

Program Outcomes Assessment

BS in Engineering Technology

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General Information (Program Outcomes Assessment)

Standing Requirements

❖ Mission Statement

The mission of the Engineering Technology (ET) degree program at Indiana State University is to prepare graduates with technical and leadership skills necessary to enter careers in process and systems design, operations, quality, continuous improvement, lean manufacturing, and sustainability.

December 2014

❖ Outcomes Library

BS in Engineering Technology - Dec 2014

Obj. 1: Apply disciplinary reasoning, critical thinking, and hands-on skills to identify, analyze and solve problems. (Technology).

Outcome	Mapping
a. (1.1) An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities	No Mapping
b.(1.2)An ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems 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	No Mapping
c.(1.3)An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply results An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes	No Mapping
d.(1.4)An ability to design systems, components, or processes for broadly-defined engineering technology problems An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives	No Mapping
f.(1.5)An ability to identify, analyze, and solve broadly-defined engineering technology problems	No Mapping

Obj. 2: Communicate effectively in both oral and written form to articulate technical knowledge, ideas, and proposals (Communication)



Outcome	Mapping
g. (2.1) An ability to apply written, oral, and graphical communication; and an ability to use technical literature An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature	No Mapping

Obj. 3: Consider professional, ethical and social responsibility of engineering technology practices

Outcome	Mapping
i.(3.1)An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity	No Mapping
j. (3.2)A knowledge of the impact of engineering technology solutions in a societal and global context	No Mapping

4. Perform effectively, think independently and work collaboratively in a team environment in a membership or leadership role (Mng / Team)

Outcome	Mapping
e.(4.1)An ability to function effectively as a member or leader on a technical team	No Mapping

5. Actively participate in professional development, including continuous self-improvement and lifelong learning (Lifelong Learning).

Outcome	Mapping
h.(5.1)An understanding of the need for and an ability to engage in self-directed continuing professional development	No Mapping
k.(5.2)A commitment to quality, timeliness, and continuous improvement.	No Mapping

BS in Engineering Technology Outcome Set


Objective 8. Social Responsibilities

An ability to understand professional, ethical and social responsibilities

Outcome	Mapping
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 **Curriculum Map**

Active Curriculum Maps

 **BSET Automotive Concentration** (See appendix)
Alignment Set: BS in Engineering Technology Outcome Set
Created: 08/06/2012 10:23:19 am CDT
Last Modified: 08/07/2012 9:53:24 am CDT

 **BSET Computer Engineering Technology Concentration** (See appendix)
Alignment Set: BS in Engineering Technology Outcome Set

Created: 08/06/2012 10:12:33 am CDT
Last Modified: 08/07/2012 9:57:20 am CDT

-
- **BSET Core Curriculum Map** (See appendix)
Alignment Set: BS in Engineering Technology Outcome Set
Created: 08/02/2012 8:49:48 am CDT
Last Modified: 08/08/2012 8:06:38 am CDT

This map aligns courses with learning objectives

-
- **BSET Electronics Concentration** (See appendix)
Alignment Set: BS in Engineering Technology Outcome Set
Created: 08/06/2012 9:31:24 am CDT
Last Modified: 08/08/2012 8:13:44 am CDT

This details the electronics Concentration

-
- **BSET Mechanical Concentration** (See appendix)
Alignment Set: BS in Engineering Technology Outcome Set
Created: 08/06/2012 9:49:45 am CDT
Last Modified: 08/08/2012 8:18:18 am CDT

-
- **BSET Packaging Concentration** (See appendix)
Alignment Set: BS in Engineering Technology Outcome Set
Created: 08/06/2012 10:00:20 am CDT
Last Modified: 08/08/2012 8:23:21 am CDT
-

Communication of Outcomes

File Attachments:

1. **BSET communication of outcomes.docx** (See appendix)
-

Archive (This area is to be used for archiving pre-TaskStream assessment data and for current documents.)


