

## 2016-2017 Assessment Cycle (College of Engineering) ENGR\_Chemical Engineering BS

### Mission

Welcome to the "Mission" tab. First, review the University's Mission, Values, and Vision statements provided below. Then, in the section labeled "Department / Program Mission", type in the current mission for your department, program, or unit. Click "Save" when you are finished.

#### University Mission

The University of Louisiana at Lafayette offers an exceptional education informed by diverse worldviews grounded in tradition, heritage, and culture. We develop leaders and innovators who advance knowledge, cultivate aesthetic sensibility, and improve the human condition.

#### University Values

We strive to create a community of leaders and innovators in an environment that fosters a desire to advance and disseminate knowledge. We support the mission of the university by actualizing our core values of equity, integrity, intellectual curiosity, creativity, tradition, transparency, respect, collaboration, pluralism, and sustainability.

#### University Vision

We strive to be included in the top 25% of our peer institutions by 2020, improving our national and international status and recognition.

#### Program Mission

##### Program Mission

*If applicable, provide the program's mission in the space provided. If none exists, write "None Available in 2016-2017".*

The mission of the Chemical Engineering program at the University of Louisiana at Lafayette is to provide highly qualified graduates who are well trained for industry, graduate or professional schools, and academia.

### Goals (University/Program tied to Curriculum)

#### Standards/Outcomes

Identifier	Description
ABET-	CRITERION: Program Outcomes and Assessment Although institutions may use different terminology, for purposes of Criterion 3, program

<b>EAC.1.3</b>	outcomes are intended to be statements that describe what students are expected to know or be able to do by the time of graduation from the program.
<b>ABET-EAC.1.3.1</b>	> an ability to apply knowledge of mathematics, science, and engineering
<b>ABET-EAC.1.3.10</b>	> a knowledge of contemporary issues
<b>ABET-EAC.1.3.11</b>	> an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
<b>ABET-EAC.1.3.12</b>	Each program must have an assessment process with documented results. Evidence must be given that the results are applied to the further development and improvement of the program. The assessment process must demonstrate that the outcomes of the program, including those listed above, are being measured.
<b>ABET-EAC.1.3.2</b>	> an ability to design and conduct experiments, as well as to analyze and interpret data
<b>ABET-EAC.1.3.3</b>	> an ability to design a system, component, or process to meet desired needs
<b>ABET-EAC.1.3.4</b>	> an ability to function on multi-disciplinary teams
<b>ABET-EAC.1.3.5</b>	> an ability to identify, formulate, and solve engineering problems
<b>ABET-EAC.1.3.6</b>	> an understanding of professional and ethical responsibility
<b>ABET-EAC.1.3.7</b>	> an ability to communicate effectively
<b>ABET-EAC.1.3.8</b>	> the broad education necessary to understand the impact of engineering solutions in a global and societal context
<b>ABET-EAC.1.3.9</b>	> a recognition of the need for, and an ability to engage in life-long learning

## Curriculum Map

### Assessment Findings for the Assessment Measure level for Chemical Engineering

Legend	A - Assessed
Course/Event	Course Embedded Assessment

Standard/Outcome	ABET-EAC.1.3.1 > an ability to apply knowledge of mathematics, science, and engineering				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Direct - Course assessment (Other)	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 201, 317, 400, 401, 405, 407, 420; Spring: CHEE 302, 310, 408, 413, 427; Other: CHEE 210, ENGR 301, 305. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met	Results from assessment instruments were collected from each faculty member teaching the respective course. All these scores were added and the overall % was compared with the 70% departmental metric, which was met for all outcomes (see attached Excel sheet). Some examples of assessment forms are attached. Faculty members proposed improvements to specific courses ranging from providing more clear instructions during testing to bring speakers from industry to provide seminars and lectures.	CHEE_400_F2016_Course_Assessment_Form_Section_1.xlsx CHEE_201__Fall_2016_Direct_Assessment_Form.docx CHEE_408__Spring_2016_Direct_Assessment_Form.docx Assessment_Results_for_SACS.xlsx	- Pedagogical Change : Faculty members proposed improvements to specific courses ranging from providing more clear instructions during testing to bring speakers from industry to provide seminars and lectures. This improvements obtained from the course assessments were complemented with the senior exit interviews, and meetings between students and industrial advisory board.

