Mission / Purpose

The mission of the Industrial Engineering Technology program is to produce graduates who can easily make the transition from the university to planning and supervisory positions in the workforce, particularly that of the industrial sector, including manufacturing and service industries. In light of this, courses are infused with industrial applications and students are required to study problems identified in local industries. In their senior project course, students frequently interface with local industry and, under the guidance of faculty, analyze and solve problems that have real-world applications.

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

SLO 1:OBJ01 -- ABET General Criteria a

IET 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 (2013-2014) - Target: Partially Met
79% (454 of 577) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'a' FA13: F-F = 87% (45 of 52); ONL = 73% (144 of 196); SP14: F-F = 47% (7 of 15); ONL = 82% (258 of 314);

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

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

AEC 390 Engineering Economics
Established in Cycle: 2010-2011
Some of the IET and BCT students missed at least 1 or 2 quizzes and 1 assignments because either they didn't see the quiz posted...
**IET 406 Industrial Automation**  
*Established in Cycle: 2010-2011*

Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for...

**IET Coursework Action Plans**  
*Established in Cycle: 2013-2014*

AEC 132 FF SP14 Sketchbook Small sample size, similar to BCT comments

CAD Exercises Small sample size, 'monitor...'

**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 (2013-2014) - Target: Not Met**
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'a' was 2.8. (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.

**Increase Exit Survey Sample**  
*Established in Cycle: 2013-2014*
Because student degree plan checks did not include completion of the department exit survey, the sample for this measure was sma...

**SLO 2:OBJ02 -- ABET General Criteria b**
IET 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'.

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Page 2 of 21
Findings (2013-2014) - Target: Met
80% (468 of 586) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'b' FA13: F-F = 89% (57 of 64); ONL = 73% (144 of 196); SP14: F-F = 44% (4 of 9); ONL = 83% (263 of 317);

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

AEC 390 Engineering Economics
Established in Cycle: 2010-2011
Some of the IET and BCT students missed at least 1 or 2 quizzes and 1 assignments because either they didn't see the quiz posted...

IET 406 Industrial Automation
Established in Cycle: 2010-2011
Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for...

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 (2013-2014) - Target: Met
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'b' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

SLO 3:OBJ03 -- ABET General Criteria c
IET 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 (2013-2014) - Target: Met
95% (54 of 57) of student work samples (projects, exams, quizzes,
papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'c' FA13: F-F = 100% (16 of 16); ONL = 0% (0 of 0); SP14: F-F = 0% (0 of 0); ONL = 93% (38 of 41);

**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 (2013-2014) - Target: Met**

Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'c' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

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

IET 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 (2013-2014) - Target: Partially Met**

79% (320 of 404) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'd' FA13: F-F = 94% (30 of 32); ONL = 71% (85 of 120); SP14: F-F = 0% (0 of 0); ONL = 81% (205 of 252);

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

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

**AEC 390 Engineering Economics**

Established in Cycle: 2010-2011

Some of the IET and BCT students missed at least 1 or 2 quizzes and 1 assignments because either they didn't see the quiz posted...

**IET 406 Industrial Automation**

Established in Cycle: 2010-2011
Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for...

**IET Coursework Action Plans**
*Established in Cycle: 2013-2014*

- AEC 132 FF SP14 Sketchbook Small sample size, similar to BCT comments
- CAD Exercises Small sample size, monitor...

**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 (2013-2014) - Target: Met**
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'd' was 3.5. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 5:OBJ05 -- ABET General Criteria e**
IET 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 (2013-2014) - Target: Not Met**
76% (60 of 79) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'e' FA13: F-F = 0% (0 of 0); ONL = 76% (29 of 38); SP14: F-F = 0% (0 of 0); ONL = 76% (31 of 41);

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

**IET 406 Industrial Automation**
*Established in Cycle: 2010-2011*
Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for...

**IET Coursework Action Plans**

*Established in Cycle: 2013-2014*

- **AEC 132 FF SP14 Sketchbook** Small sample size, similar to BCT comments
- **CAD Exercises** Small sample size, 'monitor...

**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 (2013-2014) - Target: Met**

Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'e' was 3.5. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

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

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

**Related Measures:**

**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 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 (2013-2014) - Target: Met**

80% (433 of 543) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'f'.

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

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

**AEC 390 Engineering Economics**

*Established in Cycle: 2010-2011*

Some of the IET and BCT students missed at least 1 or 2 quizzes and 1
assignments because either they didn't see the quiz posted...

**IET 406 Industrial Automation**  
*Established in Cycle: 2010-2011*

Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for...

