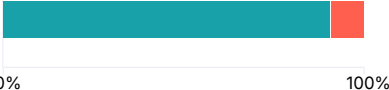



Academic year 2024-2025

ME-Chemical Engineering - ME-MECH Learning Outcomes

Application of Engineering, Science, and Mathematics Principles



Students will demonstrate an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

MEASURES	RESULTS	ACTIONS
Comprehensive Exam Proficiency Minimum acceptable is 3 out of 4 Direct - Exam (Course) Target 75% of students achieve the proficiency	MET Comprehensive Exam ■ Met ■ Not Met  0% 100% Met: 91% Not Met: 9% Met Total: 91% Not Met Total: 9% Analysis The results met the target for the SLO.	Maintain Assessment Strategy With passing scores, there are likely to be few if any paradigm shifts in how to present the SLO #1 related materials. It is necessary that the program maintain continuous improvement To that end, the following improvement steps are proposed: <ul style="list-style-type: none"> • Present findings to department faculty to ensure that all courses internally promote and evaluate students' abilities to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. • Evaluate where in the ME internal curriculum that more open-ended projects requiring the skills presented in SLO #1 can be incorporated. • Evaluate that classes taken externally to the department meet the demands of SLO #1 • Work with College of Engineering partners to ensure acceptable rigor related to SLO #1 across all disciplines associated with the shared degree.
Student Survey Proficiency = Minimum acceptable is 3 out of 4 Indirect - Survey Target 75% of students will achieve the proficiency	MET Student Survey ■ Met  0% 100% Values are not shown when too close to each other. Click or use arrow keys to see details. Met: 100% Met Total: 100% Not Met Total: Analysis The results met the target for the SLO.	Maintain Assessment Strategy With passing scores, there are likely to be few if any paradigm shifts in how to present the SLO #1 related materials. It is necessary that the program maintain continuous improvement To that end, the following improvement steps are proposed: <ul style="list-style-type: none"> • Present findings to department faculty to ensure that all courses internally promote and evaluate students' abilities to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. • Evaluate where in the ME internal curriculum that more open-ended projects requiring the skills presented in SLO #1 can be incorporated. • Evaluate that classes taken externally to the department meet the demands of SLO #1 • Work with College of Engineering partners to ensure acceptable rigor related to SLO #1 across all disciplines associated with the shared degree.

Engineering Design


Students will demonstrate an ability to apply engineering design to produce solutions appropriately.


MEASURES	RESULTS	ACTIONS
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<p>Comprehensive Exam</p> <p>Proficiency is 3 out of 4</p> <p>Direct - Exam (Course)</p> <p>Target</p> <p>75% of students will achieve the proficiency</p>	<p>MET</p> <p>Comprehensive Exam</p> <p>■ Met ■ Not Met</p>  <p>0% 100%</p> <p>Met: 91%</p> <p>Not Met: 9%</p> <p>Met Total: 91%</p> <p>Not Met Total: 9%</p> <p>Analysis</p> <p>The results met the target for the SLO.</p>	<p>Maintain Assessment Strategy</p> <p>It is necessary that the program maintain continuous improvement to increase the overall proficiency rates and overall PI scores for the SLO. To that end, the following improvement steps are proposed:</p> <ul style="list-style-type: none"> • Present findings to department faculty to ensure that all courses internally (required or elective) rigorously promote the ability to apply engineering design to produce solutions appropriately. • Ensure efforts are made to clearly identify faculty and department expectations as to good engineering design, linear solution development, and clear presentation of results in a meaningful manner. • Evaluate that classes taken externally to the department meet the demands associated with good engineering design. • Work with College of Engineering partners to ensure acceptable rigor related to SLO #2 across all disciplines associated with the shared degree.
<p>Student Survey</p> <p>Proficiency is a Minimum acceptable is 3 out of 4</p> <p>Indirect - Survey</p> <p>Target</p> <p>75% of students will achieve the proficiency</p>	<p>MET</p> <p>Student Survey</p> <p>■ Met</p>  <p>0% 100%</p> <p><i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i></p> <p>Met: 100%</p> <p>Met Total: 100%</p> <p>Not Met Total:</p> <p>Analysis</p> <p>The results met the target for the SLO.</p>	<p>Maintain Assessment Strategy</p> <p>It is necessary that the program maintain continuous improvement to increase the overall proficiency rates and overall PI scores for the SLO. To that end, the following improvement steps are proposed:</p> <ul style="list-style-type: none"> • Present findings to department faculty to ensure that all courses internally (required or elective) rigorously promote the ability to apply engineering design to produce solutions appropriately. • Ensure efforts are made to clearly identify faculty and department expectations as to good engineering design, linear solution development, and clear presentation of results in a meaningful manner. • Evaluate that classes taken externally to the department meet the demands associated with good engineering design. • Work with College of Engineering partners to ensure acceptable rigor related to SLO #2 across all disciplines associated with the shared degree.