 **Archive**

2012-2013 Assessment Cycle

 **Assessment Plan**

 **Assessment Findings**

 **Action Plan**

 **Status Report**

2013-2014 Assessment Cycle

Assessment Plan

Outcomes and Measures

BS in Engineering Technology Outcome Set

Objective 1

An appropriate mastery of the knowledge, techniques, skills, and modern tools of the student's selected engineering technology discipline;

SLO A

No measures specified

An appropriate mastery of the knowledge, techniques, skills, and modern tools of the student's selected engineering technology discipline;

Objective 2

An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology

SLO B

No measures specified

An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology

Objective 3

Apply experimental results to improve processes

SLO C

No measures specified

An ability to conduct, analyze, and interpret experiments, and apply experimental results to improve processes

Objective 4. Creativity

An ability to apply creativity in the design of systems, components, or processes appropriate to the students' selected engineering technology program educational objectives;

SLO D

No measures specified

An ability to apply creativity in the design of systems, components, or processes appropriate to the students' selected engineering technology program educational objectives;

Objective 5. Functionality on Teams

An ability to function effectively as a member or leader on a technical team

SLO E *No measures specified*

An ability to function effectively as a member or leader on a technical team

Objective 6. Critical Thinking Applied to Problems

An ability to identify, analyze and solve technical broadly-defined engineering technology problems

SLO F *No measures specified*

An ability to identify, analyze and solve technical broadly-defined engineering technology problems

Objective 7. Life long learning

An understanding of the need for and an ability to engage in self-directed continuing professional development

SLO H *No measures specified*

An understanding of the need for and an ability to engage in self-directed continuing professional development

Objective 8. Social Responsibilities

An ability to understand professional, ethical and social responsibilities

SLO I *No measures specified*

An understanding of an a commitment to address professional and ethical responsibilities including a respect for diversity

Objective 9. Communications

An ability to apply written, oral, and graphical communication in both technical and non-technical environments; an ability to identify and use appropriate technical literature

SLO G *No measures specified*

An ability to apply written, oral, and graphical communication in both technical and non-technical environments; an ability to identify and use appropriate technical literature

Objective 10. Quality and Improvement

A commitment to quality, timeliness, and continuous improvement

SLO K *No measures specified*

a commitment to quality, timeliness, and continuous improvement

Objective 11

A knowledge of the impact of engineering technology solutions in a societal and global context

SLO J *No measures specified*

A knowledge of the impact

of engineering technology
solutions in a societal and
global context

Assessment Findings

Finding per Measure

BS in Engineering Technology Outcome Set

Objective 1

An appropriate mastery of the knowledge, techniques, skills, and modern tools of the student's selected engineering technology discipline;

SLO A

No measures specified

An appropriate mastery of the knowledge, techniques, skills, and modern tools of the student's selected engineering technology discipline;

Objective 2

An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology

SLO B

No measures specified

An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology

Objective 3

Apply experimental results to improve processes

SLO C

No measures specified

An ability to conduct, analyze, and interpret experiments, and apply experimental results to improve processes

Objective 4. Creativity

An ability to apply creativity in the design of systems, components, or processes appropriate to the students' selected engineering technology program educational objectives;

SLO D

No measures specified

An ability to apply creativity in the design of systems, components, or processes appropriate to the students' selected engineering technology program educational objectives;

Objective 5. Functionality on Teams

An ability to function effectively as a member or leader on a technical team

SLO E

No measures specified

An ability to function effectively as a member or leader on a technical team

Objective 6. Critical Thinking Applied to Problems

An ability to identify, analyze and solve technical broadly-defined engineering technology problems

SLO F *No measures specified*

An ability to identify, analyze and solve technical broadly-defined engineering technology problems

Objective 7. Life long learning

An understanding of he need for and an ability to engage in self-directed continuing professional development

SLO H *No measures specified*

An understanding of he need for and an ability to engage in self-directed continuing professional development

Objective 8. Social Responsibilities

An ability to understand professional, ethical and social responsibilities

SLO I *No measures specified*

An understanding of an a commitment to address professional and ethical responsibilities including a respect for diversity

Objective 9. Communications

An ability to apply written, oral, and graphical communication in both technical and non-technical environments; an ability to identify and use appropriate technical literature

SLO G *No measures specified*

An ability to apply written, oral, and graphical communication in both technical and non-technical environments; an ability to identify and use appropriate technical literature

Objective 10. Quality and Improvement

A commitment to quality, timeliness, and continuous improvement

SLO K *No measures specified*

a commitment to quality, timeliness, and continuous improvement

Obective 11

A knowledge of the impact of engineering technology solutions in a societal and global context

SLO J *No measures specified*

A knowledge of the impact of engineering technology

solutions in a societal and
global context

Overall Recommendations

No text specified

Overall Reflection

No text specified

Action Plan

Status Report

2014-2015 Assessment Cycle

Assessment Plan

Outcomes and Measures

BS in Engineering Technology - Dec 2014

Obj. 1: Apply disciplinary reasoning, critical thinking, and hands-on skills to identify, analyze and solve problems. (Technology).

a. (1.1) An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline

An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities

▼ **Measure:** CTM of ATMAE
Direct - Exam

Details/Description: The Certified Technology Manager certification exam from the Association of Technology, Management, and Applied Engineering will be utilized to assess this SLO. Specifically, the competency categories of project and systems will be assessed.

