**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 (2011-2012) - Target: Met**
88% (2,500 of 2,827) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria ‘a’

FA11: F-F = 88% (591 of 668); ONL = 88% (843 of 959); SP12: F-F = 89% (697 of 784); ONL = 89% (369 of 416);

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

For full information, see the Details of Action Plans 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 2:M1.2 -- ABET-GCa -- Exit/Alumni Survey Results
M1.2: (ABET-GCa) Exit and Alumni Survey results for ABET General Criteria 'a'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle

SLO 2:OBJ02 -- ABET General Criteria b
BCT students will have an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies. (ABET General Criteria 'b')

Related Measures:

M 3:M2.1 -- ABET GCb -- Assessment Aggregates
M2.1: (ABET-GCb) Aggregate of assessments for ABET General Criteria 'b'.

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 'b'.

Findings (2011-2012) - Target: Met
88% (2,313 of 2,614) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'b' FA11: F-F = 88% (507 of 576); ONL = 88% (781 of 886); SP12: F-F = 89% (708 of 792); ONL = 88% (317 of 360);

M 4:M2.2 -- ABET-GCb -- Exit/Alumni Survey Results
M2.2: (ABET-GCb) Exit and Alumni Survey results for ABET General Criteria 'b'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle
SLO 3:OBJ03 -- ABET General Criteria c
BCT students will have an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes. (ABET General Criteria 'c')

Related Measures:

M 5:M3.1 -- ABET-GCc -- Assessment Aggregates
M3.1: (ABET-GCc) Aggregate of assessments for ABET General 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 General Criteria 'c'.

Findings (2011-2012) - Target: Met
86% (779 of 911) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'c' FA11: F-F = 91% (187 of 206); ONL = 87% (284 of 327); SP12: F-F = 82% (244 of 298); ONL = 80% (64 of 80);

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans 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 6:M3.2 -- ABET-GCc -- Exit/Alumni Survey Results
M3.2: (ABET-GCc) Exit and Alumni Survey results for ABET General Criteria 'c'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle

SLO 4:OBJ04 -- ABET General Criteria d
BCT students will have an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives. (ABET General Criteria 'd')

Related Measures:

M 7:M4.1 -- ABET-GCd -- Assessment Aggregates
M4.1: (ABET-GCd) Aggregate of assessments for ABET General Criteria 'd'.

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 'd'.

**Findings (2011-2012) - Target: Met**
84% (831 of 989) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'd'.

FA11: F-F = 87% (215 of 246); ONL = 74% (136 of 183); SP12: F-F = 85% (307 of 360); ONL = 87% (173 of 200);

M4.2: (ABET-GCd) Exit and Alumni Survey results for ABET General Criteria 'd'.

Source of Evidence: Academic indirect indicator of learning - other

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

**Findings (2011-2012) - Target: Not Reported This Cycle**

SLO 5:OBJ05 -- ABET General Criteria e
BCT students will have an ability to function effectively as a member or leader on a technical team. (ABET General Criteria 'e')

**Related Measures:**

M9:M5.1 -- ABET-GCe -- Assessment Aggregates
M5.1: (ABET-GCe) Aggregate of assessments for ABET General 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 General Criteria 'e'.

**Findings (2011-2012) - Target: Met**
90% (1,593 of 1,776) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'e'.

FA11: F-F = 97% (198 of 204); ONL = 87% (666 of 788); SP12: F-F = 89% (64 of 72); ONL = 91% (645 of 712);

**Related Action Plans (by Established cycle, then alpha):**
For full information, see the Details of Action Plans 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 10:M5.2 -- ABET-GCe -- Exit/Alumni Survey Results**

M5.2: (ABET-GCe) Exit and Alumni Survey results for ABET General Criteria 'e'.

*Source of Evidence:* Academic indirect indicator of learning - other

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

**Findings (2011-2012) - Target: Not Reported This Cycle**

**SLO 6:OBJ06 -- ABET General Criteria f**

BCT students will have an ability to identify, analyze, and solve broadly-defined engineering technology problems. (ABET General Criteria 'f')

**Related Measures:**

**M 11:M6.1 -- ABET-GCf -- Assessment Aggregates**

M6.1: (ABET-GCf) Aggregate of assessments for ABET General Criteria 'f'.

