increase Hattiesburg on-campus enrollment by 10%.
Increase Hattiesburg on-campus enrollment by two percent each Fall semester.

Related Measures:

M 9:IR Enrollment Data
The Construction Engineering Technology program desires to increase the Hattiesburg campus student enrollment by two percent. The data will be collected in the Fall semester from the Office of Institutional Research.

Source of Evidence: Existing data

Connected Document
IR response to Official Enrollment Data for Fall 2019

Target:
The target will be met if the enrollment for the Hattiesburg on-campus Construction Engineering Technology majors increases by ten percent from Fall 2016 to Fall 2017 and two percent every Fall semester to follow.

Findings (2018-2019) - Target: Met
Official data from the Office of Institutional Research will not be available until November 1, 2019. This report is due September 30, 2019 so the program coordinator with the assistance of the Student Advancement Administrator, Kimber Atwell, ran a query to determine how many enrolled and active students are in the program on Friday, September 20, 2019. The query resulted in the following data: on campus Construction Engineering Technology (CET) majors= 108; Online CET majors = 192; On-campus Construction Management (CM) majors = 25; Online CM majors = 49. The combining of CET and CM majors numbers results in 133 Construction Engineering Technology and Construction Management students on-campus students enrolled. In July 2018, the Construction Engineering Technology degree program was approved for a name change to Construction Management so in order to report an accurate number of on-campus students the two enrollments must be combined. The Office of Institutional Research provides official data of program enrollment and was contacted to request enrollment for the Fall 2019 semester. It was stated that official enrollment will not be available until November 1, 2019 and this report is due by September 30, 2019. Therefore, the enrollment data included is subject to change and the outcome of meeting or not meeting the Target may be impacted. Communication from the Office of Institutional Research is included in this finding. The Fall 2017 on-campus enrollment for CET was 127. Fall 2018 on-campus enrollment for CET was 113. Fall 2019 enrollment is projected to be 133. This is a 17.7% increase and the first time we have met our initial target in 3 cycles.

Connected Document

Projected Completion Date: 07/30/2019

AEC 254 Use of Technology

Only 72.7% of on-campus AEC 254 students achieved the target related to technology use on an assignment in the course.

Established in Cycle: 2017-2018
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: M2 (Direct): AEC 254 Estimating Assignment | **Outcome/Objective:** Utilize electronic-based technology.

Implementation Description: The instructor of the course will spend more time showing students how to use the software in order to successfully complete the assignment. Tutors may also be made available for those students needing extra help.
Projected Completion Date: 07/31/2019
Responsible Person/Group: Instructor of course and coordinator of program

AEC 380 AIA-A201 Test

The on-campus section students achieved only 73.3% out of the targeted 80% minimum. The instructor of the course will review the questions missed and provide additional emphasis on students fully understanding the content contained in those questions to assist in improving the outcomes.

Established in Cycle: 2017-2018
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: M1 (Direct): AEC 380-AIA-201 Test | **Outcome/Objective:** Understand methods of project delivery.

Projected Completion Date: 08/30/2019
Responsible Person/Group: instructor of course

BCT 400 Cost Estimate Action Plan 2017-2018

The BCT 400 course has not met SLO a0 11.04 Tf1 0 0 1 110.arg(t)-4(e)13(t)-f( )-4(o)13(f)-4(64(e)11 0 rg0.

Measure: M2 (Direct) BCT 400 Cost Estimate Project | **Outcome/Objective:** Create construction project cost estimates.

Projected Completion Date: 01/01/2019
Responsible Person/Group: Course instructor and program coordinator

Analysis Questions and Analysis Answers

What specifically did your assessments show regarding proven strengths or progress you made on outcomes/objectives?

One of the main strengths that will enable us to better track outcomes is the faculty commitment to submitting the end-of-the-semester course assessment data. Those data enable collection of all course outcomes and allows program coordinator and program faculty to meet to discuss possible actions we may take collectively to improve. This is the

campus students achieving the target (58%- Spring 2018 to 76% - Spring 2019), we are still not at the 80% required for both On-campus and Online students. In Fall 2018, the Construction Management (prior to July 2019 the program was Construction Engineering Technology) program coordinator meet with the program faculty to discuss the curriculum and any changes that need to be made to improve student success. One major outcome of that meeting was the revision of several prerequisites. The program coordinator submitted course modification proposals for six major courses to the Academic Council in the Fall 2018 semester to be implemented in Fall 2019. Most of the course modifications involved changing the prerequisites as faculty determined at our meeting that our existing prerequisites were not suitable for the six courses submitted. BCT 400 now has Estimating 1 and 2 courses as strictly enforced prerequisites whereas before this change a student could enroll in BCT 400 as long as they were classified as a senior. It is anticipated that this change will have a positive outcome on achieving the desired target.

Annual Report Section Responses

Program Summary. Summarize highlights of the past year for this particular academic program. Provide context to an outside reviewer.

