Colorado State University PUEBLO

Academic Program Assessment Report for AY 2018-2019   **Program: MSISE**

(Due: May 1, 2019)   **Date report completed:** 07/12/2019

Completed by: Leonardo Bedoya-Valencia

Assessment contributors (other faculty involved): Ebisa Wollega

Please describe the 2018-2019 assessment activities and follow-up for your program below. Please complete this form for each undergraduate major, minor, certificate, and graduate program (e.g., B.A., B.S., M.S.) in your department. Please copy any addenda (e.g., rubrics) and paste them in this document, save and submit it to both the Dean of your college/school and to the Assistant Provost as an email attachment before May 1, 2019. You'll also find this form on the assessment website at https://www.csupueblo.edu/assessment-and-student-learning/resources.html. Thank you.

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 2018-2019 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 last 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 program are planned based on this assessment?
Apply industrial engineering knowledge in facility design, operations planning, operations research, and simulation	Spring 2019	**Methods**: EN 577 Operations Planning and Control Includes Design Strategy, Solutions, and Tools. **Rubrics**: Design	Three (3) MSISE graduate students were enrolled in Spring 2019.	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	Since 100% of the students performed well; we conclude that the goal was met.	The course instructor continues to guide the students to focus on research problems related to contemporary issues.

		Strategy, Solutions, and Tools			replication and expansion of a current topic on IE, 100% of the students in EN 577 were able to demonstrate their knowledge on IE when dealing with current problems.		
Apply industrial engineering knowledge in facility design, operations planning, operations research, and simulation	Fall 2018	**Methods**: EN 571 Operations Research Includes Design Strategy, Solutions, and Tools. **Rubrics**: Design Strategy, Solutions, and Tools	Four (4) MSISE graduate students were enrolled in Fall 2018.	80% or more of the students should meet or exceed expectations.	In the research project report composed of indentification of operation problems in complex systems, mathematical formulation of the problem, solving the problem using appropriate methods, and interpreting the solution in terms of the operational	Since 100% of the students performed well; we conclude that the goal was met.	The students will be encouraged to use the most recent mathematical programming tools.

					requirements, 100% of the students in EN 571 were able to demonstrate their knowledge on IE when dealing with complex systems operation.		
Apply engineering principles in the design and analysis of a system or process to meet specified needs	Fall 2018	**Methods:** EN 575 Facilities Planning and Design Research Project Reports. **Rubrics**: Design Strategy and Constraints and Variables	Three (3) MSISE students who were enrolled in Fall 2018	80% or more of the students should meet or exceed expectations	100% of the students in EN 575 were able to understand and solve facility layout 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 will be offered problems from real applied research existing in the most recent literature presented in the Institute of Industrial and Systems Engineeirng Annual Conference
Communicate effectively in writing and orally.	Fall 2018 Spring 2019	**Methods:** Reports and Presentations in EN 593 (Fall 2018) and Presentations Evaluation in EN 520 (Spring	Three (3) MSE and six (6) MSISE graduate student who were enrolled in EN 593	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	Since 100% of the students performed well we conclude that the goal was met. Instead of course specific student surveys in EN	Keep on encouraging students in the EN 593 Graduate Seminar to work and use proper referencing in their academics reports including research.

		2019). **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.	during the Fall 2018 and Four (4) MSISE graduate students who were enrolled in EN 520 during Spring 2019.		potential topic for his master thesis. A 100% of the students exceeded the expectation for this SLO. In EN 520, 4 out of 4 students met the expectation for the research project presentations. The four students 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.	593, feedback through the grading method was given to the student.	

Comments on part I:

II. Closing the Loop. Describe at least one data-informed change to your curriculum during the 2017-2018 cycle. These are those that were based on, or implemented to address, the results of assessment from previous cycles.

A. What SLO(s) did you address? **Please include the outcome(s) verbatim from the assessment plan.**	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?	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 2018	Stress the use of proper referencing when writing academic reports	Training sessions with the library on writing, proper referencing, and use of on campus databases for literature review	9 out of the 9 students in EN593 and 4 out 4 students in EN520 wrote their reports by following the IEEE referencing format.

Comments on part II: Most of the master students in both programs are international students who have some issues using proper referencing in their reports. For the last 5 years the department of engineering working jointly with the library and the writing center have been providing workshops to all the master students on writing, using the academic resources and proper referencing.