# Degree Program Assessment Plan

## Degree Program - ENG - Environmental Engineering (BS/MEV)

**CIP Code:** 14.1401.00  
**Degree Program Coordinator:** Dr. Venky Shankar  
**Degree Program Coordinator Email:** venky.shankar@ttu.edu  
**Degree Program Coordinator Phone:** 8068348189

## Student Learning Outcome: ABET Criterion 3a

An ability to apply knowledge of mathematics, science, and engineering  
**Outcome Status:** Active  
**Outcome Type:** Student Learning  
**Start Date:** 08/23/2010

### Assessment Methods

<table>
<thead>
<tr>
<th>Assessment Method</th>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam - FE Exam- Math Portion (Active)</td>
<td>&gt;50% Pass Math Portion (AM) FE 75% of the time</td>
</tr>
<tr>
<td>Exam - FE Exam- Statics Portion (Active)</td>
<td>&gt;50% Pass Statics Portion (AM) FE 75% of the time</td>
</tr>
<tr>
<td>Exam - FE Exam- Fluid Mechanics Portion (Active)</td>
<td>&gt;50% Pass Fluid Mechanics Portion (AM) FE 75% of the time</td>
</tr>
<tr>
<td>Exam - FE Exam- Engineering Economics Portion (Active)</td>
<td>&gt;50% pass Engineering Economics Portion (AM) FE 75% of the time</td>
</tr>
<tr>
<td>Exam - FE Exam- Chemistry Portion (Active)</td>
<td>&gt;50% Pass Chemistry Portion (AM) FE 75% of the time</td>
</tr>
<tr>
<td>Senior Exit Interview - Senior Exit Interview (Active)</td>
<td>4.0 or higher on question querying this issue on the exit interview</td>
</tr>
<tr>
<td>Course Level Assessment - Course Assessment (Active)</td>
<td>4.0 or higher class attainment for 5.0 emphasis, or 3.2 or higher class attainment for 4.0 emphasis, academic years 2011-2014</td>
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</table>
Degree Program - ENG - Environmental Engineering (BS/MEV)

**Student Learning Outcome: ABET Criterion 3b**

An ability to design and conduct experiments, as well as to analyze and interpret data

**Outcome Status:** Active  
**Outcome Type:** Student Learning  
**Start Date:** 08/23/2010

**Assessment Methods**

- **Student Exit Survey - Senior Exit Survey (Active)**
  - **Criterion:** 4.0 or higher on question querying this issue on the exit interview

- **Course Level Assessment - Course Assessment (Active)**
  - **Criterion:** 4.0 or higher on question querying this issue on the alumni survey (1, 3, 7 years)

**Student Learning Outcome: ABET Criterion 3c**

An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

**Outcome Status:** Active  
**Outcome Type:** Student Learning  
**Start Date:** 08/23/2010

**Assessment Methods**

- **Student Exit Survey - Senior Exit Survey (Active)**
  - **Criterion:** 4.0 or higher on question querying this issue on the exit interview

- **Course Level Assessment - Course Assessment (Active)**
  - **Criterion:** 4.0 or higher class attainment for 5.0 emphasis, or 3.2 or higher class attainment for 4.0 emphasis, academic years 2011-2014

**Student Learning Outcome: ABET Criterion 3d**

An ability to function on multidisciplinary teams

**Outcome Status:** Active  
**Outcome Type:** Student Learning  
**Start Date:** 08/23/2010
Assessment Methods

**Student Exit Survey - Senior Exit Survey (Active)**

**Criterion:** 4.0 or higher on question querying this issue on the exit interview

**Course Level Assessment - Course Assessment (Active)**

**Criterion:** 4.0 or higher class attainment for 5.0 emphasis, or 3.2 or higher class attainment for 4.0 emphasis, academic years 2011-2014

Student Learning Outcome: ABET Criterion 3e

An ability to identify, formulate, and solve engineering problems

**Outcome Status:** Active  
**Outcome Type:** Student Learning  
**Start Date:** 08/23/2010

Assessment Methods

**Exam - Graduates pass the FE exam (Active)**

**Criterion:** 85% passing the FE exam

**Exam - Graduates pass the FE exam (Active)**

**Criterion:** Students score >50% on AM FE exam > 75% of the time

**Senior Exit Interview - Senior Exit Interview (Active)**

**Criterion:** 4.0 or higher on question querying this issue on the exit interview

**Course Level Assessment - Course Assessment (Active)**

**Criterion:** 4.0 or higher class attainment for 5.0 emphasis, or 3.2 or higher class attainment for 4.0 emphasis, academic years 2011-2014

Student Learning Outcome: ABET Criterion 3f

An understanding of professional and ethical responsibility

**Outcome Status:** Active  
**Outcome Type:** Student Learning  
**Start Date:** 08/23/2010
### Degree Program - ENG - Environmental Engineering (BS/MEV)

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<tr>
<td><strong>Exam</strong> - Graduate performance on FE exam (Active)</td>
<td>Students score &gt;50% on ethics questions 75% of the time</td>
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#### Student Learning Outcome: ABET Criterion 3g

An ability to communicate effectively  
**Outcome Status:** Active  
**Outcome Type:** Student Learning  
**Start Date:** 08/23/2010

**Assessment Methods**

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#### Student Learning Outcome: ABET Criterion 3h

The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context  
**Outcome Status:** Active  
**Outcome Type:** Student Learning  
**Start Date:** 08/23/2010

**Assessment Methods**

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| **Criterion:** 4.0 or higher on question querying this issue on the exit interview |

| **Course Level Assessment - Course Assessment (Active)** |
| **Criterion:** 4.0 or higher class attainment for 5.0 emphasis, or 3.2 or higher class attainment for 4.0 emphasis, academic years 2011-2014 |

### Student Learning Outcome: ABET Criterion 3i

A recognition of the need for, and an ability to engage in life-long learning

**Outcome Status:** Active  
**Outcome Type:** Student Learning  
**Start Date:** 08/23/2010

**Assessment Methods**

- **Senior Exit Interview - Senior Exit interview (Active)**
  - **Criterion:** 4.0 or higher on question querying this issue on the exit interview

| **Course Level Assessment - Course Assessment (Active)** |
| **Criterion:** 4.0 or higher class attainment for 5.0 emphasis, or 3.2 or higher class attainment for 4.0 emphasis, academic years 2011-2014 |

### Student Learning Outcome: ABET Criterion 3j

A knowledge of contemporary issues

**Outcome Status:** Active  
**Outcome Type:** Student Learning  
**Start Date:** 08/23/2010

**Assessment Methods**

- **Senior Exit Interview - Senior Exit interview (Active)**
  - **Criterion:** 4.0 or higher on question querying this issue on the exit interview

| **Course Level Assessment - Course Assessment (Active)** |
| **Criterion:** 4.0 or higher class attainment for 5.0 emphasis, or 3.2 or higher class attainment for 4.0 emphasis, academic years 2011-2014 |
Degree Program - ENG - Environmental Engineering (BS/MEV)

Student Learning Outcome: ABET Criterion 3k

An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Outcome Status: Active
Outcome Type: Student Learning
Start Date: 08/23/2010

Assessment Methods

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