Mission / Purpose
The chemical and biological engineering program at The University of Alabama derives its education and scientific purpose from its responsibilities to and relationship with the citizens of Alabama and the international community of chemical engineering professionals. Our mission is to provide the technical workforce and expertise needed by the chemical and related industries. This mission is fulfilled through three visions, which are: To provide students with a multidisciplinary undergraduate/graduate education of the highest standard of excellence, recognized by both industry and the national academic community, enabling them to perform to their maximum potential in a technologically-based and environmentally-sensitive society; and to sustain an international position of leadership in dynamic scientific and technological research that is engaged by students and faculty and that is focused on global issues of significance to the interests of Alabama; and to contribute to the economic and technical well being of the state and nation through innovative educational, professional, and informational service. Program Objectives: To sustain a nationally-accredited undergraduate program, internationally-recognized research and a graduate program focused on doctoral level achievements. To attain leadership in innovative educational and research areas that recognized the diversity of Alabama’s human and natural resources. To place all graduates in meaningful, challenging and rewarding careers that impact the strength of the technological and industrial base. To provide outreach activities for those within Alabama and the nation who can benefit from the unique educational and professional opportunities offered by our program.

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

SLO 4: Highly proficient
To be highly proficient in content knowledge of their chosen area of specialty.

Connected Documents
chemical engineering PhD Curriculum Map I
chemical engineering PhD Curriculum Map II

Related Measures
M 1: Criterion based grading
Criterion based grading for the core graduate ChE classes
Source of Evidence: Academic direct measure of learning - other

M 2: Prospectus exam
Pass/Fail outcome of the prospectus exam
Source of Evidence: Academic direct measure of learning - other

SLO 5: Solve complex problems
To be able to apply knowledge to solve complex problems above the MS level (think critically and have the ability to analyze and synthesize data), and to communicate their results clearly and concisely

Connected Documents
chemical engineering PhD Curriculum Map I
chemical engineering PhD Curriculum Map II

Related Measures
M 3: Qualifying exam
Pass/Fail outcome of the Qualifying exam
Source of Evidence: Academic direct measure of learning - other

M 4: Department seminar.
Delivery of a satisfactory department seminar.
Source of Evidence: Academic direct measure of learning - other

SLO 6: State-of-the-art research
To perform independent, state-of-the-art research on problems of practical application or theoretical relevance

Connected Documents
chemical engineering PhD Curriculum Map I
chemical engineering PhD Curriculum Map II

Related Measures
M 5: Final Oral Examination
Pass/Fail outcome of the Final Oral Examination
Source of Evidence: Academic direct measure of learning - other

M 6: Peer reviewed publications
Number of peer reviewed publications and presentations at scientific meetings. Inclusion of those publications in the dissertation.
Source of Evidence: Academic direct measure of learning - other
| OthOtcm 1: Program Quality | The program will improve and sustain a high level of recognized quality. |
| OthOtcm 2: Program Optimum Enrollment | The program will build and sustain an optimal level of annual program enrollments and degree completions |
| OthOtcm 3: Program Highly Valued | The program will be highly valued by its program graduates and other key constituencies it serves. |
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Connected Documents
chemical engineering PhD Curriculum Map I
chemical engineering PhD Curriculum Map II

Related Measures

M 5: Final Oral Examination
Pass/Fail outcome of the Final Oral Examination
Source of Evidence: Academic direct measure of learning - other

M 6: Peer reviewed publications
Number of peer reviewed publications and presentations at scientific meetings.
Source of Evidence: Academic direct measure of learning - other

Other Outcomes, with Any Associations and Related Measures, Targets, Findings, and Action Plans

OthOtcn 1: Program Quality
The program will improve and sustain a high level of recognized quality.

OthOtcn 2: Program Optimum Enrollment
The program will build and sustain an optimal level of annual program enrollments and degree completions

OthOtcn 3: Program Highly Valued
The program will be highly valued by its program graduates and other key constituencies it serves.

OthOtcn 5: Solve complex problems
To be able to apply knowledge to solve complex problems above the MS level (think critically and have the ability to analyze and synthesize data), and to communicate their results clearly and concisely

Connected Documents
chemical engineering PhD Curriculum Map I
chemical engineering PhD Curriculum Map II

Related Measures
M 3: **Qualifying exam**
Pass/Fail outcome of the Qualifying exam
Source of Evidence: Academic direct measure of learning - other

M 4: **Department seminar.**
Delivery of a satisfactory department seminar.
Source of Evidence: Academic direct measure of learning - other
Detailed Assessment Report
2011-2012 Chemical Engineering Ph.D
As of: 7/15/2014 03:34 PM CENTRAL

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

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chemical engineering PhD Curriculum Map I
chemical engineering PhD Curriculum Map II

Related Measures
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Criterion based grading for the core graduate ChE classes
Source of Evidence: Academic direct measure of learning - other

M 2: Prospectus exam
Pass/Fail outcome of the prospectus exam
Source of Evidence: Academic direct measure of learning - other

SLO 2: Solve complex problems
To be able to apply knowledge to solve complex problems (think critically and have the ability to analyze and synthesize data), and to communicate their results clearly and concisely

Connected Documents
chemical engineering PhD Curriculum Map I
chemical engineering PhD Curriculum Map II

Related Measures
M 3: Qualifying exam
Pass/Fail outcome of the Qualifying exam
Source of Evidence: Academic direct measure of learning - other

M 4: Department seminar.
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Related Measures
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Pass/Fail outcome of the Final Oral Examination
Source of Evidence: Academic direct measure of learning - other

M 6: Peer reviewed publications
Number of peer reviewed publications and presentations at scientific meetings.
Source of Evidence: Academic direct measure of learning - other
## Curriculum Map 1 (Student Learning Outcomes)

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<thead>
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<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
<th>Required Experience</th>
<th>Common Experience</th>
<th>Required Task</th>
<th>Qualifying exam</th>
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<th>Activity 2</th>
<th>Activity 3</th>
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### Student Learning Outcomes
- **Student Learning Outcome 1**: Proficiency in area of specialty
- **Student Learning Outcome 2**: Critical thinking and Communication
- **Student Learning Outcome 3**: Independent research
- **Student Learning Outcome 4**: 
- **Student Learning Outcome 5**: 
- **Student Learning Outcome n**: 

### Activity Outcomes
- **Activity 1**: Prospectus
- **Activity 2**: Peer reviewed Publications
- **Activity 3**: Presentations at professional symposia
- **Activity 4**: Dissertation Defense
## Curriculum Map II (Assessment Measures)

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<th>Student Learning Outcome 2</th>
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