Assessment: Assessment Plan

TEXAS TECH UNIVERSITY
Office *of the* Provost
Office *of* Planning & Assessment

Degree Program - ENG - Chemical Engineering (PHD)

CIP Code: 14.0701.00

Degree Program Coordinator: Gerri Botte
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Program Purpose Statement: The Graduate Program (PhD) in Texas Tech?s Department of Chemical Engineering is dynamic and internationally visible. The purpose of the PhD program is to graduate very high quality PhD students who can think independently on a research topic and carry out research supported by federal, state and industrially funded research in diverse fields such as polymers and soft matter, complex fluids,bioengineering, computational chemical engineering, biofuels, process system engineering, and nano-science and engineering . 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: Jeff Rammage
Modality: Face-to-Face

Student Learning Outcome: Program Outcome PhD 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

Student Transcript Evaluation - Mastery of ChE core concepts in coursework

(Active)

Criterion: All students pass required core curriculum with GPA of 3.0 or higher.
Schedule: Annually

Instructor Course Evaluation - Mastery of ChE core concepts in coursework (Active)

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.
Schedule: Annually

Instructor Course Evaluation - Ability to use computational and modeling tools to solve ChE problems (Active)

Criterion: Learning outcomes associated with computational and modeling tools in core courses ChE 5310 and 5323 are met according to the instructor self-evaluation of the courses.
Schedule: Annually

Student Learning Outcome: Program Outcome PhD 2

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Graduates are able to perform state-of-the-art research and use literature to creatively solve problems.

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

Assessment Methods

Portfolio Review - Performance in dissertation research (Active)

Criterion: Students publish at least four refereed journal articles from their dissertation research and at least three first-author publications (Web of Science)
Schedule: Annually

Student Exit Survey - Placement of students (Active)

Criterion: 100% of students are placed within six months of graduation
Schedule: Yearly

Student Learning Outcome: Program Outcome PhD 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 graduating students presented their work at regional or national meetings
Schedule: Yearly

Student Exit Survey - Student awards for research (Active)

Criterion: 40% of the graduating students received local or national awards for presentations
Schedule: Yearly

Student Learning Outcome: Program Outcome PhD 4

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

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 (EHS)
Schedule: Yearly

Student Projects - Understanding of research ethics (Active)

Criterion: 100% completed TTU RCR training or took a professional ethics course (VPR)

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Schedule: Yearly

Student Exit Survey - Membership or participation in professional and student organizations (Active)

Criterion: 100% of graduating students are members of professional organizations
Schedule: Yearly