*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 'f'.

**Findings (2011-2012) - Target: Met**

87% (2,129 of 2,436) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'f' FA11: F-F = 87% (374 of 430); ONL = 85% (713 of 835); SP12: F-F = 93% (384 of 414); ONL = 87% (658 of 757);

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

For full information, see the *Details of Action Plans* 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 question...

**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 (2011-2012) - Target: Not Reported This Cycle**

**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 (2011-2012) - Target: Met**

90% (1,792 of 1,986) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'g' FA11: F-F = 91% (549 of 604); ONL = 88% (360 of 407); SP12: F-F = 93% (370 of 400); ONL = 89% (513 of 575);

**M 14:M7.2 -- ABET-GCg -- Exit/Alumni Survey Results**

M7.2: (ABET-GCg) Exit and Alumni Survey results for ABET General Criteria 'g'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

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

**Findings (2011-2012) - Target: Not Reported This Cycle**

**SLO 8:OBJ08 -- ABET General Criteria h**

BCT students will have an understanding of the need for and an ability to engage in self-directed continuing professional development. (ABET General Criteria 'h')

**Related Measures:**
M 15:M8.1 -- ABET-GCh -- Assessment Aggregates
M8.1: (ABET-GCh) Aggregate of assessments for ABET General Criteria 'h'.

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 'h'.

Findings (2011-2012) - Target: Met
85% (621 of 731) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'h'.

FA11: F-F = 80% (114 of 143); ONL = 81% (105 of 129);
SP12: F-F = 90% (179 of 198); ONL = 85% (223 of 261);

M 16:M8.2 -- ABET-GCh -- Exit/Alumni Survey Results
M8.2: (ABET-GCh) Exit and Alumni Survey results for ABET General Criteria 'h'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle

SLO 9:OBJ09 -- ABET General Criteria i
BCT students will have an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity. (ABET General Criteria 'i')

Related Measures:

M 17:M9.1 -- ABET-GCi -- Assessment Aggregates
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 (2011-2012) - Target: Met
88% (608 of 694) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'i'.

FA11: F-F = 93% (165 of 177); ONL = 82% (88 of 107);
SP12: F-F = 84% (87 of 104); ONL = 88% (268 of 306);

M 18:M9.2 -- ABET-GCi -- Exit/Alumni Survey Results
M9.2: (ABET-GCi) Exit and Alumni Survey results for ABET General Criteria 'i'.

Source of Evidence: Academic indirect indicator of learning - other
Target:
80% of scores on the evaluation category supporting ABET General Criteria 'i' will have a minimum rating of "satisfactory" (3 or higher out of 5).

Findings (2011-2012) - Target: Not Reported This Cycle

SLO 10:OBJ10 -- ABET General Criteria j
BCT students will have a knowledge of the impact of engineering technology solutions in a societal and global context. (ABET General Criteria 'j')

Related Measures:

M 19:M10.1 -- ABET-GCj -- Assessment Aggregates
M10.1: (ABET-GCj) Aggregate of assessments for ABET General Criteria 'j'.

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 'j'.

Findings (2011-2012) - Target: Met
84% (302 of 359) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'j' FA11: F-F = 96% (96 of 100); ONL = 74% (90 of 122); SP12: F-F = 0% (0 of 0); ONL = 85% (116 of 137);

M 20:M10.2 -- ABET-GCj -- Exit/Alumni Survey Results
M10.2: (ABET-GCj) Exit and Alumni Survey results for ABET General Criteria 'j'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle

SLO 11:OBJ11 -- ABET General Criteria k
BCT students will have a commitment to quality, timeliness, and continuous improvement. (ABET General Criteria 'k')

Related Measures:

M 21:M11.1 -- ABET-GCk -- Assessment Aggregates
M11.1: (ABET-GCk) Aggregate of assessments for ABET General Criteria 'k'.