Because our CET program is offered online we value the training received and will implement things learned and best practices in designing our online courses. Dr. Zhang has reviewed several online courses for QM and shared that she gained a lot of knowledge and ideas by reviewing online course design from faculty at other institutions. In May 23, 2019 through August 11, 2019, four full-time faculty (Connell, Lee, Kemp, Cewe-Malloy) and one adjunct faculty completed IDEO online courses. The IDEO courses are designed to provide insight into how one uses design thinking to solve challenges. Our program faculty are certified National Center for Construction Education and Research (NCCER) and four of our courses use specific modules of these NCCER national standards to verify performance of lab activities required to meet accreditation and industry standards. There are NCCER Testing Facilities located all throughout the U.S. and some outside the U.S. so using NCCER modules to replace our labs allows our online student population to complete the lab requirements required for the degree without having to come to the Hattiesburg campus. All of these accomplishments support our efforts to engage our students and delivery a high-quality program. We continue to participate in recruiting events. The 3nd Annual Craft of Construction & Design Day event held on March 27, 2019 was even more successful than the first event in 2017. We had over 206 high school & community college students, counselors, advisors, and instructors, and 16 industry representatives attend. Administrators and program coordinators, faculty, program alumni, and student representatives provided information and a memorable day to those attending. Our Sigma Lambda Chi student members will be participating in recruiting visits to regional high schools and community colleges. We attended two Black & Gold Day, College Transfer Day, and Honors Day recruiting events on the Hattiesburg campus of Southern Miss. Two other recruiting events we participated in were Pathways to Possibilities held in Biloxi, Mississippi and Pathway to Careers held in Jackson, Mississippi. We hosted our 3rd School of Construction & Design Building Futures Summer Camp on July 14-18, 2019, during which 25 campers (8th through 12th grade) spend days learning the skills of construction by actually building a structure. Our first camp had 12 campers so the number of participants has more than doubled in the three years we have been hosting the camp. The camp is made possible by our partnership with the Mississippi Construction Education Foundation (MCEF). This year MCEF established two scholarships for students completing the camp and entering our Construction program. The Associated General Contractors (AGC) also established a scholarship for students majoring in construction. The Industry Advisory Council (IAC) for the Construction and Architecture programs continues to grow in number and represents the many diverse sectors of the construction industry. Our IAC Executive Committee developed revised By-Laws, hosted meetings for the IAC in the fall & spring semesters, served as mentors, industry partners, and guest speakers for faculty and courses, attended American Council for Construction Education national meetings & workshops, gave feedback on curriculum matters, provided financial support for scholarships and School needs, and offered our students internships. We now have 39 paid members of our IAC with several corporate memberships among them. The School of Construction and Design was the institution with the largest number of industry representatives present at the American Council for Construction Education held on February 20, 2019 in Houston, Texas and was

Brad Carey lecture Flyer
Garrison Leadership lecture Flyer
Sigma Lambda Chi Flyer

Continuous Improvement Initiatives. Any department-level or program-level action plans for improvement that are not necessarily tied to a specific student learning outcome or program objective should be described in this field.

The Construction Engineering Technology program coordinator, after several meetings with program faculty and director, submitted several proposals for prerequisite and other course changes. The objective of making these changes was to optimize student success in individual courses and program completion based on several years of faculty data and observation of performance in their courses taught. We revised our mapping of Student Learning Outcomes (SLOs) for our main accrediting organization, the American Council for Construction Education, while considering the best course for being able to consistently assess based on instructor provided assessments and avoiding possible transfer courses at the lower-level so we fully assess all students completing our program. A copy of the revised mapping of ACCE SLOs is attached to this section of the report. The Construction Engineering Technology program coordinator developed the template faculty teaching in the program use for reporting course assessment results. The template is delivered to faculty in the form of a survey the faculty member completes at the end of each semester for all classes he/she taught. The Student Learning Outcomes (SLO) required by our accrediting bodies are part of the template and faculty merely select the appropriate SLO (as determined by all faculty during our Spring 2019 meeting) from the list provided. The template has been used for four semesters and is a "work in progress" because with each semester it is discovered that an improvement may be made to the template. The coordinator of the program reviews the results after the semester's data has been submitted and conducts meetings with individual faculty or program faculty groups to discuss what we may do to improve outcomes where needed. A copy of the results submitted by faculty for Fall 2018 and Spring 2019 is included as an attachment to this section of the report. Each course taught in the program requires faculty to have an Academic Partner and an Industry Partner. The Academic Partner is a faculty member at another college or university that is teaching a similar course and the Industry Partner is someone who is currently practicing in the A/E/C industry and an expert in the subject matter of the course. The two partners assist the faculty member by reviewing the syllabus and course schedule of topics to be covered, reviewing textbook or other teaching aids used in the course, and sometimes function as guest speakers in the classroom. Our quality of advisement and student retention has been positively impacted by the hiring of a Student Advancement Administrator. This person is the main point of contact for semester advisement, initial point of contact for student questions and concerns, and communicates any student issues she cannot resolve to the program coordinator so action may be taken in a timely manner. The program has developed new marketing materials to distribute to visitors, prospective students, and during recruiting activities and events. This one page handout provides information that is intended to inform, gives a point of contact, and visually appealing. Our Sigma Lambda Chi honor society inductees visited two nearby high schools to inform students of the opportunities and majors our School of Construction and Design and programs has to offer. Sending junior and senior level Construction Engineering Technology and Architectural Engineering Technology majors was effective in that high school students can better relate to individuals close to their age and our students were able to speak about their personal experiences as a major in the two programs of study. The coordinator has developed and implemented an alumni survey and a graduating senior exit survey for the construction program. It has been several years since these data have been collected. This is an indirect measure of achievement of SLO and also allows us to maintain current contact information on our programs alumni. Results of both surveys are included with this section of the report with the names on the alumni survey removed to protect sensitive information such as salary being tied to an individual.

Connected Documents

ACCE SLO Matched to CM Courses Fall 2019