Legend	A - Assessed				
Course/Event	Course Embedded Assessment				
Standard/Outcome	ABET-EAC.1.3.10 > a knowledge of contemporary issues				
Assessment Measures	<b>Assessment</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the</b>	<b>Improvement</b>

Measure			Assessments	Narratives
Direct - Course assessment (Other)	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 403; Spring: CHEE 404, 408. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met	Metrics proposed by faculty members teaching the courses and the overall departmental metric was met. Some of the improvements proposed include a different evaluation of group work to enhance accountability of each group member. Techniques were discussed to improve the quality of technical presentations. CHEE 408 no includes specific lectures on process economics and online ASPEN videos.	CHEE_403__Fall_2016_ABET_Assessment_Form.docx CHEE_408__Spring_2016_Direct_Assessment_Form.docx	- Assessment Process: Continuous monitoring: See objective 1.

Legend	A - Assessed				
Course/Event	Course Embedded Assessment				
Standard/Outcome	ABET-EAC.1.3.11 > an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Direct - Course assessment (Other)	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 317, 400, 401, 405, 407, 420; Spring: CHEE 302, 408, 413, 427; Other: CHEE 210. As a department	Attached is the course assessment of CHEE 407- Chemical Engineering Plan Design. All faculty metrics were met in all assessment instruments. This course is refined every semester with new projects, and strategies to improve group dynamics.	CHEE_407__Fall_2016_Direct_Assessment_Form.docx	- Assessment Process: Continuous monitoring: See objective 1.

		we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met			
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Legend	A - Assessed				
Course/Event	Course Embedded Assessment				
Standard/Outcome	ABET-EAC.1.3.2 > an ability to design and conduct experiments, as well as to analyze and interpret data				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Direct - Course assessment (Other)	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 403; Spring: CHEE 404, 413. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met	As discussed before for CHEE 403, all metrics were met.		

Legend	A - Assessed				
Course/Event	Course Embedded Assessment				
Standard/Outcome	ABET-EAC.1.3.3 > an ability to design a system, component, or process to meet desired needs				
Assessment					

Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
		Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 201, 401, 405, 407, 420; Spring: CHEE 310, 408; Other: ENGR 301, ENGR 305. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met	An example for course CHEE 405 is included as an example for meeting metrics established by the instructor. The students designed a heat exchanger to meet process needs.	Course_Assessment_Form_CHEE405_SP2016.xlsx	- Assessment Process: Continuous monitoring: See objective 1.

Legend	A - Assessed				
Course/Event	Course Embedded Assessment				
Standard/Outcome	ABET-EAC.1.3.4 > an ability to function on multi-disciplinary teams				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Direct - Course assessment (Other)	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 317, 403, 405; Spring: CHEE 404, 427; Other: ENGR 305. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the	CHEE 317 offers one of the best opportunities to test the ability to function on multi-disciplinary teams. The course is a requirement for students in mechanical, petroleum, and chemical engineering programs. The instructor noted no necessary improvements.	CHEE_317_FA_16.xlsx	

		courses. been met yet? Met			
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Legend	A - Assessed				
Course/Event	Course Embedded Assessment				
Standard/Outcome	ABET-EAC.1.3.5 > an ability to identify, formulate, and solve engineering problems				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Indirect - Course assessment (Other)	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 201, 317, 400, 401, 405, 407, 420; Spring: CHEE 302, 310, 408, 413, 427; Other: ENGR 301, 305. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met	Overall metrics were met for this objective. In the attached examples the instructor noted the need to emphasize specific course material for the next time the courses are offered (CHEE 420, and CHEE 201)	Course_Assessment_Form.revised.13Jan19.xlsx	- Assessment Process: Continuous monitoring: See objective 1.