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 'k'.
Findings (2011-2012) - Target: Met
89% (2,923 of 3,296) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'k' FA11: F-F = 89% (597 of 673); ONL = 88% (1,009 of 1,147); SP12: F-F = 92% (316 of 344); ONL = 88% (1,001 of 1,132);

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans 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 22:M11.2 -- ABET-GCk -- Exit/Alumni Survey Results
M11.2: (ABET-GCk) Exit and Alumni Survey results for ABET General Criteria 'k'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle

SLO 12:OBJ12 -- ABET Associate Criteria a
BCT graduates are capable of utilizing modern instruments, methods and techniques to implement construction contracts, documents, and codes. (ABET Associate Degree Program Specific Criteria 'a')

Related Measures:

M 23:M12.1 -- ABET-ADa -- Assessment Aggregates
M12.1: (ABET-ADa) Aggregate of assessments for ABET Associate 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 Associate Degree Program Specific Criteria 'a'.

Findings (2011-2012) - Target: Met
88% (2,206 of 2,504) 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 'a' FA11: F-F = 91% (386 of 424); ONL = 86% (718 of 838); SP12: F-F = 91% (552 of 606); ONL = 86% (550 of 636);
Related Action Plans (by Established cycle, then alpha):

For full information, see the Details of Action Plans 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 24:M12.2 -- ABET-ADa -- Exit/Alumni Survey Results
M12.2: (ABET-ADa) Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'a'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle

SLO 13:OBJ13 -- ABET Associate Criteria b
BCT graduates are capable of evaluating materials and methods for construction projects. (ABET Associate Degree Program Specific Criteria 'b')

Related Measures:

M 25:M13.1 -- ABET-ADb -- Assessment Aggregates
M13.1: (ABET-ADb) Aggregate of assessments for ABET Associate Degree Program Specific Criteria 'b'.

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 'b'.

Findings (2011-2012) - Target: Met
86% (1,219 of 1,419) 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 'b' FA11: F-F = 91% (318 of 351); ONL = 83% (302 of 366); SP12: F-F = 82% (281 of 342); ONL = 88% (318 of 360);
M 26:M13.2 -- ABET-ADb -- Exit/Alumni Survey Results
M13.2: (ABET-ADb) Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'b'.

Source of Evidence: Academic indirect indicator of learning - other

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

**Findings (2011-2012) - Target: Not Reported This Cycle**

**SLO 14:OBJ14 -- ABET Associate Criteria c**
BCT graduates are capable of utilizing modern surveying methods for construction layout. (ABET Associate Degree Program Specific Criteria 'c')

**Related Measures:**

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 (2011-2012) - Target: Met**
92% (579 of 628) 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' FA11: F-F = 99% (127 of 128); ONL = 86% (160 of 186); SP12: F-F = 91% (91 of 100); ONL = 94% (201 of 214);

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

For full information, see the Details of Action Plans 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 (2011-2012) - Target: Not Reported This Cycle

SLO 15:OBJ15 -- ABET Associate Criteria d
BCT graduates are capable of determining forces and stresses in elementary structural systems. (ABET Associate Degree Program Specific Criteria 'd')

Related Measures:

M 29:M15.1 -- ABET-ADd -- Assessment Aggregates
M15.1: (ABET-ADd) Aggregate of assessments for ABET Associate Degree Program Specific Criteria 'd'.

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 'd'.

Findings (2011-2012) - Target: Met
85% (435 of 509) 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 'd' FA11: F-F = 91% (177 of 195); ONL = 92% (12 of 13); SP12: F-F = 81% (225 of 279); ONL = 95% (21 of 22);

M 30:M15.2 -- ABET-ADd -- Exit/Alumni Survey Results
M15.2: (ABET-ADd) Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'd'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle

SLO 16:OBJ16 -- ABET Associate Criteria e
BCT graduates are capable of estimating material quantities and costs. (ABET Associate Degree Program Specific Criteria 'e')

Related Measures:

M 31:M16.1 -- ABET-ADe -- Assessment Aggregates
M16.1: (ABET-ADe) Aggregate of assessments for ABET Associate 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 Associate Degree Program Specific Criteria 'e'.

