

# 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):**

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

91% ( 1,534 of 1,688 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'b' FA10: F-F = 97% ( 315 of 326 ); ONL = 69% ( 158 of 229 ); SP11: F-F = 87% ( 377 of 432 ); ONL = 98% ( 684 of 701 );

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

96% ( 889 of 929 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'c' FA10: F-F = 97% ( 323 of 334 ); ONL = 83% ( 29 of 35 ); SP11: F-F = 81% ( 21 of 26 ); ONL = 97% ( 516 of 534 );

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

94% ( 954 of 1,017 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'd' FA10: F-F = 97% ( 341 of 352 ); ONL = 64% ( 58 of 90 ); SP11: F-F = 0% ( 0 of 0 ); ONL = 97% ( 555 of 575 );

**M 8:M4.2 -- ABET-GCd -- Exit/Alumni Survey Results**

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 (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 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:**

**M 9: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 (2010-2011) - Target: Met**

88% ( 1,642 of 1,874 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'e' FA10: F-F = 69% ( 182 of 262 ); ONL

= 88% ( 484 of 548 ); SP11: F-F = 86% ( 308 of 357 ); ONL = 94% ( 668 of 707 );

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

88% ( 1,271 of 1,439 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'f' FA10: F-F = 88% ( 244 of 278 ); ONL = 67% ( 152 of 228 ); SP11: F-F = 90% ( 289 of 322 ); ONL = 96% ( 586 of 611 );

**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 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) - Target: Met**

93% ( 894 of 966 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'g' FA10: F-F = 91% ( 167 of 183 ); ONL = 62% ( 13 of 21 ); SP11: F-F = 90% ( 360 of 398 ); ONL = 97% ( 354 of 364 );

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

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 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 (2010-2011) - Target: Met**

90% ( 832 of 929 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'h' FA10: F-F = 86% ( 260 of 303 ); ONL = 71% ( 29 of 41 ); SP11: F-F = 89% ( 131 of 148 ); ONL = 94% ( 412 of 437 );

**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 (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 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 (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-F = 85% ( 210 of 246 ); ONL = 94% ( 471 of 502 );

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

88% ( 207 of 234 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'j' FA10: F-F = 94% ( 31 of 33 ); ONL = 68% ( 43 of 63 ); SP11: F-F = 83% ( 20 of 24 ); ONL = 99% ( 113 of 114 );

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

87% ( 2,183 of 2,512 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'k' FA10: F-F = 76% ( 400 of 523 ); ONL = 88% ( 497 of 562 ); SP11: F-F = 85% ( 496 of 581 ); ONL = 93% ( 790 of 846 );

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

89% ( 1,331 of 1,490 ) 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' FA10: F-F = 94% ( 383 of 406 ); ONL = 67% ( 152 of 228 ); SP11: F-F = 87% ( 382 of 437 ); ONL = 99% ( 414 of 419 );

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

94% ( 1,016 of 1,080 ) 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' FA10: F-F = 94% ( 359 of 380 ); ONL = 67% ( 47 of 70 ); SP11: F-F = 100% ( 134 of 134 ); ONL = 96% ( 476 of 496 );

**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 (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 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 (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**

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 (2010-2011) - Target: Met**

88% ( 832 of 949 ) 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' FA10: F-F = 85% ( 374 of 442 ); ONL = 0% ( 0 of 0 ); SP11: F-F = 82% ( 92 of 112 ); ONL = 93% ( 366 of 395 );

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

75% ( 146 of 195 ) 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' FA10: F-F = 72% ( 49 of 68 ); ONL = 55% ( 11 of 20 ); SP11: F-F = 67% ( 43 of 64 ); ONL = 100% ( 43 of 43 );

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

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

77% ( 370 of 480 ) 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' FA10: F-F = 92% ( 11 of 12 ); ONL = 66% ( 96 of 146 ); SP11: F-F = 81% ( 246 of 303 ); ONL = 89% ( 17 of 19 );

**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 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).

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

84% ( 473 of 560 ) 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 FA10: F-F = 82% ( 179 of 218 ); ONL = 60% ( 28 of 47 ); SP11: F-F = 85% ( 128 of 151 ); ONL = 96% ( 138 of 144 );

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

For full information, see the *Action Plan Detail* 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 (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 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 (2010-2011) - Target: Met**

87% ( 811 of 927 ) 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' FA10: F-F = 79% ( 204 of 257 ); ONL = 57% ( 4 of 7 ); SP11: F-F = 92% ( 248 of 271 ); ONL = 91% ( 355 of 392 );

#### **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'.

Source of Evidence: Academic indirect indicator of learning - other

##### **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 (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 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'.

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 'd'.

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

95% ( 318 of 335 ) 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' FA10: F-F = 97% ( 60 of 62 ); ONL = 57% ( 4 of 7 ); SP11: F-F = 100% ( 64 of 64 ); ONL = 94% ( 190 of 202 );

#### **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 (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 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-F = 94% ( 526 of 560 ); ONL = 64% ( 107 of 166 ); SP11: F-F = 83% ( 275 of 333 ); ONL = 94% ( 538 of 573 );

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

For full information, see the *Action Plan Detail* 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 (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 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 (2010-2011) - Target: Met**

93% ( 792 of 849 ) 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' FA10: F-F = 94% ( 421 of 450 ); ONL = 73% ( 19 of 26 ); SP11: F-F = 100% ( 18 of 18 ); ONL = 94% ( 334 of 355 );

#### **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 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 (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.

## 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 -- ABET-GCa -- Assessment Aggregates | **Outcome/Objective:** OBJ01 -- ABET General Criteria a  
**Measure:** M11.1 -- ABET-GCk -- Assessment Aggregates | **Outcome/Objective:** OBJ11 -- ABET General Criteria k  
**Measure:** M12.1 -- ABET-ADa -- Assessment Aggregates | **Outcome/Objective:** OBJ12 -- ABET Associate Criteria a  
**Measure:** M14.1 -- ABET-ADc -- Assessment Aggregates | **Outcome/Objective:** OBJ14 -- ABET Associate Criteria c  
**Measure:** M17.1 -- ABET-ADf -- Assessment Aggregates | **Outcome/Objective:** OBJ17 -- ABET Associate Criteria f  
**Measure:** M18.1 -- ABET-BSa -- Assessment Aggregates | **Outcome/Objective:** OBJ18 -- ABET BS Criteria a  
**Measure:** M23.1 -- ABET-BSf -- Assessment Aggregates | **Outcome/Objective:** OBJ23 -- ABET BS Criteria f  
**Measure:** M3.1 -- ABET-GCc -- Assessment Aggregates | **Outcome/Objective:** OBJ03 -- ABET General Criteria c  
**Measure:** M5.1 -- ABET-GCe -- Assessment Aggregates | **Outcome/Objective:** OBJ05 -- ABET General Criteria e  
**Measure:** M6.1 -- ABET-GCf -- Assessment Aggregates | **Outcome/Objective:** OBJ06 -- ABET General Criteria f

### **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 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-ADf -- 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, 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 (BCT) 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 criteria. For the Architectural 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, and k. a commitment to quality, timeliness, and continuous improvement. Criteria Specific to Construction Engineering Technology 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; and 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 22,123 student work samples (out of 24,768) that were evaluated as better than or equal to 70 (out of 100). The percentage of samples better than or equal to 70 is 89% which exceeds our stated level of performance of 80%. These findings were derived from 21 of 22 courses in the curriculum; the findings from the remaining course is still being pursued but was taught by an instructor that lost all data from hard-drive failure. (This issue will lead to an improved reporting system). 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.