

# The University of Southern Mississippi

## Detailed Assessment Report

As of: 10/01/2013 12:22 PM EST

### 2012-2013 Architectural Engineering Technology BS

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

## Mission / Purpose

The University of Southern Mississippi Architectural Engineering Technology (ACT) program provides students with a broad-based education with an emphasis on critical thinking, technical problem-solving ability, and computer applications in addition to a background in architectural design. The ACT program is committed to producing graduates who possess the necessary skills, critical thinking, discipline and work ethics to enter the A/E/C industry fully capable of performing entry-level tasks at the office and in the field.

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

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

ACT 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**

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 (2012-2013) - Target: Met**

94% ( 479 of 512 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'a'. FA12: F-F = 96% ( 236 of 245 ); ONL = 83% ( 15 of 18 ); SP13: F-F = 91% ( 194 of 213 ); ONL = 94% ( 34 of 36 );

#### **M 2:M1.2 -- ABET-GCa -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET General Criteria 'a'.

Source of Evidence: Academic indirect indicator of learning - other

#### **Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'a' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'a' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat true; 1 = Not True)

**SLO 2:OBJ02 -- ABET General Criteria b**

ACT 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**

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 (2012-2013) - Target: Met**

94% ( 479 of 512 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'a'. FA12: F-F = 96% ( 236 of 245 ); ONL = 83% ( 15 of 18 ); SP13: F-F = 91% ( 194 of 213 ); ONL = 94% ( 34 of 36 );

**M 4:M2.2 -- ABET-GCb -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET General Criteria 'b'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'b' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'b' was 3.09. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 3:OBJ03 -- ABET General Criteria c**

ACT 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**

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 (2012-2013) - Target: Met**

92% ( 33 of 36 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'c'. FA12: F-F = 86% ( 12 of 14 ); ONL = 100% ( 4 of 4 ); SP13: F-F = 94% ( 17 of 18 ); ONL = 0% ( 0 of 0 );

**M 6:M3.2 -- ABET-GCc -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET General Criteria 'c'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'c' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'c' was 3.09. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 4:OBJ04 -- ABET General Criteria d**

ACT 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**

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 (2012-2013) - Target: Met**

97% ( 305 of 315 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'd'. FA12: F-F = 97% ( 111 of 114 ); ONL = 0% ( 0 of 0 ); SP13: F-F = 100% ( 48 of 48 ); ONL = 95% ( 146 of 153 );

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

Exit and Alumni Survey results for ABET General Criteria 'd'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'd' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'd' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 5:OBJ05 -- ABET General Criteria e**

ACT 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**

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 (2012-2013) - Target: Met**

85% ( 17 of 20 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'e'. FA12: F-F = 0% ( 0 of 0 ); ONL = 63% ( 5 of 8 ); SP13: F-F = 100% ( 8 of 8 ); ONL = 100% ( 4 of 4 );

**M 10:M5.2 -- ABET-GCe -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET General Criteria 'e'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'e' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'e' was 3.2. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

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

ACT 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**

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 (2012-2013) - Target: Met**

93% ( 395 of 423 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'f'. FA12: F-F = 91% ( 165 of 182 ); ONL = 100% ( 4 of 4 ); SP13: F-F = 98% ( 65 of 66 ); ONL = 94% ( 161 of 171 );

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

Exit and Alumni Survey results for ABET General Criteria 'f'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'f' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'f' was 3.09. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

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

ACT 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**

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 (2012-2013) - Target: Met**

86% ( 311 of 360 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'g'. FA12: F-F = 95% ( 105 of 111 ); ONL = 82% ( 18 of 22 ); SP13: F-F = 82% ( 161 of 196 ); ONL = 87% ( 27 of 31 );

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

Exit and Alumni Survey results for ABET General Criteria 'g'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'g' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'g' was 3.31. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

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

ACT 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**

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 (2012-2013) - Target: Met**

94% ( 117 of 125 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'h'. FA12: F-F = 95% ( 61 of 64 ); ONL = 100% ( 4 of 4 ); SP13: F-F = 100% ( 18 of 18 ); ONL = 87% ( 34 of 39 );

##### **M 16:M8.2 -- ABET-GCh -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET General Criteria 'h'.

Source of Evidence: Academic indirect indicator of learning - other

##### **Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'h' will have a minimum rating of "satisfactory" (3 or higher out of 4).

