



(Due: June 1, 2023)

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I. Assessment of Student Learning Outcomes (SLOs) in this cycle. Including processes, results, and recommendations for improved student learning. Use Column H to describe improvements planned for 2023-2024 based on the assessment process.

A. Which of the program SLOs were assessed during this cycle? Please include the outcome(s) verbatim from the assessment plan.	B. When was this SLO <u>last</u> assessed? (semester and year)	C. What method was used for assessing the SLO? Please include a copy of any rubrics used in the assessment process.	D. Who was assessed? Please fully describe the student group(s) and the number of students or artifacts involved.	E. What is the expected achievement level and how many or what proportion of students should be at that level?	F. What were the results of the assessment? Include the proportion of students meeting proficiency.	G. What were the department's conclusions about student performance?	H. What changes/improvements to the <u>program</u> are planned based on this assessment?
Apply industrial engineering knowledge in facility design, operations planning, operations research, and simulation.	Fall 2022 and Spring 2023.	Methods: EN 571 Operations Research (Fall 2022), EN 575 Facilities Planning and Design (Fall 2022), and 577 Operations Planning and Control Spring 2023). Rubrics: Design Strategy,	In EN 571 seven (7) MSE graduate students were enrolled in Fall 2022. In EN 575, one (1) MSISE graduate student was enrolled in Fall 2022. In EN 577, six	80% or more of the students should meet or exceed expectations.	In the research project report composed of a literature review, a detailed review and the replication and expansion of a current topic on IE, 100% of the students in EN 571, EN 575, and EN 577 were able to demonstrate their knowledge on IE when dealing with current problems.	Since 100% of the students performed well; we conclude that the goal was met.	The course instructors continue to guide the students to focus on research problems related to contemporary issues by using both conferences and scholarly journals dealing with industrial and systems engineering.

		Solutions, and Tools.	(6) MSE students were enrolled.				
Apply engineering principles in the design and analysis of a system or process to meet specified needs.	Fall 2022.	Methods: EN 571 Operations Research (Fall 2022), EN 575 Facilities Planning and Design (Fall 2022). Rubrics: Design Strategy and Constraints and Variables.	In EN 571, seven (7) MSE graduate students were enrolled in Fall 2022. In EN 575, one (1) MSISE graduate student was enrolled in Fall 2022.	80% or more of the students should meet or exceed expectations.	100% of the students in EN 571 and EN 575 were able to understand and solve problems both in manufacturing and services industries by using optimization and programming.	All students (100%) performed well. We conclude that the goal was met.	Students continue to be offered problems from real applied research existing in the most recent literature presented in both conferences and scholarly journals dealing with industrial and systems engineering.
Communicate effectively in writing and orally.	Fall 2022 and Spring 2023.	Methods: Reports and Presentations in EN 520 (Spring 2022) and 593 (Fall 2022) Rubrics: <i>written:</i> Articulation, organization, neatness, grammar and spelling, writing style, document formatting	In EN 593, nine (9) MSE and one (1) MSISE graduate student were enrolled during the Fall 2022. In EN 520, two (2) MSISE and three (3) MSE graduate students were enrolled	80% or more of the students should meet or exceed expectations.	The students in EN 593 wrote literature reviews, academic critiques on thesis and dissertations, and did presentations each on a potential topic for his master thesis. A 100% of the students exceeded the expectation for this SLO. In EN 520, the students met the expectation for the research project presentations. The students in EN 520 wrote and	Since 100% of the students performed well we conclude that the goal was met. Instead of course specific student surveys in both EN 520 and EN 593, feedback through the grading method was given to the students.	Keep on encouraging students in the EN 593 Graduate Seminar and EN 520 Simulation Experiments to work and use proper referencing in their academics reports including research papers and thesis. Additionally, students were encouraged to use the Writing center for editing their works.

		<i>Oral:</i> Delivery, length and detail, mechanics, dialect, visual aides, appearance, and listening and response to questions.	during Spring 2023.		presented a research project composed of a literature review, a detailed analysis and the replication and expansion of a current problem on IE solved by using simulation.		
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Comments on part I: For this academic year (2022-2023) most of the MSISE students are 3+2 students. For this reason, the student learning outcome 3, Communicate effectively in writing and orally, was highlighted as a priority for assessment in the MSISE program. In particular, the main point was on performing literature review and using proper referencing when writing and presenting. In the most recent three assessment cycles, in collaboration with the Library and the Writing Center, the performance of the MSISE students has improved substantially. Most of the students have written master thesis and their articulation, organization, neatness, grammar and spelling, writing style, and document formatting exceed expectation.

II. Closing the Loop. Describe at least one data-informed change to your curriculum during the 2022-2023 cycle.

A. What SLO(s) did you address? Outcome(s) verbatim from assessment plan.	B. When was this SLO last assessed to generate the data which informed the change?	C. What were the recommendations for change from the previous assessment?	D. How were the recommendations for change acted upon?	E. What were the results of the changes? If the changes were not effective, what are the next steps or the new recommendations?
Communicate effectively in writing and orally.	Fall 2022 and Spring 2023	Stress the importance of proper referencing, articulation, organization, neatness, grammar and spelling, writing style, document formatting when writing academic reports.	Training sessions with the Library and the Writing Center on writing, proper referencing, and use of on campus databases for literature review.	All MSISE and MSE students are now writing their reports by following the IEEE style and referencing format. Additionally, through the library training, the MSISE and MSE students are capable of using software to prepare the references in their written reports.

Comments on part II: Since most of the master students in the MSISE program are international students who have some issues meeting expectations for the student learning outcome 3, Communicate effectively in writing and orally, for the last 5 years the department of engineering working jointly with the Library and the writing center has been providing workshops to all the master students on writing, using the academic resources and proper referencing.