Legend	A - Assessed				
Course/Event	Course Embedded Assessment				
Standard/Outcome	ABET-EAC.1.3.6 > an understanding of professional and ethical responsibility				
Assessment					

Measures	Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
	Direct - Project	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 403, 407; Spring: CHEE 404, 408; Other: CHEE 307. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met	A course on safety, ethics, and environment was developed to better comply with this objective. Now the course is required of all students in the chemical engineering program. There were issues with the necessary skills students needed to complete meaningful projects related to safety in the chemical process industry. The issue was addressed by changing the pre-requirements for the course. These new pre-requirements will be included in the Fall 2018 Student Bulletin. Other courses also evaluate professional and ethical responsibility, including the unit operation labs, and capstone design courses.	CHEE_307__Spring_2016_Direct_Assessment_Form.docx	- Policy / Process / Procedural: New requirements for CHEE 307 will be implemented starting with the Fall 2018 Student Bulletin.

Legend	A - Assessed				
Course/Event	Course Embedded Assessment				
Standard/Outcome	ABET-EAC.1.3.7 > an ability to communicate effectively				
Assessment Measures	Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives



	Direct - Course assessment (Other)	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 317, 403, 405, 407; Spring: CHEE 404, 408, 413, 427. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met	Students are evaluated on effective communication in CHEE 403, CHEE 404, CHEE 407, and CHEE 408. Assessment forms for these courses were attached previously. Students are judged on different technical aspects, including communication, by a panel of experts during the final presentations of CHEE 407 and CHEE 408.		- Assessment Process: Continuous monitoring: See objective 1.
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Legend	A - Assessed														
Course/Event	Course Embedded Assessment														
Standard/Outcome	ABET-EAC.1.3.8 > the broad education necessary to understand the impact of engineering solutions in a global and societal context														
Assessment Measures	<table border="1"> <thead> <tr> <th data-bbox="338 1047 562 1144">Assessment Measure</th> <th data-bbox="562 1047 1144 1144">Criterion</th> <th data-bbox="1144 1047 1522 1144">Summary</th> <th data-bbox="1522 1047 1753 1144">Attachments of the Assessments</th> <th data-bbox="1753 1047 2003 1144">Improvement Narratives</th> </tr> </thead> <tbody> <tr> <td data-bbox="338 1144 562 1461">Direct - Course assessment (Other)</td> <td data-bbox="562 1144 1144 1461">Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 400, 407; Spring: CHEE 408. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met</td> <td data-bbox="1144 1144 1522 1461">Capstone design courses, such as CHEE 407 and CHEE 408, clearly shows students the impact of effective chemical process design in society. Assessment forms were attached previously.</td> <td data-bbox="1522 1144 1753 1461"></td> <td data-bbox="1753 1144 2003 1461">- Assessment Process: Continuous monitoring: See objective 1.</td> </tr> </tbody> </table>					Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives	Direct - Course assessment (Other)	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 400, 407; Spring: CHEE 408. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met	Capstone design courses, such as CHEE 407 and CHEE 408, clearly shows students the impact of effective chemical process design in society. Assessment forms were attached previously.		- Assessment Process: Continuous monitoring: See objective 1.
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives											
Direct - Course assessment (Other)	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 400, 407; Spring: CHEE 408. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met	Capstone design courses, such as CHEE 407 and CHEE 408, clearly shows students the impact of effective chemical process design in society. Assessment forms were attached previously.		- Assessment Process: Continuous monitoring: See objective 1.											

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Legend	A - Assessed				
Course/Event	Course Embedded Assessment				
Standard/Outcome	ABET-EAC.1.3.9 > a recognition of the need for, and an ability to engage in life-long learning				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Direct - Course assessment (Other)	Has the criterion Questions are embedded in final and course exams, homeworks, and projects relevant to specific outcomes (all defined by faculty). Courses in which assessments take place are Fall: CHEE 403, 407; Spring: CHEE 404, 408. As a department we will meet a 70% cumulative score from all the assessment outcomes defined within the courses. been met yet? Met	Capstone design courses show students the need to continuously improve engineering skills.		- Assessment Process: Continuous monitoring: See objective 1.

Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.1 > an ability to apply knowledge of mathematics, science, and engineering				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>

	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scoores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the Senior Exit Interview form will be used to compute this average Fall: CHEE 201, 317, 400, 401, 405, 407, 420; Spring: CHEE 302, 310, 408, 413, 427; Other: CHEE 210, ENGR 301, 305. As a department we expect to score an average of 3 out of 5 on the survey for these courses listed here. been met yet? Met			- Pedagogical Change : Results of exit interviews are used to better assign faculty to specific courses.
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Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.10 > a knowledge of contemporary issues				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scoores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the Senior Exit Interview form will be used to compute this average Fall: CHEE 403; Spring: CHEE 404, 408. As a department we expect to score an average of 3 out of 5 on the survey for these courses listed here. been met yet? Met			- Assessment Process: Continuous monitoring:

Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.11 > an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the Senior Exit Interview form will be used to compute this average Fall: CHEE 317, 400, 401, 405, 407, 420; Spring: CHEE 302, 408, 413, 427; Other: CHEE 210. As a department we expect to score an average of 3 out of 5 on the survey for these courses listed here. been met yet? Met			- Assessment Process: Continuous monitoring:

Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.2 > an ability to design and conduct experiments, as well as to analyze and interpret data				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the Senior Exit Interview form will be used to compute this average Fall: CHEE 403; Spring: CHEE 404, 413. As a department we expect to score an average of 3 out of 5 on the survey for these			- Assessment Process: Continuous monitoring:

		courses listed here. been met yet? Met			
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Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.3 > an ability to design a system, component, or process to meet desired needs				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scocores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the Senior Exit Interview form will be used to compute this average Fall: CHEE 201, 401, 405, 407, 420; Spring: CHEE 310, 408; Other: ENGR 301, ENGR 305. As a department we expect to score an average of 3 out of 5 on the survey for these courses listed here. been met yet? Met			- Assessment Process: Continuous monitoring:

Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.4 > an ability to function on multi-disciplinary teams				
Assessment Measures	<b>Assessment</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of</b>	<b>Improvement Narratives</b>

	<b>Measure</b>			<b>the Assessments</b>	
	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scoores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the Senior Exit Interview form will be used to compute this average Fall: CHEE 317, 403, 405; Spring: CHEE 404, 427; Other: ENGR 305. As a department we expect to score an average of 3 out of 5 on the survey for these courses listed here. been met yet? Met			- Assessment Process: Continuous monitoring: Exit interviews with students provide feedback on how to better evaluate group work, making individual students accountable.

Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.5 > an ability to identify, formulate, and solve engineering problems				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scoores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the Senior Exit Interview form will be used to compute this average Fall: CHEE 201, 317, 400, 401, 405, 407, 420; Spring: CHEE 302, 310, 408, 413, 427; Other: ENGR 301, 305. As a department we expect to score an average of 3 out of 5 on the survey for these courses listed here. been met yet? Met			- Assessment Process: Continuous monitoring:

Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.6 > an understanding of professional and ethical responsibility				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the Senior Exit Interview form will be used to compute this average Fall: CHEE 407; Spring: CHEE 408. As a department we expect to score an average of 3 out of 5 on the survey for these courses listed here. been met yet? Met			- Assessment Process: Continuous monitoring: We insure students understand the courses and experiences in the program that stress ethical responsibility.

Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.7 > an ability to communicate effectively				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the			- Assessment Process: Continuous

		Senior Exit Interview form will be used to compute this average Fall: CHEE 317, 403, 405, 407; Spring: CHEE 404, 408, 413, 427. As a department we expect to score an average of 3 out of 5 on the survey for these courses listed here. been met yet? Met			monitoring:
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Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.8 > the broad education necessary to understand the impact of engineering solutions in a global and societal context				
Assessment Measures	<b>Assessment Measure</b>	<b>Criterion</b>	<b>Summary</b>	<b>Attachments of the Assessments</b>	<b>Improvement Narratives</b>
	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the Senior Exit Interview form will be used to compute this average Fall: CHEE 400, 407; Spring: CHEE 408. As a department we expect to score an average of 3 out of 5 on the survey for these courses listed here. been met yet? Met			- Assessment Process: Continuous monitoring:

Legend	A - Assessed				
Course/Event	Senior Exit Interviews				
Standard/Outcome	ABET-EAC.1.3.9 > a recognition of the need for, and an ability to engage in life-long learning				
Assessment					