##### **Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'h' was 3.26. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

### **SLO 9:OBJ09 -- ABET General Criteria i**

ACT 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**

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 (2012-2013) - Target: Met**

92% ( 330 of 360 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments

supporting ABET General Criteria 'i'. FA12: F-F = 92% ( 277 of 300 ); ONL = 63% ( 5 of 8 ); SP13: F-F = 100% ( 15 of 15 ); ONL = 89% ( 33 of 37 );

**M 18:M9.2 -- ABET-GCi -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET General Criteria 'i'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'i' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'i' was 3.34. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 10:OBJ10 -- ABET General Criteria j**

ACT 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**

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 (2012-2013) - Target: Met**

91% ( 159 of 175 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'j'. FA12: F-F = 96% ( 43 of 45 ); ONL = 0% ( 0 of 0 ); SP13: F-F = 89% ( 116 of 130 ); ONL = 0% ( 0 of 0 );

**M 20:M10.2 -- ABET-GCj -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET General Criteria 'j'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'j' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Partially Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'j' was 2.91. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

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

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

**Continue to monitor**

*Established in Cycle:* 2012-2013

Small graduate exit survey sample size; but finding close to target--continue to monitor.

**SLO 11:OBJ11 -- ABET General Criteria k**

ACT 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**

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 (2012-2013) - Target: Met**

92% ( 264 of 288 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'k'. FA12: F-F = 90% ( 148 of 165 ); ONL = 89% ( 25 of 28 ); SP13: F-F = 96% ( 54 of 56 ); ONL = 95% ( 37 of 39 );

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

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

**ACT 262 Architectural Design I**

*Established in Cycle:* 2010-2011

In this case, 11 of 18 ACT students (61%) are performing at or above 70, which is less than the target level of 80% of total stu...

**M 22:M11.2 -- ABET-GCk -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET General Criteria 'k'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET General Criteria 'k' will have a minimum rating of "satisfactory" (3 or higher out of 45).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET General Criteria 'k' was 3.26. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

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

ACT graduates are capable of employing concepts of architectural theory and design in a design environment. (ABET Associate Degree Program Specific Criteria 'a')

**Related Measures:**

### **M 23:M12.1 -- ABET-ADa -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

95% ( 127 of 133 ) 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'. FA12: F-F = 98% ( 85 of 87 ); ONL = 63% ( 5 of 8 ); SP13: F-F = 93% ( 14 of 15 ); ONL = 100% ( 23 of 23 );

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

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

#### **ACT 262 Architectural Design I**

*Established in Cycle:* 2010-2011

In this case, 11 of 18 ACT students (61%) are performing at or above 70, which is less than the target level of 80% of total stu...

### **M 24:M12.2 -- ABET-ADa -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'a'.

Source of Evidence: Academic indirect indicator of learning - other

#### **Target:**

Average 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 4).

#### **Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Associate Degree Program Specific Criteria 'a' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

### **SLO 13:OBJ13 -- ABET Associate Criteria b**

ACT graduates are capable of utilizing modern instruments, methods and techniques to produce A/E documents and presentations. (ABET Associate Degree Program Specific Criteria 'b')

#### **Related Measures:**

### **M 25:M13.1 -- ABET-ADb -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

89% ( 56 of 63 ) 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'. FA12: F-F = 96% ( 24 of 25 ); ONL = 50% ( 3 of 6 ); SP13: F-F = 100% ( 6 of 6 ); ONL = 88% ( 23 of 26 );

**M 26:M13.2 -- ABET-ADb -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'b'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average 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 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Associate Degree Program Specific Criteria 'b' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 14:OBJ14 -- ABET Associate Criteria c**

ACT graduates are capable of conducting standardized field and laboratory testing on construction materials. (ABET Associate Degree Program Specific Criteria 'c')

**Related Measures:**

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

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 (2012-2013) - Target: Met**

