

# The University of Southern Mississippi

## Detailed Assessment Report 2010-2011 Construction Engineering Technology BS\*

### Mission / Purpose

The University of Southern Mississippi Construction Engineering Technology (BCT) 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 period of training and work experience will allow them to move into managerial positions.

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

#### **SLO 1:OBJ01 -- ABET General Criteria a**

BCT students will have an ability to select and apply the knowledge, techniques, skills, and modern tools of their disciplines to broadly-defined engineering technology activities. (ABET General Criteria 'a')

#### Related Measures:

##### **M 1:M1.1 -- ABET-GCa -- Assessment Aggregates**

M1.1: (ABET-GCa) Aggregate of assessments for ABET General Criteria 'a'.

Source of Evidence: Academic direct measure of learning - other

#### **Target:**

80% of students receive a score of 70 (out of 100) or better on assessments supporting ABET General Criteria 'a'.

#### **Findings (2010-2011) - Target: Met**

91% ( 1,772 of 1,945 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'a' FA10: F-F = 95% ( 388 of 407 ); ONL = 70% ( 156 of 223 ); SP11: F-F = 87% ( 439 of 503 ); ONL = 97% ( 789 of 812 );

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









### **BCT 205 Surveying**

Established in Cycle: 2010-2011

Review and help sessions will be conducted before midterm and final exam.

### **BCT 486 Project Controls**

Established in Cycle: 2010-2011

Average scores were all passing with exception of 1 quiz. Some had perfect scores. Plan to evaluate low scoring questio...

### **M 12:M6.2 -- ABET-GCf -- Exit/Alumni Survey Results**

M6.2: (ABET-GCf) Exit and Alumni Survey results for ABET General Criteria 'f'.

Source of Evidence: Academic indirect indicator of learning - other

#### **Target:**

80% of scores on the evaluation category supporting ABET General Criteria 'f' will have a minimum rating of "satisfactory" (3 or higher out of 5).

#### **Findings (2010-2011) - Target: Not Reported This Cycle**

The Assessment Plan for ABET programs in the School of Construction was modified in the summer of 2011. Alumni and graduate exit surveys are being revised for concordance with the new plan and will be distributed beginning fall 2011.

### **SLO 7:OBJ07 -- ABET General Criteria g**

BCT students will have an ability to communicate effectively regarding broadly-defined engineering technology activities. (ABET General Criteria 'g')

#### **Related Measures:**

### **M 13:M7.1 -- ABET-GCg -- Assessment Aggregates**

M7.1: (ABET-GCg) Aggregate of assessments for ABET General Criteria 'g'.

Source of Evidence: Academic direct measure of learning - other

#### **Target:**

80% of students receive a score of 70 (out of 100) or better on assessments supporting ABET General Criteria 'g'.

#### **Findings (2010-2011) -**



M9.1: (ABET-GCi) Aggregate of assessments for ABET General Criteria 'i'.

Source of Evidence: Academic direct measure of learning - other

**Target:**

80% of students receive a score of 70 (out of 100) or better on assessments supporting ABET General Criteria 'i'.

**Findings (2010-2011) - Target: Met**

87% ( 974 of 1,121 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'i' FA10: F-F = 78% ( 263 of 338 ); ONL = 86% ( 30 of 35 ); SP11: F-





was modified in the summer of 2011. Alumni and graduate exit surveys are being revised for concordance with the new plan and will be distributed beginning fall 2011.

**SLO 12:OBJ12 -- ABET Associate Criteria a**

BCT graduates are capable of utilizing modern instruments, methods and techniques to



### **M 27:M14.1 -- ABET-ADc -- Assessment Aggregates**

M14.1: (ABET-ADc) Aggregate of assessments for ABET Associate Degree Program Specific Criteria 'c'.

Source of Evidence: Academic direct measure of learning - other

#### **Target:**

80% of students receive a score of 70 (out of 100) or better on assessments supporting ABET Associate Degree Program Specific Criteria 'c'.

