

University of Louisiana at Lafayette

Detailed Assessment Report 2015-2016 Mechanical Engineering MS

As of: 11/18/2016 10:51 AM CENTRAL

(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request.*)

Mission / Purpose

Our mission is to provide quality education and meaningful career opportunities for mechanical engineering graduates of the University of Louisiana at Lafayette. We develop highly qualified graduates with potential to assume engineering positions of increasing responsibility in industry, or to pursue higher learning in the form of graduate studies;

We facilitate relevant research and development activities for faculty for economic and professional development, faculty proficiency, and feedback to the instructional program;

We provide services to the College of Engineering, the University, and the Community in which this University resides.

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

SLO 1: General Engineering Knowledge

An ability to demonstrate breadth of knowledge across the general field of engineering.

Related Measures

M 1: Oral Defense

Each student is required to either write a thesis or do a project. In either case, an oral defense is required. The committee asks probing questions in order to evaluate the student's breadth of knowledge, depth of knowledge, ability to solve practical problems, and ability to enter and succeed in a Ph.D. program. The student's performance on each outcome is rated on a scale of 1 - 5, with 5 being the best score.

Source of Evidence: Presentation, either individual or group

Target:

The average score for all students will be 3.0 or higher.

Finding (2015-2016) - Target: Met

5 graduating graduate students were evaluated during this assessment cycle. 100% of students were evaluated to have achieved a score of 3 or better using the departmental rubric.

Related Action Plans (by Established cycle, then alpha):

Improve Data Collection Process

It was discovered that the data collection process was flawed, and that not all students were being evaluated. A new data collection process will be established and supervised by the Graduate Coordinator, to insure that the data is collected in a timely manner.

Established in Cycle: 2014-2015

Implementation Status: Finished

Priority: High

Relationships (Measure | Outcome/Objective):

Measure: Evaluation of Final Exam | **Outcome/Objective:** Demonstration of Specialized Knowledge
 | General Engineering Knowledge | Potential of PhD Success | Practical Problem Solving Skills
Measure: Evaluation of Thesis or Report Document | **Outcome/Objective:** Demonstration of Specialized Knowledge
 | Potential of PhD Success | Practical Problem Solving Skills
Measure: Oral Defense | **Outcome/Objective:** Demonstration of Specialized Knowledge
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Implementation Description: A new graduate coordinator was appointed, Dr. Taylor. A Microsoft SharePoint survey was set up to collect the assessment data. This method resulted in a much higher rate of participation by the faculty in the assessment of the students. This action item will be closed.

Projected Completion Date: 09/2016

Responsible Person/Group: Dr. Taylor.

Additional Resources: None.

Review and Revise Assessment Procedures

On 9/30/2016, the faculty met to review the assessment data for the 2015 - 2016 assessment cycle. It was decided to conduct a general review of the MS program outcomes, instruments, targets, and procedures. This will take place during the 2016 - 2017 assessment cycle.

Established in Cycle: 2015-2016

Implementation Status: In-Progress

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Responsible Person/Group: Chambers, Taylor, McInerney

M 3: Evaluation of Final Exam

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Source of Evidence: Academic direct measure of learning - other

Target:

The average score for all students will be 3.0 or higher.

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Responsible Person/Group: Chambers, Taylor, McInerney

SLO 2: Demonstration of Specialized Knowledge

An ability to demonstrate depth of knowledge in an area of specialization beyond the level of a B.S. degree in engineering.

Related Measures

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SLO 3: Practical Problem Solving Skills

An ability to demonstrate competence in solving practical problems in the field of engineering.

Related Measures**M 1: Oral Defense**

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Responsible Person/Group: Chambers, Taylor, McInerney

SLO 4: Potential of PhD Success

An ability to demonstrate readiness to enter and succeed in an engineering PhD program.

Related Measures

M 1: Oral Defense

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| General Engineering Knowledge | Potential of PhD Success |
Practical Problem Solving Skills

Implementation Description: A new graduate coordinator was appointed, Dr. Taylor. A Microsoft SharePoint survey was set up to collect the assessment data. This method resulted in a much higher rate of participation by the faculty in the assessment of the students. This action item will be closed.

Projected Completion Date: 09/2016

Responsible Person/Group: Dr. Taylor.

Additional Resources: None.

Review and Revise Assessment Procedures

On 9/30/2016, the faculty met to review the assessment data for the 2015 - 2016 assessment cycle. It was decided to conduct a general review of

the MS program outcomes, instruments, targets, and procedures. This will take place during the 2016 - 2017 assessment cycle.

Established in Cycle: 2015-2016

Implementation Status: In-Progress

Priority: High

Relationships (Measure | Outcome/Objective):

Measure: Evaluation of Final Exam | **Outcome/Objective:** Demonstration of Specialized Knowledge | General Engineering Knowledge | Potential of PhD Success | Practical Problem Solving Skills

Measure: Evaluation of Thesis or Report Document | **Outcome/Objective:** Demonstration of Specialized Knowledge | Potential of PhD Success | Practical Problem Solving Skills

Measure: Oral Defense | **Outcome/Objective:** Demonstration of Specialized Knowledge | General Engineering Knowledge | Potential of PhD Success | Practical Problem Solving Skills

Projected Completion Date: 09/2017

Responsible Person/Group: Chambers, Taylor, McInerney

Analysis Questions and Analysis Answers

How were assessment results shared and evaluated within the unit?

Assessment results and action plans were shared with the faculty via email. On 9/30/2016 a faculty meeting was held to discuss the findings and recommend action. One action item was closed and another was opened.

Identify which action plans [created in prior cycle(s)] were implemented in this current cycle. For each of these implemented plans, were there any measurable or perceivable effects? How, if at all, did the findings appear to be affected by the implemented action plan?

The action item to improve the data collection procedure was completed by creating a Microsoft SharePoint survey to collect faculty assessments of graduate student performance. This resulted in a significantly higher rate of response.

What has the unit learned from the current assessment cycle? What is working well, and what is working less well in achieving desired outcomes?

The department has observed that on the whole the graduate students are meeting our expectations. However, it was decided that it was time to conduct a general review of all assessment procedures at both the graduate and undergraduate levels. At the graduate level, the focus will be on reviewing the outcomes themselves to insure they are still relevant, and on reviewing the instruments for collecting assessment data. This will be accomplished during the 2016 - 2017 assessment cycle.