Academic year 2024-2025

MEM-Industrial Engineering - MEM-MEMG Learning Outcomes

Science

An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

MEASURES	RESULTS	ACTIONS
Comprehensive Exam The comprehensive exam is given to all students before they graduate. Direct - Exam (Course) **Target** 75% of students should pass the comprehensive test on one attempt. The exam covers common interview questions in engineering management. The exam is closed book and closed notes and covers a wide range of topics with free responses. It is graded on a pass fail basis by one faculty member. The exam is a summary of all the material covered in the degree. The standard of 75% was set based on being an open ended exam without a study guide.	**MET** Comprehensive Exam ■ Met ■ Approached 0% 100% Met: 95% Approached: 5% Met Total: 95% Not Met Total: 5% **Analysis** The students were able to answer in written format standard engineering management interview questions.	*No actions have been added.*
Class Project for INEN 5301 Entrepreneurship The class project for INEN 5301 Entrepreneurship is used to assess student performance. Direct - Assignment **Target** 75% of students achieve 3 or above on the attached rubrics. The rubric sets a high standards, so the faculty set the performance goal of 75% in the top 2 categories. The 3rd category is also acceptable performance for passing the class. Masters of Engineering Management SACS Report.docx	**NOT MET** Class Project for INEN 5301 Entrepreneurship ■ Exceeded ■ Met ■ Approached 0% 100% Exceeded: 11% Met: 56% Approached: 33% Met Total: 67% Not Met Total: 33% **Analysis** The class project for Entrepreneurship was selected for this assessment.	*No actions have been added.*

Engineering Design

An ability to apply engineering design to produce solutions appropriately.

MEASURES	RESULTS	ACTIONS

Comprehensive Exam

The comprehensive exam is given to all students before they graduate. It is case study questions similar to short questions in a job interview. The exam covers design topics related to engineering management.

Direct - Exam (Course)

Target

75% of students should pass the comprehensive test on one attempt. The exam covers common interview questions in engineering management. The exam is closed book and closed notes and covers a wide range of topics with free responses. It is graded on a pass-fail basis by one faculty member. The exam is a summary of all the material covered in the degree. The standard of 75% was set based on being an open-ended exam without a study guide.

MET

Comprehensive Exam

■ Met ■ Approached

0%	100%

Met:	95%
Approached:	5%
Met Total:	95%
Not Met Total:	5%

Analysis

The pass rate on the exam met our standards. No significant issues were identified.

No actions have been added.

Design Project Entrepreneurship Course

Design Project Entrepreneurship Course.

Direct - Assignment

Engineering Management: INEN 5369

Target

75% of students achieve a score of 3 or above on the attached rubrics. Three faculty members evaluate the rubrics. A total of 20 students are used in the assessment. The 75% target is set based on the standards of the rubric that are relatively high. The rubric results are converted to a final score by taking an average across all elements and rounding down.

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NOT MET

Design Project Entrepreneurship Course

■ Met ■ Approached

0%	100%

Met:	67%
Approached:	33%
Met Total:	67%
Not Met Total:	33%

Analysis

The projects did not meet our standard for Engineering Design. The projects were too focused on economic analysis and marketing to meet this engineering outcome.

Gather Additional Data

IN PROGRESS

INEN 5345 CIM will be used in future semesters. This courses focuses on traditional engineering design.

Systems Thinking

An ability to use modern engineering tools to produce engineering analysis in a systematic manner.

MEASURES	RESULTS	ACTIONS
Comprehensive Exam The comprehensive exam is given to all students before they graduate. It is case	**MET** Comprehensive Exam ■ Met ■ Approached	*No actions have been added.*

study questions similar to short questions in a job interview.

Direct - Exam (Course)

Target

75% of students should pass the comprehensive test on one attempt. The exam covers common interview questions in engineering management. The exam is closed book and closed notes and covers a wide range of topics with free responses. It is graded on a pass-fail basis by one faculty member. The exam is a summary of all the material covered in the degree. The standard of 75% was set based on being an open-ended exam without a study guide.

0%	100%

Met: 95%
Approached: 5%

Met Total: 95%
Not Met Total: 5%

Analysis

The students were able to answer in written format standard engineering management interview questions.

Class project

Design Project Entrepreneurship Course.

Direct - Assignment

Engineering Management: INEN 5369

Target

75% of students achieve a score of 3 or above on the attached rubrics. Three faculty members evaluate the rubrics. A total of 20 students are used in the assessment. The 75% target is set based on the standards of the rubric that are relatively high. The rubric results are converted to a final score by taking an average across all elements and rounding down.

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NOT MET

Class project
■ Met ■ Approached

0%	100%

Met: 44%
Approached: 56%

Met Total: 44%
Not Met Total: 56%

Analysis

The project assessed did not cover system design as a focus. The primary topic in the course was economic analysis and marketing.

Revise Measurement / Assessment

COMPLETE

Return to assessing INEN 5345 for SACS outcomes.

Recommended Due Date: 06/18/2025

MEM-Industrial Engineering - MEM-MEMG Success Outcomes

Employment NOT MET

Percentage of students who find employment 3 months after graduation.

MEASURES	RESULTS	ACTIONS
Employment Estimate A LinkedIn search is used to estimate the percentage of students with employment. This analysis has 3 major limitations: 1. Students might not update their Linked in profile after finding a job. 2. Not all students have LinkedIn profiles. Students who can not be located on LinkedIn are excluded.	**NOT MET** **Analysis** The percentage of students without jobs based on LinkedIn profile was 13 of 29 (44%). The performance in Fall 2025 was 9 of 13 not finding jobs. In the prior semesters, 4 of 12 did not find jobs. This result might be due to a weaking job market for our graduates who are mostly	**Other - [Pe]** COMPLETE Include "Personal branding" as part of department orientation and several courses (required programming course and PIC). We need to get the students excited about building their brands. A side effect is marketing our brand to their networks. This short training could include some of the

Direct - Counts

Target

70% of students based on a LinkedIn search have employment.

international students. Note, this result is based on a LinkedIn search that will underestimate true performance, since students might not update their LinkedIn profile after finding jobs. Note, 23 students have LinkedIn profiles that could be located and were excluded from the analysis. Discussions with students and popular press also indicate a weaking job market.

following:
1. Professional social media (LinkedIn) - describing your growth at Lamar is a part of branding.
2. Research publications (important) - Very important signal on resumes today.
3. Use electives to build a brand - Do not just take the easiest course.
4. Quality resume
5. Technical skills for their target job
6. Branding strategy

Building a brand is important in a challenging global labor market.

Branding will also increase the percentage of students who use LinkedIn and make this measure more accurate.

Recommended Due Date: 06/29/2025

Other - [AI and Robotics Courses]

COMPLETE

The department will deploy teaching resources to support AI and robotics courses. These areas are important based on our advisory council feedback. The department has developed several AI and robotics course over the past 2 years. We will work on keeping them up to data and making sure our students have skills in these areas.

Recommended Due Date: 06/27/2025

Other - [Encourage Thesis]

COMPLETE

Students need to be able to present research project to companies to get hired. For most students, doing a thesis is the best way to develop a project that can be demonstrated to a company. The department will strongly encourage students to do thesis work instead of coursework option.

Recommended Due Date: 06/27/2025