Annual Assessment Report 2023-2024

MS Systems Engineering

Department of Industrial & Manufacturing Engineering

College of Engineering

CONTACT
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DISCIPLINARY ACCREDITATION No

DEVELOPMENT AND DOCUMENTATION OF STUDENT LEARNING OUTCOMES
How were the program's SLOs developed? (select all that apply)
   o   We developed them as a program/department using our own knowledge and expertise of the field.

Other than the CPP Catalog and the Office of Assessment and Program Review website, where else are your SLOs published? Select all that apply.
- Published in alternative place. Please specify: MSSE Program Canvas Page Accessible by all MSSE students

ASSESSMENT ACTIVITIES IN 2023-2024

This section provides the opportunity for programs to share and discuss assessment activities conducted in **AY 2023-2024.** This includes data collection, rubric development, data analysis, discussion of findings, development or implementation of closing the loop improvement strategies, update of your assessment plan and/or curriculum matrix, etc.

How many total SLOs does your program assess according to your assessment plan?
- 4

How many SLOs did your program assess this past year in 2023-2024?

- My program assessed SLOs in AY 2023-2024 (e.g., artifact collection, scoring, closing the loop, etc.).

Please list the SLOs examined

- SLO #1: Diagnose and identify causes of system failure
- SLO #2: Develop proposals to prescribe solutions to system failure
- SLO #3: Critically evaluate the global, societal, and ethical impacts of system behavior
- SLO #4: Assess impact of new elements on existing systems

Student Learning Outcome (SLO): **Diagnose and identify causes of system failure**

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Thesis or dissertation (graduate-level only) (Direct)	• Used rubric or scoring guide

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
30	Percentage of results that were Satisfactory (options 1 and 2 in the rubric)	Yes	Students were successful in defining the problem at hand

Student Learning Outcome (SLO): **Develop proposals to prescribe solutions to system failure**

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Thesis or dissertation (graduate-level only) (Direct)	• Used rubric or scoring guide

Findings			
N of Artifacts	**Criterion Used**	**Goal Met**	**Eye-opening Result**
30	Percentage of results that were Satisfactory (options 1 and 2 for the two of the rubric questions)	Yes	Students were successful in developing and explaining their approach to addressing the problem at hand

Student Learning Outcome (SLO): **Critically evaluate the global, societal, and ethical impacts of system behavior**

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Thesis or dissertation (graduate-level only) (Direct)	• Used rubric or scoring guide
• Closing the loop (e.g., investigated other pressing issues related to SLO achievement, changed course sequence, etc.) Please explain: A one page instruction was developed explaining the implications of the criteria and how it should be applied in their master projects. This guideline is used for the first time in Fall 2024 in SE6950 course (Systems Engineering Project)		

Findings			
N of Artifacts	**Criterion Used**	**Goal Met**	**Eye-opening Result**
30	Percentage of results that were Satisfactory (options 1 and 2 for the one of the rubric questions)	No	Students had partial or no conversation about the impact that their problem and solution will have on global, economic, environmental, and societal factors

Student Learning Outcome (SLO): **Assess impact of new elements on existing systems**

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Thesis or dissertation (graduate-level only) (Direct)	• Used rubric or scoring guide

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
30	Percentage of results that were Satisfactory (options 1 and 2 for the two of the rubric questions)	Yes	This evaluation was not very straight forward

IMPROVING THROUGH ASSESSMENT

Overall, what best describes how the program used the results in 2023-2024? Select all that apply.
- Course-level changes (e.g., syllabus, content, pedagogy)

Ideas to improve student learning can come from different constituents. With whom did the program discuss assessment planning and/or share results during AY 2023-2024? Select all that apply.
- A committee of program/department faculty

The past academic year posed both challenges and opportunities. Please share any assessment discoveries (e.g., insights about assessment procedures, great achievements, etc.) regarding program assessment in 2023-2024 so that others may learn from your experiences.
I tried to make the process clearer and well-defined, easily available to all faculty

Please share how the program triangulates various data sources to determine student success. Consider assessment findings, CPP's GI2025 markers, CSU Dashboard, CPP's Student Success Dashboard on Tableau, CPP's Graduating Senior Survey on Tableau, course evaluations, etc.
I use the students course evaluations results as well as exit survey results.

Does the program offer a certificate or credential (e.g., teaching credential)?
- No

The most current assessment plan and curriculum matrix we have on file for your program may be found here. To ensure we have the most updated assessment plan and curriculum matrix for your program, and for posting on our website, please upload the following documents:

Assessment Plan - Yes

Curriculum Matrix - Yes

If you would like us to review other assessment documents such as your evidence (e.g., assignment, survey, interview questions etc.) or scoring rubric, please upload/provide them. (Select all that apply)
- Rubric