**Findings (2011-2012) - Target: Met**
87% (719 of 830) 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 'e' FA11: F-F = 83% (255 of 306); ONL = 86% (119 of 138); SP12: F-F = 94% (198 of 210); ONL = 84% (147 of 176);

**Related Action Plans (by Established cycle, then alpha):**
For full information, see the Details of Action Plans 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 on...

**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 (2011-2012) - Target: Not Reported This Cycle**

**SLO 17:OBJ17 -- ABET Associate Criteria f**
BCT graduates are capable of employing productivity software to solve technical problems. (ABET Associate Degree Program Specific Criteria 'f')

**Related Measures:**

**M 33:M17.1 -- ABET-ADf -- Assessment Aggregates**
M17.1: (ABET-ADf) Aggregate of assessments for ABET Associate Degree Program Specific Criteria 'f'.

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 'f'.

Findings (2011-2012) - Target: Met
89% (602 of 676) 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 'f'.
FA11: F-F = 92% (11 of 12); ONL = 86% (318 of 370); SP12: F-F = 96% (243 of 254); ONL = 75% (30 of 40);

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans 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 question...

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 (2011-2012) - Target: Not Reported This Cycle

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 (2011-2012) - Target: Met
88% (2,605 of 2,967) 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'.
FA11: F-F = 86% (595 of 690); ONL = 87% (764 of 876); SP12: F-F = 92% (580 of 630); ONL = 86% (666 of 771);

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans 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).

Findings (2011-2012) - Target: Not Reported This Cycle

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 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 'b'.
Findings (2011-2012) - Target: Met
86% (1,282 of 1,485) 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 'b' FA11: F-F = 86% (401 of 465); ONL = 87% (383 of 442); SP12: F-F = 91% (138 of 152); ONL = 85% (360 of 426);

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

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 38:M19.2 -- ABET-BSb -- Exit/Alumni Survey Results
M19.2: (ABET-BSb) Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'b'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle

SLO 20:OBJ20 -- ABET BS Criteria c
BCT graduates are capable of selecting appropriate construction materials and practices. (ABET Baccalaureate Degree Program Specific Criteria 'c')

Related Measures:

M 39:M20.1 -- ABET-BSc -- Assessment Aggregates
M20.1: (ABET-BSc) Aggregate of assessments for ABET Baccalaureate 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 Baccalaureate Degree Program Specific Criteria 'c'.

Findings (2011-2012) - Target: Met
89% (948 of 1,065) 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 'c' FA11: F-F = 92% (205 of 224); ONL = 87% (225 of 258); SP12: F-F = 87% (194 of 222); ONL = 90% (324 of 361);
M 40:M20.2 -- ABET-BSc -- Exit/Alumni Survey Results
M20.2: (ABET-BSc) Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'c'.

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

Findings (2011-2012) - Target: Not Reported This Cycle

SLO 21:OBJ21 -- ABET BS Criteria d
BCT graduates are capable of applying principles of construction law and ethics. (ABET Baccalaureate Degree Program Specific Criteria 'd')

Related Measures:

M 41:M21.1 -- ABET-BSd -- Assessment Aggregates
M21.1: (ABET-BSd) Aggregate of assessments for ABET Baccalaureate Degree Program Specific Criteria 'd'.

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

Findings (2011-2012) - Target: Met
87% (935 of 1,079) 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 'd' FA11: F-F = 85% (389 of 455); ONL = 87% (175 of 201); SP12: F-F = 87% (232 of 267); ONL = 89% (139 of 156);

M 42:M21.2 -- ABET-BSd -- Exit/Alumni Survey Results
M21.2: (ABET-BSd) Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'd'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle

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 (2011-2012) - Target: Met**

88% (1,805 of 2,049) 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'. FA11: F-F = 90% (376 of 419); ONL = 86% (438 of 508); SP12: F-F = 90% (577 of 642); ONL = 86% (414 of 480);