Measures	Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
	Indirect - Exit Interviews	Has the criterion Students complete the Senior Exit Interview and their scores are averaged to give a cumulative score for a year. Survey scores from the following courses listed on the Senior Exit Interview form will be used to compute this average Fall: CHEE 403, 407; Spring: CHEE 404, 408. As a department we expect to score an average of 3 out of 5 on the survey for these courses listed here. been met yet? Met			

## Summary of Improvement Narratives

### Improvement Narrative List

#### Assessment Findings for the Assessment Measure level

Standard/Outcome	ABET-EAC.1.3.1 > an ability to apply knowledge of mathematics, science, and engineering
Legend	A
Course/Event	Course Embedded Assessment
Assessment Measure	Direct - Course assessment (Other)
Assessment Findings	Met
Improvement Narrative	

	<b>Improvement Type</b>	<b>Summary</b>
	Pedagogical Change	Faculty members proposed improvements to specific courses ranging from providing more clear instructions during testing to bring speakers from industry to provide seminars and lectures. This improvements obtained from the course assessments were complemented with the senior exit interviews, and meetings between students and industrial advisory board.

Standard/Outcome	ABET-EAC.1.3.10 > a knowledge of contemporary issues					
Legend	A					
Course/Event	Course Embedded Assessment					
Assessment Measure	Direct - Course assessment (Other)					
Assessment Findings	Met					
Improvement Narrative	<table border="1"> <thead> <tr> <th>Improvement Type</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>Assessment Process: Continuous monitoring</td> <td>See objective 1.</td> </tr> </tbody> </table>		Improvement Type	Summary	Assessment Process: Continuous monitoring	See objective 1.
Improvement Type	Summary					
Assessment Process: Continuous monitoring	See objective 1.					

Standard/Outcome	ABET-EAC.1.3.11 > an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.					
Legend	A					
Course/Event	Course Embedded Assessment					
Assessment Measure	Direct - Course assessment (Other)					
Assessment Findings	Met					
Improvement Narrative	<table border="1"> <thead> <tr> <th>Improvement Type</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>Assessment Process: Continuous monitoring</td> <td>See objective 1.</td> </tr> </tbody> </table>		Improvement Type	Summary	Assessment Process: Continuous monitoring	See objective 1.
Improvement Type	Summary					
Assessment Process: Continuous monitoring	See objective 1.					

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Standard/Outcome	ABET-EAC.1.3.3 > an ability to design a system, component, or process to meet desired needs	
Legend	A	
Course/Event	Course Embedded Assessment	
Assessment Measure		
Assessment Findings	Met	
Improvement Narrative		
	<b>Improvement Type</b>	<b>Summary</b>
	Assessment Process: Continuous monitoring	See objective 1.

Standard/Outcome	ABET-EAC.1.3.5 > an ability to identify, formulate, and solve engineering problems	
Legend	A	
Course/Event	Course Embedded Assessment	
Assessment Measure	Indirect - Course assessment (Other)	
Assessment Findings	Met	
Improvement Narrative		
	<b>Improvement Type</b>	<b>Summary</b>
	Assessment Process: Continuous monitoring	See objective 1.

Standard/Outcome	ABET-EAC.1.3.6 > an understanding of professional and ethical responsibility	
Legend	A	

Course/Event	Course Embedded Assessment	
Assessment Measure	Direct - Project	
Assessment Findings	Met	
Improvement Narrative		
	<b>Improvement Type</b>	<b>Summary</b>
	Policy / Process / Procedural	New requirements for CHEE 307 will be implemented starting with the Fall 2018 Student Bulletin.

Standard/Outcome	ABET-EAC.1.3.7 > an ability to communicate effectively	
Legend	A	
Course/Event	Course Embedded Assessment	
Assessment Measure	Direct - Course assessment (Other)	
Assessment Findings	Met	
Improvement Narrative		
	<b>Improvement Type</b>	<b>Summary</b>
	Assessment Process: Continuous monitoring	See objective 1.

