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2021 Academic Program Assessment Report		Program current assessment plan here:	
Industrial and Systems Engineering MS		Program prior assessment report here:	

Report Completed By:	Leonardo Bedoya-Valencia
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Please describe this year's assessment activities and follow-up for your program below. (Separate sheet for each undergraduate major, stand-alone minor, certificate, and graduate program in your department.) Please also submit any addenda such as rubrics which are not available in your assessment plan. The reports will be available to the Dean of your college/school and to the Executive Director for Assessment as well as faculty peer reviewers.

Brief Statement of Program Mission and Goals:	

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 the year based on the assessment process.

A. Your program SLOs are pasted here verbatim from your assessment plan. Please enter info in columns B-H only for those assessed during this annual cycle.	B. When was this SLO last reported on prior to this cycle? (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 (N).	E. What is the expected proficiency 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 program are planned based on this assessment?
Apply industrial engineering knowledge in facility design, operations planning, operations research, and simulation	Fall 2019 and Spring 2020.	Methods: EN 571 Operations Research (Fall 2020), EN 575 Facilities Planning and Design (Fall 2020), and 577 Operations Planning and Control Spring 2021). Rubrics: Design Strategy, Solutions, and Tools.	In EN 571 Two (2) MSME graduate students were enrolled in Fall 2020. In EN 575 no students were enrolled. In EN 577, one (1) MSISE and one (1) MEME students were enrolled.	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 both EN 571 and EN 577 were able to demonstrate their knowledge on IE when dealing with current problems. No students in EN 575 were assessed.	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 the both conferences and scholarly journals dealing with industrial and systems engineering.
Apply engineering principles in the design and analysis of a system or process to meet specified needs,	Fall 2019.	Methods: EN 571 Operations Research (Fall 2020), EN 575 Facilities Planning and Design (Fall 2020. Rubrics: Design Strategy and Constraints and Variables.	In EN 571 Two (2) MSME graduate students were enrolled in Fall 2020. In EN 575 no students were enrolled.	80% or more of the students should meet or exceed expectations	100% of the students in EN 571 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 2019 and Spring 2020.	Methods: Reports and Presentations in EN 520 (Spring 2021) and 593 (Fall 2020) Rubrics: written: Articulation, organization, neatness, grammar and spelling, writing style, document formatting Oral: Delivery, length and detail, mechanics, dialect, visual aides, appearance, and listening and response to questions.	In EN 593, Two (2) MSME and Two (2) MSISE graduate student were enrolled during the Fall 2020. In EN 520, one MSISE student was enrolled during Spring 2021.	80% or more of the students should meet or exceed expectations	The students in EN 593 wrote literature reviews 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, one student met the expectation for the research project presentations. The student in EN 520 wrote and 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.	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. Additianllly, students were encouraged to use the Writing center for editing their works.

Comments on part I:	Since most of the MSISE students are international students, the student learning outcome 3, Communicate effectively in writing and orally, is a priority for assessment in the MSISE program. In the most recent two 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. 100% of the MSISE students included in the last two assessment cycles were accepted to continue on PhD programs.			

II. Closing the Loop. Describe at least one data-informed change to your curriculum during the year cycle. These are those that were based on, or implemented to address, the results of assessment from previous cycles.

A. What SLO(s) or other issues did you address in this cycle? Please include SLOs verbatim from the assessment plan, as above.	B. When was this SLO last assessed to generate the data which informed the change? Please indicate the semester and year.	C. What were the recommendations for change from the previous assessment column H and/or feedback?	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 2019	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 students are now writing their reports their reports by following the IEEE style and referencing format.

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.