92% ( 33 of 36 ) 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'. FA12: F-F = 86% ( 12 of 14 ); ONL = 100% ( 4 of 4 ); SP13: F-F = 94% ( 17 of 18 ); ONL = 0% ( 0 of 0 );

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

Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'c'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average 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 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Associate Degree Program Specific Criteria 'c' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

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

ACT graduates are capable of utilizing modern instruments and research techniques for site development and building layout. (ABET Associate Degree Program Specific Criteria 'd')

**Related Measures:**

**M 29:M15.1 -- ABET-ADd -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

100% ( 61 of 61 ) 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'. FA12: F-F = 100% ( 13 of 13 ); ONL = 0% ( 0 of 0 ); SP13: F-F = 100% ( 48 of 48 ); ONL = 0% ( 0 of 0 );

**M 30:M15.2 -- ABET-ADd -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'd'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average 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 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Associate Degree Program Specific Criteria 'd' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 16:OBJ16 -- ABET Associate Criteria e**

ACT graduates are capable of determining forces and stresses in elementary structural systems. (ABET Associate Degree Program Specific Criteria 'e')

**Related Measures:**

**M 31:M16.1 -- ABET-ADe -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

95% ( 108 of 114 ) 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'. FA12: F-F = 97% ( 93 of 96 ); ONL = 0% ( 0 of 0 ); SP13: F-F = 0% ( 0 of 0 ); ONL = 83% ( 15 of 18 );

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

Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'e'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average 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 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Associate Degree Program Specific Criteria 'e' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 17:OBJ17 -- ABET Associate Criteria f**

ACT graduates are capable of estimating material quantities for technical projects. (ABET Associate Degree Program Specific Criteria 'f')

**Related Measures:**

**M 33:M17.1 -- ABET-ADf -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

97% ( 66 of 68 ) 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'. FA12: F-F = 100% ( 7 of 7 ); ONL = 100% ( 2 of 2 ); SP13: F-F = 100% ( 41 of 41 ); ONL = 89% ( 16 of 18 );

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

Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'f'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average 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 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Associate Degree Program Specific Criteria 'f' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 18:OBJ18 -- ABET Associate Criteria g**

ACT graduates are capable of calculating basic loads and demands in mechanical and electrical systems. (ABET Associate Degree Program Specific Criteria 'g')

**Related Measures:**

**M 35:M18.1 -- ABET-ADg -- Assessment Aggregates**

Aggregate of assessments for ABET Associate Degree Program Specific 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 Associate Degree Program Specific Criteria 'g'.

**Findings (2012-2013) - Target: Met**

95% ( 250 of 262 ) 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 'g'. FA12: F-F = 97% ( 201 of 208 ); ONL = 0% ( 0 of 0 ); SP13: F-F = 89% ( 39 of 44 ); ONL = 100% ( 10 of 10 );

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

Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'g'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET Associate

Degree Program Specific Criteria 'g' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Associate Degree Program Specific Criteria 'g' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 19:OBJ19 -- ABET Associate Criteria h**

ACT graduates are capable of utilizing codes, contracts and specifications in design, construction and inspection activities. (ABET Associate Degree Program Specific Criteria 'h')

**Related Measures:**

**M 37:M19.1 -- ABET-ADh -- Assessment Aggregates**

Aggregate of assessments for ABET Associate Degree Program Specific 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 Associate Degree Program Specific Criteria 'h'.

**Findings (2012-2013) - Target: Met**

96% ( 122 of 127 ) 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 'h'. FA12: F-F = 97% ( 28 of 29 ); ONL = 60% ( 6 of 10 ); SP13: F-F = 100% ( 72 of 72 ); ONL = 100% ( 16 of 16 );

**M 38:M19.2 -- ABET-ADh -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'h'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET Associate Degree Program Specific Criteria 'h' will have a minimum rating of "satisfactory" (3 or higher out of 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Associate Degree Program Specific Criteria 'h' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 20:OBJ20 -- ABET Associate Criteria i**

ACT graduates are capable of employing productivity software to solve technical problems. (ABET Associate Degree Program Specific Criteria 'i')

**Related Measures:**

**M 39:M20.1 -- ABET-ADi -- Assessment Aggregates**

Aggregate of assessments for ABET Associate Degree Program Specific 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 Associate Degree Program Specific Criteria 'i'.