Standard/Outcome	ABET-EAC.1.3.8 > the broad education necessary to understand the impact of engineering solutions in a global and societal context	
Legend	A	
Course/Event	Course Embedded Assessment	
Assessment Measure	Direct - Course assessment (Other)	
Assessment Findings	Met	
Improvement Narrative		
	<b>Improvement Type</b>	<b>Summary</b>

	Assessment Process: Continuous monitoring	See objective 1.
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Standard/Outcome	ABET-EAC.1.3.9 > a recognition of the need for, and an ability to engage in life-long learning					
Legend	A					
Course/Event	Course Embedded Assessment					
Assessment Measure	Direct - Course assessment (Other)					
Assessment Findings	Met					
Improvement Narrative	<table border="1"> <thead> <tr> <th>Improvement Type</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>Assessment Process: Continuous monitoring</td> <td>See objective 1.</td> </tr> </tbody> </table>		Improvement Type	Summary	Assessment Process: Continuous monitoring	See objective 1.
Improvement Type	Summary					
Assessment Process: Continuous monitoring	See objective 1.					

Standard/Outcome	ABET-EAC.1.3.1 > an ability to apply knowledge of mathematics, science, and engineering					
Legend	A					
Course/Event	Senior Exit Interviews					
Assessment Measure	Indirect - Exit Interviews					
Assessment Findings	Met					
Improvement Narrative	<table border="1"> <thead> <tr> <th>Improvement Type</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>Pedagogical Change</td> <td>Results of exit interviews are used to better assign faculty to specific courses.</td> </tr> </tbody> </table>		Improvement Type	Summary	Pedagogical Change	Results of exit interviews are used to better assign faculty to specific courses.
Improvement Type	Summary					
Pedagogical Change	Results of exit interviews are used to better assign faculty to specific courses.					

Standard/Outcome	ABET-EAC.1.3.10 > a knowledge of contemporary issues	
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Legend	A					
Course/Event	Senior Exit Interviews					
Assessment Measure	Indirect - Exit Interviews					
Assessment Findings	Met					
Improvement Narrative	<table border="1"> <thead> <tr> <th>Improvement Type</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>Assessment Process: Continuous monitoring</td> <td></td> </tr> </tbody> </table>		Improvement Type	Summary	Assessment Process: Continuous monitoring	
Improvement Type	Summary					
Assessment Process: Continuous monitoring						

Standard/Outcome	ABET-EAC.1.3.11 > an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.					
Legend	A					
Course/Event	Senior Exit Interviews					
Assessment Measure	Indirect - Exit Interviews					
Assessment Findings	Met					
Improvement Narrative	<table border="1"> <thead> <tr> <th>Improvement Type</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>Assessment Process: Continuous monitoring</td> <td></td> </tr> </tbody> </table>		Improvement Type	Summary	Assessment Process: Continuous monitoring	
Improvement Type	Summary					
Assessment Process: Continuous monitoring						

Standard/Outcome	ABET-EAC.1.3.2 > an ability to design and conduct experiments, as well as to analyze and interpret data	
Legend	A	
Course/Event	Senior Exit Interviews	
Assessment Measure	Indirect - Exit Interviews	
Assessment Findings	Met	

Improvement Narrative		
	<b>Improvement Type</b>	<b>Summary</b>
	Assessment Process: Continuous monitoring	

Standard/Outcome	ABET-EAC.1.3.3 > an ability to design a system, component, or process to meet desired needs	
Legend	A	
Course/Event	Senior Exit Interviews	
Assessment Measure	Indirect - Exit Interviews	
Assessment Findings	Met	
Improvement Narrative		
	<b>Improvement Type</b>	<b>Summary</b>
	Assessment Process: Continuous monitoring	

Standard/Outcome	ABET-EAC.1.3.4 > an ability to function on multi-disciplinary teams	
Legend	A	
Course/Event	Senior Exit Interviews	
Assessment Measure	Indirect - Exit Interviews	
Assessment Findings	Met	
Improvement Narrative		
	<b>Improvement Type</b>	<b>Summary</b>
	Assessment Process: Continuous	Exit interviews with students provide feedback on how to better evaluate group work, making

	monitoring	individual students accountable.
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Standard/Outcome	ABET-EAC.1.3.5 > an ability to identify, formulate, and solve engineering problems					
Legend	A					
Course/Event	Senior Exit Interviews					
Assessment Measure	Indirect - Exit Interviews					
Assessment Findings	Met					
Improvement Narrative	<table border="1"> <thead> <tr> <th>Improvement Type</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>Assessment Process: Continuous monitoring</td> <td></td> </tr> </tbody> </table>		Improvement Type	Summary	Assessment Process: Continuous monitoring	
Improvement Type	Summary					
Assessment Process: Continuous monitoring						

