



Annual Assessment Report for Academic Programs

The University Assessment Team advocates for the enhancement of student learning through purposeful, meaningful, and feasible student-outcomes assessment practices. The Assessment Team seeks to collaborate with programs, departments, and units to ensure that effective assessment of student learning occurs across the University. To assist in meeting this goal, the Team requests that you complete this Annual Assessment Report form to document student learning in your program. A PDF version of this completed form will be posted to the Academic Affairs Assessment website. Please note that this Annual Assessment Report form should only be completed after you have an Assessment Plan for Academic Programs forms on file with the University Assessment Team. The plan is completed once and only updated when revisions have been made to components of the plan.

1. **Degree Level and Program Name:** Masters, Electrical and Computer Engineering (MECE)
2. **College/School:** College of Engineering & Science
3. **Assessment Overview** - Briefly share how student learning outcomes assessment is conducted within your program/department (e.g. number of outcomes, examples of assignments used, and frequency of assessment).

The program has three student learning outcomes and assesses two outcomes each year such that all outcomes are evaluated twice over a 3-year cycle. Outcomes 1 & 2 are assessed in this cycle.

4. **Student Learning Outcomes & Benchmarks** -Which student learning outcome(s) from the assessment plan filed with the University Assessment Team is/are being reported on in this report? Include the corresponding benchmark(s) for each outcome.

Outcome (1): Apply knowledge of advanced mathematics, science, and engineering principles to electrical engineering. For quantitative assessment methods, a score of 3.5/5 (i.e., 70%) or better is considered as having achieved the program outcome. For rubric-based assessment methods, students achieving a level of 3/4 (i.e., 75%) or better are considered to have performed satisfactorily. Homework problems and Research paper Implementation projects are used to assess this outcome in ELEE 5780 (Optimization and Optimal Control).

Outcome (2): Identify, formulate, and solve complex electrical engineering problems. For quantitative assessment methods, a score of 3.5/5 (i.e., 70%) or better is considered as having achieved the program outcome. For rubric-based assessment methods, students achieving a level of 3/4 (i.e., 75%) or better are considered to have performed satisfactorily. Final Project (ML application to EE problem), Assignments (Data analysis & ML implementation) and Final Exam (ML problem formulation & theory) are used to assess this outcome in ELEE5350 (Machine Learning)



5. **Institutional Outcomes** - For which institutional outcome(s) do the reported student learning outcome(s) align?

SLO Outcome Alignment	Institutional Outcome
	I. Jesuit & Mercy Values
	II. Diversity & Cultural Awareness
Yes	III. Critical Thinking & Problem Solving
	IV. Communication
	V. Professionalism
Yes	VI. Lifelong Learning

6. **Assessment Period:** Select the academic year for which you are reporting results (i.e. when data were collected):

2024-2025

7. **Program Assessment Results** -Briefly summarize the assessment results and how they relate to benchmark(s).

Outcome 1: Assessment is based on ELEE 5780 Optimization. Direct assessment measures include homework problems (average score 4.6/5) and a research implementation project (4/5), with an overall achievement of approximately 4.5/5, exceeding the benchmark of 3.5/5. Students demonstrated strong ability to apply advanced mathematics, science, and engineering principles.

Outcome 2: Assessment is based on ELEE 5350 Machine Learning. Direct assessment measures include final project (100% achievement), assignments (87.5%), and final exam (100%), all exceeding benchmark levels. Students demonstrated strong ability to identify, formulate, and solve complex electrical engineering problems using machine learning applied to real-world datasets.

8. **Planned Actions and/or Actions Taken in Response to Assessment Results** - Briefly summarize how you are using the assessment results to enhance student learning and improve program quality.

Outcome 1: For continuous improvement, additional optimization techniques will be introduced and students will be required to implement these techniques in future offerings.

Outcome 2: For continuous improvement, it is recommended that Python programming be introduced as a prerequisite or preparatory requirement to enhance student readiness and allow deeper focus on advanced machine learning concepts.