**M 12:M6.2 -- ABET-G Cf -- Exit/Alumni Survey Results**  
M6.2: (ABET-G Cf) 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 (2013-2014) - Target: Met**  
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'f' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 7:OBJ07 -- ABET General Criteria g**  
IET 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 (2013-2014) - Target: Met**  
84% (69 of 82) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'g' FA13: F-F = 100% (20 of 20); ONL = 0% (0 of 0); SP14: F-F = 47% (7 of 15); ONL = 89% (42 of 47);

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

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

**AEC 390 Engineering Economics**  
*Established in Cycle: 2010-2011*

Some of the IET and BCT students missed at least 1 or 2 quizzes and 1 assignments because either they didn't see the quiz posted...
IET 406 Industrial Automation
Established in Cycle: 2010-2011

Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for...

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 (2013-2014) - Target: Met**
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'g' was 3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

SLO 8:OBJ08 -- ABET General Criteria h
IET 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 (2013-2014) - Target: Met**
80% (242 of 301) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'h' FA13: F-F = 100% (18 of 18); ONL = 70% (91 of 130); SP14: F-F = 0% (0 of 0); ONL = 87% (133 of 153);

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 (2013-2014) - Target: Met**
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'h' was 3.5. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)
SLO 9:OBJ09 -- ABET General Criteria i
IET 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 (2013-2014) - Target: Met
94% (95 of 101) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'i' FA13: F-F = 100% (20 of 20); ONL = 0% (0 of 0); SP14: F-F = 0% (0 of 0); ONL = 93% (75 of 81);

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

IET 406 Industrial Automation
Established in Cycle: 2010-2011

Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for...

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 (2013-2014) - Target: Met
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'i' was 3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

SLO 10:OBJ10 -- ABET General Criteria j
IET 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 (2013-2014) - Target: Partially Met
79% (219 of 276) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'j'.

FA13: F-F = 100% (16 of 16); ONL = 71% (63 of 89);
SP14: F-F = 0% (0 of 0); ONL = 82% (140 of 171);

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

IET Coursework Action Plans
Established in Cycle: 2013-2014

AEC 132 FF SP14 Sketchbook Small sample size, similar to BCT comments

CAD Exercises Small sample size, ,monitor...

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 (2013-2014) - Target: Met
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'j' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

SLO 11:OBJ11 -- ABET General Criteria k
IET 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'.

Page 10 of 21
Findings (2013-2014) - Target: Met
80% (296 of 372) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET General Criteria 'k' FA13: F-F = 100% (38 of 38); ONL = 72% (98 of 137); SP14: F-F = 44% (4 of 9); ONL = 83% (156 of 188);

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

IET 406 Industrial Automation
Established in Cycle: 2010-2011

Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for...

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 (2013-2014) - Target: Met
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'k' was 3.8. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

SLO 12:OBJ12 -- ABET Associate Criteria a
IET graduates demonstrate the ability to accomplish the integration of systems using appropriate analytical, computational, and application practices and procedures. (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 (2013-2014) - Target: Met
80% (390 of 488) 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' FA13: F-F = 100% (36 of 36); ONL = 73% (144 of 196); SP14: F-F = 0% (0 of 0); ONL = 82% (210 of 256);
Related Action Plans (by Established cycle, then alpha):

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

**AEC 390 Engineering Economics**
*Established in Cycle: 2010-2011*
Some of the IET and BCT students missed at least 1 or 2 quizzes and 1 assignments because either they didn't see the quiz posted...

**IET 406 Industrial Automation**
*Established in Cycle: 2010-2011*

Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for...

**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 (2013-2014) - Target: Met**
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'a' was 3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

**SLO 13:OBJ13 -- ABET BS Criteria a**
IET graduates demonstrate the ability to apply knowledge of probability, statistics, engineering economic analysis and cost control, and other technical sciences and specialties necessary in the field of industrial engineering technology. (ABET Baccalaureate Degree Program Specific Criteria 'a')

**Related Measures:**

**M 25:M13.1 -- ABET-BSa -- Assessment Aggregates**
M13.1: (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 (2013-2014) - Target: Met**
80% (427 of 534) 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 FA13:
F-F = 94% (64 of 68); ONL = 73% (144 of 196); SP14: F-F = 44% (4 of 9); ONL = 82% (215 of 261);

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

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

AEC 390 Engineering Economics
Established in Cycle: 2010-2011
Some of the IET and BCT students missed at least 1 or 2 quizzes and 1 assignments because either they didn't see the quiz posted...

IET 406 Industrial Automation
Established in Cycle: 2010-2011

Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for...

M 26:M13.2 -- ABET-BSa -- Exit/Alumni Survey Results
M13.2: (ABET-BSa) Exit and Alumni Survey results for ABET BaccalaureateDegree 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 (2013-2014) - Target: Met
Average of 4 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'a' was 3.5. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)

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

AEC 390 Engineering Economics
Some of the IET and BCT students missed at least 1 or 2 quizzes and 1 assignments because either they didn't see the quiz posted or missed the deadline.