**Findings (2012-2013) - Target: Met**

83% ( 196 of 235 ) 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 'i'. FA12: F-F = 100% ( 30 of 30 ); ONL = 50% ( 3 of 6 ); SP13: F-F = 81% ( 150 of 186 ); ONL = 100% ( 13 of 13 );

**M 40:M20.2 -- ABET-ADi -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Associate Degree Program Specific Criteria 'i'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average of scores on the evaluation category supporting ABET Associate Degree Program Specific Criteria 'i' will have a minimum rating of "satisfactory" (3 or higher out of 4.

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Associate Degree Program Specific Criteria 'i' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 21:OBJ21 -- ABET BS Criteria a**

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

**Related Measures:**

**M 41:M21.1 -- ABET-BSa -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

94% ( 330 of 351 ) 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'. FA12: F-F = 95% ( 123 of 129 ); ONL = 70% ( 7 of 10 ); SP13: F-F = 96% ( 23 of 24 ); ONL = 94% ( 177 of 188 );

### **M 42:M21.2 -- ABET-BSa -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'a'.

Source of Evidence: Academic indirect indicator of learning - other

#### **Target:**

Average 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 4).

#### **Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Baccalaureate Degree Program Specific Criteria 'a' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

### **SLO 22:OBJ22 -- ABET BS Criteria b**

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

#### **Related Measures:**

### **M 43:M22.1 -- ABET-BSb -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

97% ( 293 of 303 ) 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'.  
FA12: F-F = 98% ( 61 of 62 ); ONL = 100% ( 2 of 2 ); SP13: F-F = 100% ( 57 of 57 ); ONL = 95% ( 173 of 182 );

### **M 44:M22.2 -- ABET-BSb -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'b'.

Source of Evidence: Academic indirect indicator of learning - other

#### **Target:**

Average 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 4).

#### **Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013

ABET Baccalaureate Degree Program Specific Criteria 'b' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

### **SLO 23:OBJ23 -- ABET BS Criteria c**

ACT graduates are capable of selecting appropriate materials and practices for building construction. (ABET Baccalaureate Degree Program Specific Criteria 'c')

#### **Related Measures:**

##### **M 45:M23.1 -- ABET-BSc -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

94% ( 123 of 131 ) 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'.  
FA12: F-F = 95% ( 58 of 61 ); ONL = 75% ( 12 of 16 ); SP13: F-F = 98% ( 50 of 51 ); ONL = 100% ( 3 of 3 );

##### **M 46:M23.2 -- ABET-BSc -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'c'.

Source of Evidence: Academic indirect indicator of learning - other

#### **Target:**

Average 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 4).

#### **Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Baccalaureate Degree Program Specific Criteria 'c' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

### **SLO 24:OBJ24 -- ABET BS Criteria d**

ACT graduates are capable of applying principles of construction law and ethics in architectural practice. (ABET Baccalaureate Degree Program Specific Criteria 'd')

#### **Related Measures:**

##### **M 47:M24.1 -- ABET-BSd -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

90% ( 142 of 157 ) 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'.  
FA12: F-F = 84% ( 63 of 75 ); ONL = 0% ( 0 of 0 ); SP13: F-F = 100% ( 48 of 48 ); ONL = 91% ( 31 of 34 );

**M 48:M24.2 -- ABET-BSd -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'd'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average 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 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Baccalaureate Degree Program Specific Criteria 'd' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 25:OBJ25 -- ABET BS Criteria e**

ACT graduates are capable of applying basic technical design concepts to the solution of architectural problems involving architectural history, theory and design; codes, contracts and specifications; electrical and mechanical systems, environmental control systems, plumbing and fire protection; site development; structures, material behavior, foundations; construction administration, planning and scheduling. (ABET Baccalaureate Degree Program Specific Criteria 'e')

**Related Measures:**

**M 49:M25.1 -- ABET-BSe -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

94% ( 304 of 325 ) 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'.  
FA12: F-F = 95% ( 165 of 173 ); ONL = 70% ( 7 of 10 ); SP13: F-F = 97% ( 30 of 31 ); ONL = 92% ( 102 of 111 );