Engineering Analysis

Students will demonstrate an ability to use modern engineering tools to produce engineering analysis in a systematic manner.

MEASURES	RESULTS	ACTIONS
<p>Comprehensive Exam</p> <p>Proficiency Minimum acceptable is 3 out of 4</p> <p>Direct - Exam (Course)</p> <p>Target</p>	<p>MET</p> <p>Comprehensive Exam</p> <p>■ Met</p>  <p>0% 100%</p>	<p>Maintain Assessment Strategy</p> <p>It is necessary that the program maintain continuous improvement to increase the overall proficiency rates and overall PI scores for the SLO. To that end, the following improvement steps are proposed:</p> <ul style="list-style-type: none"> • Present findings to department faculty to ensure that all courses internally (required or elective) rigorously promote the ability to

<p>75% of students achieve the proficiency mentioned above</p>	<p><i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i></p> <p>Met: 100%</p> <p>Met Total: 100%</p> <p>Not Met Total:</p> <p>Analysis</p> <p>The results met the target for the SLO.</p>	<p>apply engineering design to produce solutions appropriately.</p> <ul style="list-style-type: none"> • Provide clear language in the syllabi of internal courses as to the student learning outcomes and expectations associated. • Provide access and utilization of modern tools/techniques in internally offered courses to ensure effective student coverage. • Evaluate that classes taken externally to the department to see what modern tools and techniques are being used. If a course appears to not meet the needs of SLO #3, then internal coverage becomes even more critical. • Work with College of Engineering partners to ensure acceptable rigor related to SLO #3 across all disciplines associated with the shared degree.
<p>Student Survey</p> <p>Proficiency is a 3 out of 4 on rubric</p> <p>Indirect - Survey</p> <p>Target</p> <p>75% of students achieve the proficiency mentioned above</p>	<p>MET</p> <p>Student Survey</p> <p>■ Met</p>  <p>0% 100%</p> <p><i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i></p> <p>Met: 100%</p> <p>Met Total: 100%</p> <p>Not Met Total:</p> <p>Analysis</p> <p>The results met the target for the SLO.</p>	<p>Maintain Assessment Strategy</p> <p>It is necessary that the program maintain continuous improvement to increase the overall proficiency rates and overall PI scores for the SLO. To that end, the following improvement steps are proposed:</p> <ul style="list-style-type: none"> • Present findings to department faculty to ensure that all courses internally (required or elective) rigorously promote the ability to apply engineering design to produce solutions appropriately. • Provide clear language in the syllabi of internal courses as to the student learning outcomes and expectations associated. • Provide access and utilization of modern tools/techniques in internally offered courses to ensure effective student coverage. • Evaluate that classes taken externally to the department to see what modern tools and techniques are being used. If a course appears to not meet the needs of SLO #3, then internal coverage becomes even more critical. • Work with College of Engineering partners to ensure acceptable rigor related to SLO #3 across all disciplines associated with the shared degree.