Degree Program Assessment Plan

Degree Program - ENG - Chemical Engineering (MSCHE)

CIP Code: 14.0701.00
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Program Purpose Statement: Major objectives of the department during the next decade will be: (1) to provide students with a high quality education at both the undergraduate and graduate levels to enable them to adapt to a rapidly changing technical environment, (2) to produce graduates who will be productive throughout their careers in a wide range of industrial, professional, and academic environments, and (3) to develop graduates with a strong sense of ethics and professionalism and the ability to succeed as both individual and team contributors.
Assessment Coordinator: Sindee Simon

Student Learning Outcome: Program Outcome Masters 1
Graduates have advanced knowledge of the field and are able to effectively apply this knowledge.
Outcome Status: Active
Outcome Type: Student Learning
Start Date: 09/01/2013

Assessment Methods

<table>
<thead>
<tr>
<th>Assessment Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Transcript Evaluation</td>
<td>Mastery of ChE core concepts. (Active)</td>
</tr>
<tr>
<td>Criterion: All students pass required core curriculum with GPA of 3.0 or higher.</td>
<td>Schedule: Annually</td>
</tr>
<tr>
<td>Instructor Course Evaluation</td>
<td>Mastery of ChE core concepts (Active)</td>
</tr>
<tr>
<td>Criterion: Learning outcomes associated with concept mastery in core courses ChE 5312, 5321, and 5343 are met according to instructor self-evaluations of the courses.</td>
<td>Schedule: Annually</td>
</tr>
<tr>
<td>Instructor Course Evaluation</td>
<td>Ability to use computational and modeling tools to solve ChE problems (Active)</td>
</tr>
<tr>
<td>Criterion: Learning outcomes associated with computational and modeling tools in core courses ChE 5310 and 5323 are met according to instructor self-evaluations of the courses.</td>
<td>Schedule: Annually</td>
</tr>
</tbody>
</table>

Student Learning Outcome: Program Outcome Masters 2
Graduates have an understanding of research and use literature to creatively solve problems.
Outcome Status: Active
Outcome Type: Student Learning
Start Date: 05/01/2014
Degree Program - ENG - Chemical Engineering (MSCHE)

Assessment Methods

**Student Projects** - Performance in thesis research (Active)
- **Criterion:** Students publish one refereed journal article from their thesis research (Web of Science)
- **Schedule:** Yearly

**Employment** - Graduate Exit Survey (Active)
- **Criterion:** 100% of students are placed within six months of graduation

Student Learning Outcome: Program Outcome Masters 3

Graduates are able to effectively communicate technical information.

**Outcome Status:** Active
**Outcome Type:** Student Learning
**Start Date:** 09/01/2013

Assessment Methods

**Student Exit Survey** - Student presentations (Active)
- **Criterion:** 100% of the students present their work at local, regional, or national meetings
- **Schedule:** Yearly

**Student Exit Survey** - Student awards for presentations (Active)
- **Criterion:** 20% of the graduating students receive local, regional, or national awards for poster or oral presentations
- **Schedule:** Yearly

Student Learning Outcome: Program Outcome Masters 4

Graduates have a strong sense of professionalism and a good understanding of research ethics and safety

**Outcome Status:** Active
**Outcome Type:** Student Learning
**Start Date:** 05/01/2014

Assessment Methods

**Student Projects** - Safe conduct of research (Active)
- **Criterion:** Reported safety incidents
- **Schedule:** Yearly

**Student Projects** - Understanding of research ethics (Active)
- **Criterion:** 100% participated in the TTU RCR program or took a professional ethics course (VPR)
- **Schedule:** Yearly

**Student Exit Survey** - Membership or participation in professional organizations (Active)
- **Criterion:** 100% of graduating students are members of professional organizations
- **Schedule:** Yearly
| Student Exit Survey - Membership or participation in student organizations (Active) |
| Criterion: 50% participate in TTU graduate student organizations |
| Schedule: Yearly |