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

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: M13.1 -- ABET-BSa -- Assessment Aggregates | Outcome/Objective: OBJ13 -- ABET BS Criteria a
Measure: M2.1 -- ABET GCb -- Assessment Aggregates | Outcome/Objective:
A more rigorous reminder system should be introduced to increase the level of awareness of students.

**Responsible Person/Group:** MD. Sarder

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**IET 406 Industrial Automation**

Action necessary for Project (2): Instructor make sure students understand the requirement, due date & desired content for the project

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**Established in Cycle:** 2010-2011

**Implementation Status:** In-Progress

**Priority:** High

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**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:** M13.1 -- ABET-BSa -- Assessment Aggregates | **Outcome/Objective:** OBJ13 -- ABET BS Criteria a
- **Measure:** M2.1 -- ABET GCb -- Assessment Aggregates | **Outcome/Objective:** OBJ02 -- ABET General Criteria b
- **Measure:** M4.1 -- ABET-GCd -- Assessment Aggregates | **Outcome/Objective:** OBJ04 -- ABET General Criteria d
- **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
- **Measure:** M7.1 -- ABET-GCg -- Assessment Aggregates | **Outcome/Objective:** OBJ07 -- ABET General Criteria g
- **Measure:** M9.1 -- ABET-GCi -- Assessment Aggregates | **Outcome/Objective:** OBJ09 -- ABET General Criteria i

**Responsible Person/Group:** Md. Rahman

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**IET Coursework Action Plans**

AEC 132 FF SP14 Sketchbook Small sample size, similar to BCT comments CAD Exercises Small sample size, monitor Quizzes Small sample size, monitor Final Exercise 14/22 ACT-BCT Students opted not to submit the final or submitted it grossly incomplete; Monitor, prepare students better for the reality of a cumulative final & time commitment; Final Exam 13/22 Students opted not to submit the final or submitted it grossly incomplete; Monitor, prepare students better for the reality of a cumulative final & time commitment IET 406 ONL SU13 1 Final Exam Few students missed critical analytical problems; will provide a supplementary note with additional analytical
problems 4 HW Incomplete submission of assignments made lower grade; remind students prior to assignment submission 1 Project Will provide a sample project for students to understand the project requirements, data and quality of work IET 472 ONL SU13 1 Final Exam Small number of student did not complete final exam; remind students prior to exam due date IET 472 ONL SU13 1 Midterm Remind students studying for midterm exams and schedule 3 HW Small number of student did not complete all assignment; remind students prior to assignment submission date 4 Project Guide students how to collect data, requirements of a simulation model, and report writing via supplementary document. IET 409 ONL SP14 1 Midterm small sample in this case; just monitor 4 Project small sample in this case; just monitor IET 350 ONL SP14 1 Midterm Did not submit exam in due time; remind students midterm exam schedule and due date 2 Final Exam Few students missed critical analytical problems; Provide a supplementary note with additional analytical problems 3 HW Small number of student did not complete all assignment; remind students prior to assignment submission date 4 Project Will provide a sample project for students to understand the project requirements, data and quality of work IET 302 ONL FA13 1 Midterm Two students submitted incomplete exam; remind students studying for midterm exams 2 Final Exam Few students missed critical analytical problems; Provide a supplementary note with additional analytical problems 3 HW Small number of student did not complete all assignment; remind students prior to assignment submission date 4 Project Guide students the requirements of the project, data collection and analysis via a sample project IET 370 FF SU13 Mini 4. Homework* * This assignment was optional and two students opted out IET 370 FF SP14 Mini 4. Homework ** Two of the IET students missed the deadline due to their personal issues. Told them to communicate with me prior to deadline.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: M10.1 -- ABET-GCj -- Assessment Aggregates | Outcome/Objective:
OBJ10 -- ABET General Criteria j

Responsible Person/Group: MD Sarder (Coordinator)

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Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
  Measure: M5.1 -- ABET-GCe -- Assessment Aggregates | Outcome/Objective: OBJ05 -- ABET General Criteria e

Responsible Person/Group: MD Sarder (Coordinator)

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Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
  Measure: M4.1 -- ABET-GCd -- Assessment Aggregates | Outcome/Objective:
  OBJ04 -- ABET General Criteria d

Responsible Person/Group: MD Sarder (Coordinator)

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**Established in Cycle:** 2013-2014  
**Implementation Status:** Planned  
**Priority:** High

**Relationships (Measure | Outcome/Objective):**  
**Measure:** M1.1 -- ABET-GCa -- Assessment Aggregates | **Outcome/Objective:** OBJ01 -- ABET General Criteria a

**Responsible Person/Group:** MD Sarder (Coordinator)

**Increase Exit Survey Sample**  
Because student degree plan checks did not include completion of the department exit survey, the sample for this measure was small.

