

2016-2017 Assessment Cycle (College of Engineering) ENGR_Systems Engineering PhD

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".

Systems Engineering is geared toward the rapid design and development of large and complex systems. Systems Engineering integrates all the specialty and sub-specialty groups of engineering disciplines into a team whose efforts result in a structured development process that proceeds from concept to production to operation. Example systems include coastal ecosystems, water treatment facilities, computer networks, visualization platforms, deep-water drilling operations, highway safety systems, biofuels production facilities, robotic units, refineries, fiber optic networks, aircraft, vehicle control systems, biomass gasification units, management of utilities during disaster events, and power grids. Each of the five engineering departments at UL Lafayette participates in the offering of the Systems Engineering Ph.D. degree with a discipline concentration within each department. This innovative program builds upon the research-based learning experience associated with most Engineering Ph.D. programs by adding the additional learned skill set of Systems Engineering principals. The graduate of this program is expected to be highly appealing to both industry and academic positions.

Goals (University/Program tied to Curriculum)

Standards/Outcomes

Identifier	Description
ABET-EAC.1.3	CRITERION: Program Outcomes and Assessment Although institutions may use different terminology, for purposes of Criterion 3, program 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.
ABET-EAC.1.3.1	> an ability to apply knowledge of mathematics, science, and engineering
ABET-EAC.1.3.10	> a knowledge of contemporary issues
ABET-EAC.1.3.11	> an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
ABET-EAC.1.3.12	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.
ABET-EAC.1.3.2	> an ability to design and conduct experiments, as well as to analyze and interpret data
ABET-EAC.1.3.3	> an ability to design a system, component, or process to meet desired needs
ABET-EAC.1.3.4	> an ability to function on multi-disciplinary teams
ABET-EAC.1.3.5	> an ability to identify, formulate, and solve engineering problems
ABET-EAC.1.3.6	> an understanding of professional and ethical responsibility
ABET-EAC.1.3.7	> an ability to communicate effectively
ABET-EAC.1.3.8	> the broad education necessary to understand the impact of engineering solutions in a global and societal context
ABET-EAC.1.3.9	> a recognition of the need for, and an ability to engage in life-long learning

Additional Standards/Outcomes

Identifier	Description

PhD Engineering.1	An ability to demonstrate breadth of knowledge across the general field of engineering.
PhD Engineering.2	An ability to demonstrate depth of knowledge in an area of specialization beyond the level of a B.S. degree in engineering.
PhD Engineering.3	An ability to demonstrate competence in solving practical problems in the field of engineering.

Curriculum Map

Assessment Findings for the Assessment Measure level for Systems Engineering PhD

Legend	A - Assessed				
Course/Event	Oral Exam				
Standard/Outcome	PhD Engineering.1 An ability to demonstrate breadth of knowledge across the general field of engineering.				
Assessment Measures	Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
	Direct - Presentation	Has the criterion 80% of students will achieve a score of 3 or better on their oral exam using a standard rubric. been met yet? Met	Eight students were assessed. All achieved a score of 3.0 or better. The average was 4.2.		

Legend	A - Assessed				
Course/Event	Oral Exam				
Standard/Outcome	PhD Engineering.2 An ability to demonstrate depth of knowledge in an area of specialization beyond the level of a B.S. degree in engineering.				
Assessment Measures	Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives

	Direct - Presentation	Has the criterion 80% of students will achieve a score of 3 or better on their oral exam using a standard rubric. been met yet? Met	Eight students were assessed. All achieved a score of 3.0 or better. The average was 4.4.		
--	-----------------------	--	---	--	--

Legend	A - Assessed				
Course/Event	Oral Exam				
Standard/Outcome	PhD Engineering.3 An ability to demonstrate competence in solving practical problems in the field of engineering.				
Assessment Measures	Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
	Direct - Presentation	Has the criterion 80% of students will achieve a score of 3 or better on their oral exam using a standard rubric. been met yet? Met	Eight students were assessed. All achieved a score of 3.0 or better. The average was 3.8.		