**M 50:M25.2 -- ABET-BSe -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'e'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average 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 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Baccalaureate Degree Program Specific Criteria 'e' was 3.37. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 26:OBJ26 -- ABET BS Criteria f**

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

**Related Measures:**

**M 51:M26.1 -- ABET-BSf -- Assessment Aggregates**

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 (2012-2013) - Target: Met**

95% ( 246 of 258 ) 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'. FA12: F-F = 97% ( 142 of 146 ); ONL = 25% ( 1 of 4 ); SP13: F-F = 100% ( 4 of 4 ); ONL = 95% ( 99 of 104 );

**M 52:M26.2 -- ABET-BSf -- Exit/Alumni Survey Results**

Exit and Alumni Survey results for ABET Baccalaureate Degree Program Specific Criteria 'f'.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**

Average 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 4).

**Findings (2012-2013) - Target: Met**

Average of 7 ratings on the evaluation category supporting 2012-2013 ABET Baccalaureate Degree Program Specific Criteria 'f' was 3.03. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

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

### **ACT 262 Architectural Design I**

In this case, 11 of 18 ACT students (61%) are performing at or above 70, which is less than the target level of 80% of total students.

**Established in Cycle:** 2010-2011  
**Implementation Status:** Terminated  
**Priority:** High

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

**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

**Implementation Description:** Action plan is to improve student-teacher communication about the requirements of the assessment. Faculty member terminated

**Responsible Person/Group:** Miranda Grieder

### **Continue to monitor**

Small graduate exit survey sample size; but finding close to target--continue to monitor.

**Established in Cycle:** 2012-2013  
**Implementation Status:** In-Progress  
**Priority:** Medium

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

**Measure:** M10.2 -- ABET-GCj -- Exit/Alumni Survey Results |  
**Outcome/Objective:** OBJ10 -- ABET General Criteria j

**Responsible Person/Group:** Fletcher

## Analysis Questions and Analysis Answers

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

Since we implemented a course-based approach to assessment in the 2010-2011 cycle, there has been a marked improvement in findings: the average of all outcomes has increased from 87% to 93% in the current 2012-2013 cycle. Indeed, only four criteria outcomes were in the 80%-90% bracket with the remaining exceeding 90%. We attribute this to the focus on course-based findings that not only are correlated with the program outcomes but also provide direct feedback for the individual course objectives; faculty are able to respond much more rapidly to problem areas at the course objective level.

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

The strength of our approach using course-based findings also requires continued attention since faculty are continually reassigned to new courses. We annually re-present assessment materials to the faculty; and, this year we have three new faculty that will need the presentations to understand the School of Construction approach to course-based findings and how to proactively evaluate their course objective findings for preemptive strategies in course delivery.

## **Annual Report Section Responses**

### **Program Summary**

The ACT program provides students with a broad-based education with an emphasis on critical thinking, technical problem-solving ability, and computer applications in addition to a background in architectural design. The ACT program is committed to producing graduates who possess the necessary skills, critical thinking, discipline and work ethics to enter the Architecture/Engineering/Construction (A/E/C) industry fully capable of performing entry-level tasks at the office and in the field. Complex engineering systems keep modern buildings functioning. An architectural engineering technologist must understand the electrical, lighting, structural, and ventilation systems that are essential to a building's operation. So a degree in this field requires an orientation to the general principles of engineering and a practical mastery of each of these systems. Graduates serve as architectural support for construction documentation (plans and specifications), construction project managers, facilities managers, systems engineers, and sales representatives for construction products; around 10% of our graduates continue their education to obtain architectural licenses. The Program Educational Objective of the ACT 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 (ETAC-ABET accreditation self-studies 2009). It should be noted here that ETAC-ABET no longer requires the definition of a Program Educational Objective as of this past October 2012. ACT is also 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.