**Established in Cycle:** 2013-2014  
**Implementation Status:** Planned  
**Priority:** High

**Relationships (Measure | Outcome/Objective):**  
**Measure:** M1.2 -- ABET-GCa -- Exit/Alumni Survey Results | **Outcome/Objective:** OBJ01 -- ABET General Criteria a

**Implementation Description:** Require degree check for exit survey.  
**Responsible Person/Group:** Keith Sylvester (Director); MD Sarder (Coordinator)

**Analysis Questions and Analysis Answers**

**What specifically did your assessments show regarding proven strengths or progress you made on outcomes/objectives?**  
Since we mapped the Industrial Engineering Technology (IET) program's assessment plan with our accreditation agency's (Technology Accreditation Commission-Accreditation Board for Engineering and Technology (ETAC-ABET)) assessment plan in 2011, it becomes easier to track progress and identify the reasons of not meeting the targets. In 2013-2014 assessment cycle, some of the outcomes were just below the target level, but appropriate reasons and corrective actions were taken easily due to the process improvement. The mapping plan is described fully in the "Continuous Improvement Initiatives" and "Closing the Loop" sections of WeaveOnline.

**What specifically did your assessments show regarding any outcomes/objectives that will require continued attention?**  
At the program level, the performance targets for most of the objectives were met. Four objectives (a, d, e, & J) were just below the target performance. The process we have in place allows micro- or macro-level views of the assessment outcomes. Those unmet program level and course level assessments have been reported in WeaveOnline with required action items.

**Annual Report Section Responses**

**Program Summary**
The Industrial Engineering Technology (IET) program is designed to provide the student with essential education in the various areas of industrial engineering technology and logistics management. IET delivers student with fundamental interdisciplinary techniques of quantitative problem-solving methods, management science, economic analysis, and operations management of industrial engineering and supply chain domain. Furthermore, the IET 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 industrial engineering technology. The IET program is committed to producing graduates who possess the necessary skills, critical thinking, discipline and work ethics to enter the industrial engineering and logistics industry fully capable of performing entry-level tasks at the office and in the field. The IET initiative supports Southern Miss’ emergence as the premier research University of the Gulf South through undergraduate and graduate research. For example, IET have been very productive in grant submission and funded grants. In the past five years the faculty submitted at least 40 proposals to various agencies for more than $9 million and 15 of them were funded with more than $2 million. Students & faculty conducting undergraduate research (in the related IET and logistics field) are advancing the research vision of the University with state-of-the-art research. IET graduates are empowered to conduct research, present in conferences, and publish in peer reviewed proceedings and journals. The Program Educational Objective of the IET program is: “Graduates possess the necessary skills, critical thinking, discipline and work ethics to enter the industrial and logistics 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. IET’s mission is consistent with the College of Science & Technology’s Mission Statement as well as the University’s Mission Statement. 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). IET is responsive to IHL priorities in a number of ways: educating a reentering workforce and has taken innovative approaches to curriculum delivery such as developing a completely online curriculum. The IET program produces very competent graduates. 100% of our graduates get their discipline specific job within first year of graduation. Since its inception, the program is growing. High demand of IET graduates, competent faculty, and program quality make the program sustainable. The program lies squarely within the IHL STEM priorities for meaningful, successful careers. IET is externally accredited by ETAC-ABET. IET established 2+2 consortium agreements with local community colleges to provide seamless transitions to USM.

Continuous Improvement Initiatives
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 criterion. This is the second year of this implementation. For the Industrial 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 Industrial Engineering Technology a. Graduates must demonstrate the ability to accomplish the integration of systems using appropriate analytical, computational, and application practices and procedures. b. Graduates at the baccalaureate level must demonstrate the ability to apply knowledge of probability, statistics, engineering economic analysis and cost control, and other technical sciences and specialties necessary in the field of industrial engineering technology. 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 will be the graduate exit surveys and alumni surveys rewritten to also reflect the ETAC-ABET criteria; these have not yet been implemented for this cycle. Faculty then reported their findings for each section of their courses for fall 2011 and spring 2012. 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. As part of continuous improvement, we implemented hands on learning component in some of our courses including IET 410, IET 405, IET 470, and IET 370. In these courses students can use some software, generate RFID data and enter in inventory system, and perform process improvement. This component proved the improvement of their learning experiences. To improve ethical standard in senior project course, students were required to complete a plagiarism test. Another continuous improvement initiative was to highly encourage and some cases mandate to use USM writing center & USM speaking center. This initiative improved their writing and oral presentation capabilities.
**Closing the Loop**

At the program level, we monitor individual course outcomes and action plans set by individual faculty members over a period of time to identify any issues/trends that are troubling. We also consider students' complaints while evaluating course assessments. Based on the finding we often recommend improvement/changes in course delivery, training, mentoring, etc. In some cases we reassign courses and/or terminate instructors.