Target: 70% of the students taking the exam will score above 70% on the categories listed above

Implementation Plan (timeline): Spring 2015

Responsible Individual(s):

d.(1.4)An ability to design systems, components, or processes for broadly-defined engineering technology problems

An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives

▼ **Measure:** CTM of ATMAE
Direct - Exam

Details/Description: The Certified Technology Manager certification exam from the Association of Technology, Management, and Applied Engineering will be utilized to assess this SLO. Specifically, the competency categories of project and systems will be assessed.

Target: 70% of the students taking the exam will score above 70% on the categories listed above

Implementation Plan (timeline): Spring 2015

Responsible Individual(s):

5. Actively participate in professional development, including continuous self-improvement and lifelong learning (Lifelong Learning).

h.(5.1)An understanding of the need for and an ability to engage in self-directed continuing professional development

▼ **Measure:** CTM of ATMAE
Direct - Exam

Details/Description: The Certified Technology Manager certification exam from the Association of Technology, Management, and Applied Engineering will be utilized to assess this SLO. Specifically, the competency categories of project and systems will be assessed.

Target: 70% of the students taking the exam will score above 70% on the categories listed above

Implementation Plan (timeline): Spring 2015

Responsible Individual(s):

Assessment Findings

Finding per Measure

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BS in Engineering Technology - Dec 2014

Obj. 1: Apply disciplinary reasoning, critical thinking, and hands-on skills to identify, analyze and solve problems. (Technology).

a. (1.1) An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline

An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities

▼ **Measure:** CTM of ATMAE
Direct - Exam

Details/Description: The Certified Technology Manager certification exam from the Association of Technology, Management, and Applied Engineering will be utilized to assess this SLO. Specifically, the competency categories of project and systems will be assessed.

Target: 70% of the students taking the exam will score above 70% on the categories listed above

Implementation Plan (timeline): Spring 2015

Responsible Individual(s):

Findings for CTM of ATMAE

No Findings Added

d.(1.4)An ability to design systems, components, or processes for broadly-defined engineering technology problems

An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives

▼ **Measure:** CTM of ATMAE
Direct - Exam

Details/Description: The Certified Technology Manager certification exam from the Association of Technology, Management, and Applied Engineering will be utilized to assess this SLO. Specifically, the competency categories of project and systems will be assessed.

Target: 70% of the students taking the exam will score above 70% on the categories listed above

Implementation Plan (timeline): Spring 2015

Responsible Individual(s):

Findings for CTM of ATMAE

No Findings Added

5. Actively participate in professional development, including continuous self-improvement and lifelong learning (Lifelong Learning).

h.(5.1)An understanding of the need for and an ability to engage in self-directed continuing professional development

▼ **Measure:** CTM of ATMAE
Direct - Exam

Details/Description: The Certified Technology Manager certification exam from the Association of Technology, Management, and Applied Engineering will be utilized to assess this SLO. Specifically, the competency categories of project and systems will be assessed.

Target: 70% of the students taking the exam will score above 70% on the categories listed above

Implementation Plan (timeline): Spring 2015

Responsible Individual(s):

Findings for CTM of ATMAE

No Findings Added

Overall Recommendations

No text specified

Overall Reflection

No text specified

Action Plan

Status Report

2015-2016 Assessment Cycle

 **Assessment Plan**

 **Assessment Findings**

 **Action Plan**

 **Status Report**

2016-2017 Assessment Cycle

 **Assessment Plan**

 **Assessment Findings**

2017-2018 Assessment Cycle

 **Assessment Plan**

 **Assessment Findings**

2018-2019 Assessment Cycle

 **Assessment Plan**

 **Assessment Findings**

2019-2020 Assessment Cycle

 **Assessment Plan**

 **Assessment Findings**

Appendix

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- A. **BSET Automotive Concentration** (Curriculum Map)
 - B. **BSET Computer Engineering Technology Concentration** (Curriculum Map)
 - C. **BSET Mechanical Concentration** (Curriculum Map)
 - D. **BSET Packaging Concentration** (Curriculum Map)
 - E. **BSET Electronics Concentration** (Curriculum Map)
 - F. **BSET Core Curriculum Map** (Curriculum Map)
 - G. **BSET communication of outcomes.docx** (Word Document (Open XML))
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