### **Continuous Improvement Initiatives/Additional Action Plans**

The primary action plan which is always ongoing is the delivery of assessment presentations to faculty (and particularly three new faculty and two additional relatively new faculty) to illustrate the School of Construction approach to course-based assessment. This program underwent a 6th year ETAC-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 ETAC-ABET general and program specific criteria with direct linkages from each course in the program that supported a particular criteria. This is now our third cycle using this approach and we have seen steadily increasing percentages in the findings. But there have also been a number of course reassignments and new faculty with new course developments that need to embed these assessment processes into their activities. In particular, each program needs to

reevaluate the mapping of course objectives to the program accreditation criteria listed below. 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 Architectural Engineering Technology Associate degree programs (and our corresponding lower-division) must demonstrate that graduates are capable of: a. employing concepts of architectural theory and design in a design environment; b. utilizing modern instruments, methods and techniques to produce A/E documents and presentations; c. conducting standardized field and laboratory testing on construction materials; d. utilizing modern instruments and research techniques for site development and building layout; e. determining forces and stresses in elementary structural systems; f. estimating material quantities for technical projects; g. calculating basic loads and demands in mechanical and electrical systems; h. utilizing codes, contracts and specifications in design, construction and inspection activities; and i. employing productivity software to solve technical problems; Baccalaureate degree programs must demonstrate that graduates, in addition to the competencies above, are capable of: a. creating, utilizing and presenting design, construction, and operations documents; b. performing economic analyses and cost estimates related to design, construction, and maintenance of building systems in the architectural engineering technical specialties; c. selecting appropriate materials and practices for building construction; d. applying principles of construction law and ethics in architectural practice; e. applying basic technical design concepts to the solution of architectural problems involving architectural history, theory and design; codes, contracts and specifications; electrical and mechanical systems, environmental control systems, plumbing and fire protection; site development; structures, material behavior, foundations; construction administration, planning and scheduling; and f. performing standard analysis and design in at least one recognized technical specialty within architectural engineering technology that is appropriate to the goals of the program. Process Background Faculty then mapped each of their course objectives to the ETAC-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 ETAC-ABET criteria and also provided a simple index system for staff to organize supporting materials by criteria for inspection. And, while ETAC-ABET only requires summative evidence, this approach easily provides for formative inspection of the curriculum. WeaveOnline Objectives reflect the exact ETAC-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 are the graduate exit surveys

and alumni surveys rewritten to also reflect the ETAC-ABET criteria; the graduate exit surveys were implemented for this cycle--the alumni surveys will follow later this fall. Faculty then reported their findings for each section of their courses for fall 2012 and spring 2013. 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 ETAC-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/Action Plan Tracking**

All action plans for the 2011-2012 cycle have been completed or dealt with by course reassignment. FA11 AEC 270 Asheka Rahman, small sample for ACT; just monitor; small difference with target for BCT; just monitor [Action: instructor terminated--course reassigned] ACT 322 M. Grieder, 3. Hw# 3 (PQ)--8 of 15 ACT students (53%) and 3 of 10 of ID students (30%) are performing at or above 70, which is less than the target level of 80% of total students. The assignment was a pop quiz over already delivered lecture material with the intention of preparing them for the up-coming Exam 1. 6. Exam 1-- In this case, 8 of 15 ACT students (53%) and 5 of 10 of ID students (50%) are performing at or above 70, which is less than the target level of 80% of total students. Instructor intends on making some revisions to remedy this. 7. Exam 2-- In this case, 10 of 15 ACT students (66.67%) are performing at or above 70, which is less than the target level of 80% of total students. Instructor intends on making some revisions to remedy this.[Action: instructor terminated--course reassigned] AEC 454 J. Hannon, Exercises 1,3,4,5, Exam -- small sample in this case; just monitor [course reassigned] BCT 336 J. Hannon, Reports -- I do not know the exact variable(s) responsible for the low percentages. This was instructor's second time to teach the course. This course was face-to-face with an online supplemental. Successful examples are shown and discussed after each report submittal. The course is 8 weeks in length. The reading material may be too dense, but my opinion is that students struggle with reading comprehension and not used to applying learned material. Possible ACTIONS: Increase course length; Decrease course scope (reading material); Remove the reading material from the course (text) and require student research to learn same. Quizzes -- The quizzes are not proctored and taken directly from the course text reading material. [course reassigned] AEC 496 D. Kemp, 3. Midterm report, 7. Final oral presentation -- Two of the Architecture students performed poorly on the Midterm and Final reports. Although the instructor provided detailed feedback on the Midterm report, one student improved greatly on the Final report while the other student did not. The instructor will require students who perform poorly on the Midterm report to seek documented assistance from the Writing Lab. [instructor continues to utilize the Writing Center] IET 302 Md. Rahman, 4 HW -- No action necessary for HW, Midterm & Final (items 1, 3, 4) [No action necessary] AEC 315 Md. Shiratuddin, 2 Paper -- 6 students (6 BCT) missed submitting some of the written assignments. 3 students (1 BCT, 2 ACT) did not submit any assignments at all. 3 Exam -- Exam 2 seemed generally hard for majority of students. Exam 2 will probably be revised accordingly. [Improved