#### **Findings (2010-2011) - Target: Met**

97% ( 332 of 342 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET Associate Degree Program Specific Criteria 'c' FA10: F-F = 83% ( 20 of 24 ); ONL = 100% ( 6 of 6 ); SP11: F-F = 97% ( 149 of 154 ); ONL = 99% ( 157 of 158 );

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

For full information, see the Action Plan Detail section of this report.

#### **BCT 205 Surveying**

Established in Cycle: 2010-2011

Review and help sessions will be conducted before midterm and final exam.

### **M 28:M14.2 -- ABET-ADc -- Exit/Alumni Survey Results**

M14.2: (ABET-ADc) Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'c'.

Source of Evidence: Academic indirect indicator of learning - other

#### **Target:**

80% of scores on the evaluation category supporting ABET Associate Degree Program Specific Criteria 'c' will have a minimum rating of "satisfactory" (3 or higher out of 5).

#### **Findings (2010-2011) - Target: Not Reported This Cycle**

The Assessment Plan for ABET programs in the School of Construction was modified in the summer of 2011. Alumni and graduate exit surveys are being revised for concordance with the new plan and will be distributed beginning fall 2011.

### **SLO 15:OBJ15 -- ABET Associate Criteria d**



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

For full information, see the Action Plan Detail section of this report.

**BCT 480 Safety**

Established in Cycle: 2010-2011

The 6 students who did not perform well on the OSHA self-test did not understand the content covered in order to do well o...

**M 32:M16.2 -- ABET-ADe -- Exit/Alumni Survey Results**

M16.2: (ABET-ADe) Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'e'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

80% of scores on the evaluation category supporting ABET Associate Degree Program Specific Criteria 'e' will have a minimum rating of "satisfactory" (3 or higher out of 5).

**Findings (2010-2011) - Target: Not Reported This Cycle**

The Assessment Plan for ABET programs in the School of Construction was modified in the summer o

### **BCT 205 Surveying**

Established in Cycle: 2010-2011

Review and help sessions will be conducted before midterm and final exam.

### **BCT 486 Project Controls**

Established in Cycle: 2010-2011

Average scores were all passing with exception of 1 quiz. Some had perfect scores. Plan to evaluate low scoring questio...

### **M 34:M17.2 -- ABET-ADf -- Exit/Alumni Survey Results**

M17.2: (ABET-ADf) Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'f'.

Source of Evidence: Academic indirect indicator of learning - other

#### **Target:**

80% of scores on the evaluation category supporting ABET Associate Degree Program Specific Criteria 'f' will have a minimum rating of "satisfactory" (3 or higher out of 5).

#### **Findings (2010-2011) - Target: Not Reported This Cycle**

The Assessment Plan for ABET programs in the School of Construction was modified in the summer of 2011. Alumni and graduate exit surveys are being revised for concordance with the new plan and will be distributed beginning fall 2011.

### **SLO 18:OBJ18 -- ABET BS Criteria a**

BCT graduates are capable of producing and utilizing design, construction, and operations documents. (ABET Baccalaureate Degree Program Specific Criteria 'a')

#### **Related Measures:**

### **M 35:M18.1 -- ABET-BSa -- Assessment Aggregates**

M18.1: (ABET-BSa) Aggregate of assessments for ABET Baccalaureate Degree Program Specific Criteria 'a'.

Source of Evidence: Academic direct measure of learning - other

#### **Target:**

80% of students receive a score of 70 (out of 100) or better on assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'a'.

#### **Findings (2010-2011) - Target: Met**

87% ( 1,104 of 1,275 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'a' FA10: F-F = 87% ( 218 of 252 ); ONL = 66% ( 113 of 172 ); SP11: F-F = 88% ( 408 of 464 ); ONL = 94% ( 365 of 387 );

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

For full information, see the Action Plan Detail section of this report.

#### **BCT 205 Surveying**

Established in Cycle: 2010-2011

Review and help sessions will be conducted before midterm and final exam.