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

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

**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 44:M22.2 -- ABET-BSe -- Exit/Alumni Survey Results**

M22.2: (ABET-BSe) Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'e'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

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

**Findings (2011-2012) - Target: Not Reported This Cycle**

**SLO 23:OBJ23 -- ABET BS Criteria f**

BCT graduates are capable of performing standard analysis and design in at least one recognized technical specialty within construction engineering technology that is appropriate to the goals of the program. (ABET Baccalaureate Degree Program Specific Criteria ‘f’)

**Related Measures:**
M 45:M23.1 -- ABET-BSf -- Assessment Aggregates

M23.1: (ABET-BSf) Aggregate of assessments for ABET Baccalaureate Degree Program Specific Criteria 'f'.

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 'f'.

Findings (2011-2012) - Target: Met
85% (1,583 of 1,854) 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 'f'.

FA11: F-F = 86% (485 of 564); ONL = 84% (346 of 412); SP12: F-F = 86% (415 of 480); ONL = 85% (337 of 398);

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans 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 46:M23.2 -- ABET-BSf -- Exit/Alumni Survey Results

M23.2: (ABET-BSf) Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'f'.

Source of Evidence: Academic indirect indicator of learning - other

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

Findings (2011-2012) - Target: Not Reported This Cycle

Details of Action Plans 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):
BCT 480 Safety
The 6 students who did not perform well on the OSHA self-test did not understand the content covered in order to do well on the test. The instructor is revisiting the content and providing the students multiple exposure and examples to key facts and concepts in an effort to improve retention of the material.

Established in Cycle: 2010-2011
Implementation Status: In-Progress
Priority: Medium

Relationships (Measure | Outcome/Objective):
- Measure: M16.1 -- ABET-ADe -- Assessment Aggregates | Outcome/Objective: OBJ16 -- ABET Associate Criteria e

Responsible Person/Group: Doris Kemp

BCT 486 Project Controls
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 an 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-Progress  
**Priority:** Medium

**Relationships (Measure | Outcome/Objective):**
- **Measure:** M1.1 -- ABET-GCa -- Assessment Aggregates | **Outcome/Objective:** OBJ01 -- ABET General Criteria a
- **Measure:** M12.1 -- ABET-ADa -- Assessment Aggregates | **Outcome/Objective:** OBJ12 -- ABET Associate Criteria a
- **Measure:** M17.1 -- ABET-ADI -- Assessment Aggregates | **Outcome/Objective:** OBJ17 -- ABET Associate Criteria f
- **Measure:** M18.1 -- ABET-BSa -- Assessment Aggregates | **Outcome/Objective:** OBJ18 -- ABET BS Criteria a
- **Measure:** M19.1 -- ABET-BSb -- Assessment Aggregates | **Outcome/Objective:** OBJ19 -- ABET BS Criteria b
- **Measure:** M22.1 -- ABET-BSe -- Assessment Aggregates | **Outcome/Objective:** OBJ22 -- ABET BS Criteria e
- **Measure:** M6.1 -- ABET-GCf -- Assessment Aggregates | **Outcome/Objective:** OBJ06 -- ABET General Criteria f

**Responsible Person/Group:** Jeff hannon

**Analysis Questions and Analysis Answers**

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

The Architectural Engineering Technology (ACT), Construction Engineering Technology (BCT), Industrial Engineering Technology (IET) programs in the School of Construction have undergone a complete overhaul of the assessment plan for the 2010-2011 assessment cycle. The plan, described fully in the "Continuous Improvement Initiatives" and "Closing the Loop" sections of WeaveOnline, is closely tied to our external accreditation agency: Technology Accreditation Commission-Accreditation Board for Engineering and Technology (TAC-ABET). We believe this approach will provide the faculty with a much easier reporting mechanism yet more thorough and accurate picture of assessment at both the course level and the program level.

**What specifically did your assessments show regarding any outcomes/objectives that will require continued attention?**

At the program level, the performance targets for all objectives were met. The process we have developed allows micro- or macro-level views of the assessment outcomes. There are a few course level assessments that have been reported in WeaveOnline due to not meeting the performance target at the course-level.