communication on required submittals] AEC 316 Md. Shiratuddin, 2 Paper -- 8 students (6 BCT, 2 ACT) did not submit all 5 assignments.[Improved communication on required submittals] SP12 BCT 336 J. Hannon, 1 Report -- 1st assignment, almost meets goal-no change. 2 Report -- Requires plan interpretation and knowledge of means/methods (which are provided w/ supplemental and text materials)--may change order and assign later in course. 3 Report -- No change planned yet. 4 Report -- No change planned yet. 6 Report -- This was an experimental exercise--I will not plan to use again. [course reassigned] AEC 454 J. Hannon, Exercises 1-3 -- small sample in this case; just monitor (some were missed assignments) [course reassigned] IET 370 Md. Sarder, 3. Quizzes -- \* Some of the IET students missed a math question - not able to draw a graph in word. I explained how to import a graph from excel to word. [no action necessary] AEC 496 D. Kemp, 3. Midterm report -- Two of the BCT students failed to submit the Midterm Report by the established deadline and therefore received a "0" for the assignment. However, the students submitted the Midterm Report late in order to comply with the requirement that all course assignments must be submitted these two students failed to assume responsibility to ensure the reports were submitted. [no action necessary] ACT 262 M. Grieder, 14. Project 1: Phase 2 -- In this case, 11 of 19 ACT students (57%) are performing at or above 70, which is less than the target level of 80% of total students. Action plan is to improve student-teacher communication about the requirements of the assessment. 15. Project 1: Phase 3 -- In this case, 14 of 19 ACT students (73%) are performing at or above 70, which is less than the target level of 80% of total students. Action plan is to improve student-teacher communication about the requirements of the assessment. 16. Project 2 -- In this case, 13 of 19 ACT students (68%) are performing at or above 70, which is less than the target level of 80% of total students. Action plan is to improve student-teacher communication about the requirements of the assessment. [instructor terminated -- course reassigned] AEC 316 Md. Shiratuddin, 2 Paper -- 9 students (8 BCT, 1 ACT) did not submit all assignments. 3 Exam -- 2 IET student did not sit for Exam 2. 1 ACT student did not sit for Final Exam, and did poorly for Exam 2. [improved communication on required dates for exams] FA12-SP13 The only action plan for this cycle is related to the small graduate exit survey sample size. The main action is to increase the number of ACT students and increase the sample size. The alumni survey has not yet been distributed yet either--it is important that we comparatively analyze the results of alumni versus the graduate exit survey; this analysis still remains to be completed. At the program level, all performance targets were met. In the Architectural Engineering Technology (ACT) program, this is represented by 5,173 student work samples (out of 5,559) that were evaluated as better than or equal to 70 (out of 100). The percentage of samples better than or equal to 70 is 93% which exceeds our stated level of performance of 80% and increased from 87% in the 2010-2011 cycle. These findings were derived from 11 of 23 courses in the curriculum; the findings from the remaining courses are still being pursued but were courses taught by adjuncts and/or instructors that have been terminated. The remaining courses are now in the hands of new faculty who will be undergoing assessment workshops within the School of Construction. 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 ETAC-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 faculty submit their findings, they are 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 might be too few students in a section; these sections do not require an action plan but should be monitored.

Sections with significant student numbers that have assessments below targets are added to the action plan section in WeaveOnline; all targets were met for this cycle in course findings.