Legend	A - Assessed				
Course/Event	Thesis / Report				
Standard/Outcome	PhD Engineering.1 An ability to demonstrate breadth of knowledge across the general field of engineering.				
Assessment Measures	Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives

	Direct - Report (Other)	Has the criterion 80% of students will achieve a score of 3 or better on their oral exam using a standard rubric. been met yet? Met	Eight students were assessed. All achieved a score of 3.0 or better. The average was 4.3.		- Policy / Process / Procedural: Raised admission standards to require a GRE Verbal ≥ 145 and Total (V+Q) score total ≥ 294 .
--	-------------------------	--	---	--	--

Legend	A - Assessed				
Course/Event	Thesis / Report				
Standard/Outcome	PhD Engineering.2 An ability to demonstrate depth of knowledge in an area of specialization beyond the level of a B.S. degree in engineering.				
Assessment Measures	Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
	Direct - Report (Other)	Has the criterion 80% of students will achieve a score of 3 or better on their oral exam using a standard rubric. been met yet? Met	Eight students were assessed. All achieved a score of 3.0 or better. The average was 4.4.		

Legend	A - Assessed				
Course/Event	Thesis / Report				
Standard/Outcome	PhD Engineering.3 An ability to demonstrate competence in solving practical problems in the field of engineering.				
Assessment Measures	Assessment	Criterion	Summary	Attachments of	Improvement Narratives

Measure			the Assessments	
Direct - Report (Other)	Has the criterion 80% of students will achieve a score of 3 or better on their oral exam using a standard rubric. been met yet? Met	Eight students were assessed. All achieved a score of 3.0 or better. The average was 4.0.		- Assessment Process: Continuous monitoring: We will continue to monitor the quality of the dissertations and determine whether changes are needed.

Summary of Improvement Narratives

Improvement Narrative List

Assessment Findings for the Assessment Measure level

Standard/Outcome	PhD Engineering.1 An ability to demonstrate breadth of knowledge across the general field of engineering.						
Legend	A						
Course/Event	Thesis / Report						
Assessment Measure	Direct - Report (Other)						
Assessment Findings	Met						
Improvement Narrative	<table border="1" data-bbox="405 1209 1940 1295"> <thead> <tr> <th data-bbox="405 1209 772 1250">Improvement Type</th> <th data-bbox="772 1209 1940 1250">Summary</th> </tr> </thead> <tbody> <tr> <td data-bbox="405 1250 772 1295">Policy / Process / Procedural</td> <td data-bbox="772 1250 1940 1295">Raised admission standards to require a GRE Verbal ≥ 145 and Total (V+Q) score total ≥ 294.</td> </tr> </tbody> </table>			Improvement Type	Summary	Policy / Process / Procedural	Raised admission standards to require a GRE Verbal ≥ 145 and Total (V+Q) score total ≥ 294 .
Improvement Type	Summary						
Policy / Process / Procedural	Raised admission standards to require a GRE Verbal ≥ 145 and Total (V+Q) score total ≥ 294 .						

Standard/Outcome	PhD Engineering.3 An ability to demonstrate competence in solving practical problems in the field of engineering.		
Legend	A		

Course/Event	Thesis / Report	
Assessment Measure	Direct - Report (Other)	
Assessment Findings	Met	
Improvement Narrative		
	Improvement Type	Summary
	Assessment Process: Continuous monitoring	We will continue to monitor the quality of the dissertations and determine whether changes are needed.

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

Discussed informally (selected)

Other (explain in text box below)

Graduate coordinators were informed of policy changes via email and also in informal meetings and communications.

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

Frequently (>4 times per cycle)

Periodically (2-4 times per cycle)

Once per cycle (selected)

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

Other (please explain in text box below) (selected)

Graduate Coordinators were also informed.

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

We continue to work as a team to build a strong PhD program in systems engineering. In this assessment cycle, we believed that the quality of the dissertation prepared by the students has improved. The number of students enrolled in our program also increased. The communication between our faculty and students improved significantly, and this is one area that works well. We do not see anything as "working less well" .

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

The quality of the program has improved as a result of teamwork among the faculty who serve as PhD advisers and committee members.