Standard/Outcome	ABET-EAC.1.3.6 > an understanding of professional and ethical responsibility					
Legend	A					
Course/Event	Senior Exit Interviews					
Assessment Measure	Indirect - Exit Interviews					
Assessment Findings	Met					
Improvement Narrative	<table border="1"> <thead> <tr> <th>Improvement Type</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>Assessment Process: Continuous monitoring</td> <td>We insure students understand the courses and experiences in the program that stress ethical responsibility.</td> </tr> </tbody> </table>		Improvement Type	Summary	Assessment Process: Continuous monitoring	We insure students understand the courses and experiences in the program that stress ethical responsibility.
Improvement Type	Summary					
Assessment Process: Continuous monitoring	We insure students understand the courses and experiences in the program that stress ethical responsibility.					



Standard/Outcome	ABET-EAC.1.3.7 > an ability to communicate effectively					
Legend	A					
Course/Event	Senior Exit Interviews					
Assessment Measure	Indirect - Exit Interviews					
Assessment Findings	Met					
Improvement Narrative	<table border="1"> <thead> <tr> <th>Improvement Type</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>Assessment Process: Continuous monitoring</td> <td></td> </tr> </tbody> </table>		Improvement Type	Summary	Assessment Process: Continuous monitoring	
Improvement Type	Summary					
Assessment Process: Continuous monitoring						

Standard/Outcome	ABET-EAC.1.3.8 > the broad education necessary to understand the impact of engineering solutions in a global and societal context					
Legend	A					
Course/Event	Senior Exit Interviews					
Assessment Measure	Indirect - Exit Interviews					
Assessment Findings	Met					
Improvement Narrative	<table border="1"> <thead> <tr> <th>Improvement Type</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>Assessment Process: Continuous monitoring</td> <td></td> </tr> </tbody> </table>		Improvement Type	Summary	Assessment Process: Continuous monitoring	
Improvement Type	Summary					
Assessment Process: Continuous monitoring						

Standard/Outcome	ABET-EAC.1.3.9 > a recognition of the need for, and an ability to engage in life-long learning	
Legend	A	
Course/Event	Senior Exit Interviews	
Assessment	Indirect - Exit Interviews	

Measure		
Assessment Findings	Met	
Improvement Narrative		
	<b>Improvement Type</b>	<b>Summary</b>
	Assessment Process: Continuous monitoring	These interviews are an excellent opportunity to stress to the graduates the importance of life-long learning, and provide feedback about how companies view and value well trained employees.

## Reflection

### Reflection

#### 1) How were assessment results shared in the unit?

*Please select all that apply; if "other", please use the text box to elaborate.*

Distributed via email (selected)

Presented formally at staff/department/committee meeting (selected)

Discussed informally

Other (explain in text box below)

Assessment results submitted by email and discussed in faculty, and advisory board meetings. Faculty provides comments for improvement and implementation plans. These improvement are continuously monitored using course assessment forms and student exit interviews.

#### 2) How frequently were assessment results shared in the unit?

Frequently (>4 times per cycle)

Periodically (2-4 times per cycle) (selected)

Once per cycle

Results were not shared this cycle

**3) With whom were assessment results shared?**

*Please select all that apply.*

Department Head (selected)

Dean / Asst. or Assoc. Dean (selected)

Departmental assessment committee

Other faculty / staff (selected)

Other (please explain in text box below)

**4) What were the measurable or perceivable effects on your current (2016-2017) findings based on prior action plans (created in 2015-2016)?**

The current action plan is more proactive in the implementation of program and course changes.

**5) What has the unit learned from the current assessment cycle?**

We have learned to better assess course requirements, the importance of interacting closely with industry and stress to students the specific objective of course activities and assessment instruments. Additionally, individual course assessments have provided faculty with a tool to measure course metrics, and implement changes based on metrics. As a faculty we discuss all course metrics, assessment instruments, and proposed changes. As a faculty we have a methodology to monitor changes, and assess impacts and improvement of metrics.