**Annual Report Section Responses**

**Program Summary**
The Construction Engineering Technology Program at Southern Miss is the preferred program in the Gulf South for providing a well-rounded construction management education, engaging and empowering graduates to transform the built environment.
while improving the quality of life by protecting the health, safety and welfare of the public. The BCT program is committed to producing graduates who possess the necessary skills to enter the Architecture/Engineering/Construction (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. Graduates possess the necessary skills, critical thinking, discipline and work ethics to enter the A/E/C industry fully capable of performing entry-level tasks consistent with the expectations of employers. The Construction Engineering Technology Program acknowledges the definition of a professional constructor endorsed by the American Council for Construction Education (ACCE) and other construction associations of North America and strives to meet the following goals: 1) To support the university mission "to cultivate intellectual development and creativity through the generation, dissemination, application and preservation of knowledge"; 2) To maintain high-quality standards for construction education through professional accreditations; 3) To provide opportunities for students to interact with multiple disciplines in collaborative environments both on and off campus; 4) To promote evidence-based design research in order to solve problems related to the needs of people in all environments; 5) To cultivate effective communication skills, knowledge of design theory, history, sustainability, and codes along with creative, abstract and critical thinking skills; 6) To instill a sense of service, lifelong learning and social obligation. The BCT initiative supports Southern Miss' emergence as the premier research university of the Gulf South through undergraduate and graduate research. As two current examples, BCT faculty (through MDOT and the National Transportation Research Board) are developing state and national standards in GPS technology. Students and faculty conducting both undergraduate and graduate research (in the related Construction Management & Technology emphasis of the MS in Engineering Technology degree) are advancing the research vision of the University with state-of-the-art research in Building Information Modeling with grant funded research sponsored by the Army Corps of Engineers. The Program Educational Objective of the BCT program is: "Graduates possess the necessary skills, critical thinking, discipline and work ethics to enter the A/E/C industry fully capable of performing entry-level tasks consistent with the expectations of employers." This fully supports the Mission of the Institution by cultivating intellectual development and creativity through the generation and application of knowledge. Recent survey responses indicate our alumni in all program areas are more than satisfied with their degree in the areas of critical thinking, teamwork, communication skills, design process, ethics, modern techniques, professionalism, diversity, lifelong learning and preparation (TAC-ABET accreditation self-studies 2009. BCT is responsive to IHL priorities in a number of ways: educating a reentering workforce, operates in the black, has substantial industry support to supplement state resources, and has taken innovative approaches to curriculum delivery such as developing online. In 2007, the BCT program received approval to be delivered fully online; currently, this program is the University's (and the nation's) only accredited bachelor degree online. In 2009, the program won an eLearning Initiative grant from Blackboard (valued at $158,500) to improve the quality and support IHL priorities. BCT is dually externally accredited by TAC-ABET and ACCE and is the only construction management program in the nation that is SOC-NAV approved for Navy personnel. We have nearly 100% employment of our graduates; many students are employed while seeking their degree. BCT has developed 2+2 agreements to provide seamless transitions to USM. BCT is the only accredited online construction management BS in the nation.

**Continuous Improvement Initiatives**

This program underwent a 6th year TAC-ABET accreditation visit in fall 2010. From that visit, it was apparent that the program objectives in WeaveOnline did not provide
adequate resolution from program level to course level. The organization of supporting materials and student samples of work was also extremely difficult to collect and organize in a meaningful manner. It was decided then to reorganize the program learning outcomes to exactly map to the TAC-ABET general and program specific criteria with direct linkages from each course in the program that supported a particular criterion. For the Construction Engineering Technology program, these criteria are:

**General Criteria for all programs**

For baccalaureate degree programs, these student outcomes must include, but are not limited to, the following learned capabilities:

a. an ability to select and apply the knowledge, techniques, skills, and modern tools of their disciplines to broadly-defined engineering technology activities,
b. an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies,
c. an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes,
d. an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives,
e. an ability to function effectively as a member or leader on a technical team,
f. an ability to identify, analyze, and solve broadly-defined engineering technology problems,
g. an ability to communicate effectively regarding broadly-defined engineering technology activities,
h. an understanding of the need for and an ability to engage in self-directed continuing professional development,
i. an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity,
j. a knowledge of the impact of engineering technology solutions in a societal and global context,
k. a commitment to quality, timeliness, and continuous improvement.

