

Academic Year 2025-2026

MES-Industrial Engineering - MES-MSIE Learning Outcomes

Solve complex engineering problems

An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. The following rubric is used in assessment.

MEASURES	RESULTS	ACTIONS
Thesis oral and written presentation Direct - Other Target 75% of students achieve a score of 3 or above on the attached rubrics. Three faculty members evaluate the rubrics. The attached rubric has a high standard and 3 is the anticipated score for a thesis student. Since not all student projects are the same for all outcomes, the faculty selected a 75% standard. outcome metrics IE Masters.docx	MET Thesis oral and written presentation ■ Exceeded  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Exceeded: 100% Met Total: 100% Not Met Total:	No actions have been added.
Number of Times Repeating Thesis Class Number of times that thesis course is required is a key measure of a students understanding of the outcomes learned in their coursework. Time required also measure time management and other characteristics. A problem with this metric would indicate a major issue with the program that would trigger a wide investigation of the issue. Indirect - Other Thesis: ENGR 5391 Target Students should only take thesis course 2 semesters (thesis 1 and thesis 2). Students who require more than 2 semesters are having significant problems with one or more outcomes. Since thesis is research, requiring more than 2 semesters of thesis can occur on good projects. 50% of students should complete in two semesters. The 50% level is based on most projects being scoped to be completed in 2 semester and understanding that a few thesis projects might require additional time.	MET Number of Times Repeating Thesis Class ■ Exceeded ■ Not Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Exceeded: 70% Not Met: 30% Met Total: 70% Not Met Total: 30% Analysis Only 30% required more than two semesters of thesis work.	No actions have been added.

Apply engineering design

An ability to apply engineering design to produce solutions appropriately. The following rubric is used in assessment.

MEASURES	RESULTS	ACTIONS
Thesis oral and written presentation Direct - Other Target 75% of students achieve a score of 3 or above on the attached rubrics. Three faculty members evaluate the rubrics. The attached rubric has a high standard and 3 is the anticipated score for a thesis student. Since not all student projects are the same for all outcomes, the faculty selected a 75% standard. outcome metrics IE Masters.docx	MET Thesis oral and written presentation ■ Exceeded  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Exceeded: 100% Met Total: 100% Not Met Total:	No actions have been added.
Number of Times Taking ENGR 5391 Number of times that thesis course is required is a key measure of a students understanding of the outcomes learned in their coursework. Time required also measure time management and other characteristics. A problem with this metric would indicate a major issue with the program that would trigger a wide investigation of the issue. Indirect - Other Thesis: ENGR 5391 Target Students should only take thesis course 2 semesters (thesis 1 and thesis 2). Students who require more than 2 semesters are having significant problems with one or more outcomes. Since thesis is research, requiring more than 2 semesters of thesis can occur on good projects. 50% of students should complete in two semesters. The 50% level is based on most projects being scoped to be completed in 2 semester and understanding that a few thesis projects might require additional time.	MET Number of Times Taking ENGR 5391 ■ Exceeded ■ Not Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Exceeded: 70% Not Met: 30% Met Total: 70% Not Met Total: 30% Analysis Only 30% required more than two semesters of thesis work.	No actions have been added.

Use modern engineering tools

An ability to use modern engineering tools to produce engineering analysis in a systematic manner. The following rubric is used in assessment.

MEASURES	RESULTS	ACTIONS
Thesis oral and written presentation. Direct - Presentation	MET Thesis oral and written presentation. ■ Exceeded	No actions have been added.

Target 75% of students achieve a score of 3 or above on the attached rubrics. Three faculty members evaluate the rubrics. The attached rubric has a high standard and 3 is the anticipated score for a thesis student. Since not all student projects are the same for all outcomes, the faculty selected a 75% standard. outcome metrics IE Masters.docx	 0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Exceeded: 100% Met Total: 100% Not Met Total:	
Number of Times Repeating Thesis Class Number of times that thesis course is required is a key measure of a students understanding of the outcomes learned in their coursework. Time required also measure time management and other characteristics. A problem with this metric would indicate a major issue with the program that would trigger a wide investigation of the issue. Indirect - Other Thesis: ENGR 5391 Target Students should only take thesis course 2 semesters (thesis 1 and thesis 2). Students who require more than 2 semesters are having significant problems with one or more outcomes. Since thesis is research, requiring more than 2 semesters of thesis can occur on good projects. 50% of students should complete in two semesters. The 50% level is based on most projects being scoped to be completed in 2 semester and understanding that a few thesis projects might require additional time.	Number of Times Repeating Thesis Class ■ Exceeded ■ Not Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Exceeded: 70% Not Met: 30% Met Total: 70% Not Met Total: 30% Analysis Only 30% required more than two semesters of thesis work.	No actions have been added.