#### **BCT 486 Project Controls**

Established in Cycle: 2010-2011

Average scores were all passing with exception of 1 quiz. Some had perfect scores. Plan to evaluate low scoring questio...

#### **M 36:M18.2 -- ABET-BSa -- Exit/Alumni Survey Results**

M18.2: (ABET-BSa) Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'a'.

Source of Evidence: Academic indirect indicator of learning - other

#### **Target:**

80% of scores on the evaluation category supporting ABET Baccalaureate Degree Program Specific Criteria 'a' will have a minimum rating of "satisfactory" (3 or higher out of 5).

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#### Findings (2010-2011) - Target: Not Reported This Cycle

The Assessment Plan for ABET programs in the School of Construction was modified in the summer of 2011. Alumni and graduate exit surveys are being revised for concordance with the new plan and will be distributed beginning fall 2011.

#### **SLO 19:OBJ19 -- ABET BS Criteria b**

BCT graduates are capable of performing economic analyses and cost estimates related to design, construction, and maintenance of systems in the construction technical specialties. (ABET Baccalaureate Degree Program Specific Criteria 'b')

#### Related Measures:

#### **M 37:M19.1 -- ABET-BSb -- Assessment Aggregates**

M19.1: (ABET-BSb) Aggregate of assessments for ABET Baccalaureate Degree Program Specific Criteria 'b'.

Source of Evidence: Academic direct m -8(m)7(i)-4( )172(u)-(c)22(e)-8( )17(o)13(f)-25l-8(d M)26(e)





**M 40:M20.2 -- ABET-BSc --**

being revised for concordance with the new plan and will be distributed beginning fall 2011.

**SLO 22:OBJ22 -- ABET BS Criteria e**

BCT graduates are capable of applying basic technical concepts to the solution of construction problems involving hydraulics and hydrology, geotechnics, structures, construction scheduling and management, and construction safety. (ABET Baccalaureate Degree Program Specific Criteria 'e')

**Related Measures:**

**M 43:M22.1 -- ABET-BSe -- Assessment Aggregates**

M22.1: (ABET-BSe) Aggregate of assessments for ABET Baccalaureate Degree Program Specific Criteria 'e'.

Source of Evidence: Academic direct measure of learning - other

**Target:**

80% of students receive a score of 70 (out of 100) or better on assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'e'.

**Findings (2010-2011) - Target: Met**

89% ( 1,446 of 1,632 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'e' FA10:  
F-



## Action Plan Detail for This Cycle (by Established cycle, then alpha)

### **BCT 205 Surveying**

Review and help sessions will be conducted before midterm and final exam.

**Established in Cycle:** 2010-2011

**Implementation Status:** Terminated

**Priority:** Low

**Relationships (Measure | Outcome/Objective):**

**Measure:** M1.1 --

Average scores were all passing with exception of 1 quiz. Some had perfect scores. Plan to evaluate low scoring questions and reword or add teaching material. Average on all assignments was 70%, seven had 90% or above. Assignments require use of software, discipline, and time, especially in online course. Grading was liberal. Students are offered hrs of video examples plus help sessions. I feel onus on the student side and plan no change. This assessment reflects progress or (or lack of) on the assignments as it is a cumulative product/submission--it reflects that some students went back and corrected prior assignments. The course student evaluations are high--some of this may have to do with our pre-requisite issues, which we are attempting to solve with 8wk1 and 8wk2 course delivery. Research low score areas and increase emphasis in review and instruction--difficult in 8wk sessions. Avg test scores were 25% higher than pre-test. The problem here was the earned value concepts--it needs more instruction and I am challenged with time vs content (8wk vs 16 wk)--I still think 8 wk is the way to go and await results in this semester's 8 wk session in which I will accelerate for time on this topic.

**Established in Cycle:** 2010-2011

**Implementation Status:** In-







Faculty then mapped each of their course objectives to the TAC-ABET criteria using a listing of the tools/methods for assessing each objective/criteria. This provided evidence