

## Annual Academic Assessment Report

## Master of Science in Engineering Management (MSEM)

**Program Learning Outcomes:**

1. Apply the technical and soft skills required to lead and manage diverse and inclusive, complex global engineering activities involving processes, technology, and a technical workforce to support the organization's mission and vision.
2. Use technology to develop plans, management systems, and innovative products and services to create value that are agile, resilient, and sustainable.
3. Lead and manage multi-disciplinary, multi-cultural, geographically dispersed, agile teams, and projects.
4. Identify problems, analyze engineering alternatives, and design solutions considering financial, environmental, and societal impact for the public good.
5. Assess the financial implications of engineering programs.
6. Use techniques and models to support data-driven decision-making involving significant future uncertainties about technologies, environment, demand.
7. Assess legal, safety, regulatory, professional, and ethical organizational and individual responsibilities.
8. Communicate clearly and concisely, both orally and in writing, to stakeholders and senior decision-makers.

**Assessment and Evaluation: AY 24-25**

The MSEM program director and assistant directors assess data at least semiannually and as significant feedback is received.

Students are required to present evidence of achieving each program outcome. A total of 43 out of 43 students passed the comprehensive examination. Each outcome was analyzed, with the following results:

- **Outcome 1:**
  - 93% of students agreed or strongly agreed they mastered outcome 1.
  - No students failed outcome 1.
  - Program directors and advisors conducted exit interviews with graduates, incorporating feedback and discussing results. No students provided feedback on a lack of achieving outcome 1.

- **Outcome 2:**

- 88% of students agreed or strongly agreed they mastered outcome 2.
- No students failed outcome 2.
- Program directors and advisors conducted exit interviews with graduates, incorporating feedback and discussing results. No students provided feedback on a lack of achieving outcome 2.

- **Outcome 3:**

- 93% of students agreed or strongly agreed they mastered outcome 3.
- No students failed outcome 3.
- Program directors and advisors conducted exit interviews with graduates, incorporating feedback and discussing results. No students provided feedback on a lack of achieving outcome 3.

- **Outcome 4:**

- 93% of students agreed or strongly agreed they mastered outcome 4.
- No students failed outcome 4.
- Program directors and advisors conducted exit interviews with graduates, incorporating feedback and discussing results. No students provided feedback on a lack of achieving outcome 4.

- **Outcome 5:**

- 91% of students agreed or strongly agreed they mastered outcome 5.
- No students failed outcome 5.
- Program directors and advisors conducted exit interviews with graduates, incorporating feedback and discussing results. No students provided feedback on a lack of achieving outcome 5.

- **Outcome 6:**

- 88% of students agreed or strongly agreed they mastered outcome 6.
- No students failed outcome 6.
- Program directors and advisors conducted exit interviews with graduates, incorporating feedback and discussing results. No students provided feedback on a lack of achieving outcome 6.

- **Outcome 7:**

- 84% of students agreed or strongly agreed they mastered outcome 7.
- No student failed program outcome 7.
- Program directors and advisors conducted exit interviews with graduates, incorporating feedback and discussing results. No students provided feedback on a lack of achieving outcome 7.

- **Outcome 8:**

- 91% of students agreed or strongly agreed they mastered outcome 8.
- No student failed program outcome 8.
- Program directors and advisors conducted exit interviews with all graduates, incorporating feedback and discussing results. No students provided feedback on a lack of achieving outcome 8.

**Changes to the Degree Program – Planned or Considered**

At this time, no significant changes to the MSEM program are planned. When changes to an existing course and/or a new course is needed, the program employs a robust course rebuilding and new course development process. No MSEM courses were rebuilt or developed during this AY. The course rebuilding and development process validates course objectives and maps them to program outcomes.

While not a program change, changes were made to the instructions for the comp exam, based on the number of students who needed a second attempt to pass the exam (28%).

**Changes to the Assessment Process – Planned or Completed**

The use of student surveys, comprehensive examinations, faculty feedback on mapped course objectives, and exit interviews has been effective in providing both direct and indirect evidence that the assessment process is providing the information needed to evaluate the MSEM program. At this time, no significant changes are planned to the assessment process.