**Criteria Specific to Construction Engineering Technology Associate degree programs**

Associate degree programs (and our corresponding lower-division) must demonstrate that graduates are capable of:

a. utilizing modern instruments, methods and techniques to implement construction contracts, documents, and codes;
b. evaluating materials and methods for construction projects;
c. utilizing modern surveying methods for construction layout;
d. determining forces and stresses in elementary structural systems;
e. estimating material quantities and costs;
f. employing productivity software to solve technical problems

Baccalaureate degree programs must demonstrate that graduates, in addition to the competencies above, are capable of:

a. producing and utilizing design, construction, and operations documents;
b. performing economic analyses and cost estimates related to design, construction, and maintenance of systems in the construction technical specialties;
c. selecting appropriate construction materials and practices;
d. applying principles of construction law and ethics;
e. applying basic technical concepts to the solution of construction problems involving hydraulics and hydrology, geotechnics, structures, construction scheduling and management, and construction safety;
f. performing standard analysis and design in at least one recognized technical specialty within construction engineering technology that is appropriate to the goals of the program.

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 of which courses in the program inventory were supporting any given TAC-ABET criteria and also provided a simple index system for staff to organize supporting materials by criteria for inspection. And, while TAC-ABET only requires summative evidence, this approach easily provides for formative inspection of the curriculum.

WeaveOnline Objectives reflect the exact TAC-ABET criteria with two measures for each criteria: one direct and one indirect. The direct measures are the aggregated assessments for all student work samples (projects, exams, quizzes, papers) as determined by the faculty in their mapping exercise. The indirect measures will be the graduate exit surveys and alumni surveys rewritten to also reflect the TAC-ABET criteria; these have not yet been implemented for this cycle. Faculty then reported their findings for each section of their courses for fall 2010 and spring 2011. At the course
level, it was decided to begin this process using targets of 80% of students would achieve 70 (out of 100) on the assessments. The findings were separated by program area the course might serve; for example, a course might have Architectural Engineering Technology (ACT), Construction Engineering Technology (BCT), Industrial Engineering Technology (IET), or other (OTHER) students. These findings were organized in a master spreadsheet organized so that the findings for each criteria for each program by semester and by delivery type (online or face-to-face) could be summed. This provides the total number of student samples for each criteria meeting the performance target versus total number of students being assessed. The findings for each criteria were then entered in WeaveOnline as annual summation values as well as being reported by semester and by type of site or delivery method. This system allows the program faculty to see the impact of their courses as a whole and individually on each criteria. Beyond the reporting system for SACS and TAC-ABET, the faculty also now have a systematic approach to evaluate each of their course objectives using the defined performance target levels to look at weaknesses in each course.

Closing the Loop
At the program level, all performance targets were met. In the Construction Engineering Technology (BCT) program, this is represented by 31,309 student work samples (out of 35,684) that were evaluated as better than or equal to 70 (out of 100). The percentage of samples better than or equal to 70 is 88% which exceeds our stated level of performance of 80%. Since the data is driven from the ground up (that is, from the faculty), the value of this assessment approach is that all faculty are involved rather than a select few as previously. The faculty are able to review their course level findings with respect to either the TAC-ABET criteria or the course objectives (which are generally more important to them). Although we have met all performance targets at the annual program level, there are findings (also reported in WeaveOnline) where the semester based report for either face-to-face or online might not have met the performance target. It is a simple matter to drill back down to the course level and determine which assessment tools the students were having difficulty with. When the faculty submitted their findings, they were asked to provide an assessment of any finding that went below the 80% threshold and develop action plans as needed. In some cases, the issue was too few students in a section; these sections did not require an action plan but would be monitored. Sections with significant student numbers that had assessments below targets were added to the action plan section in WeaveOnline.