CAL POLY POMONA
ASSESSMENT & PROGRAM REVIEW

Annual Assessment Report 2023-2024

BS Industrial Engineering

Department of Industrial & Manufacturing Engineering

College of Engineering

CONTACT

Name of Program Assessment Lead Payam Parsa
Name of Person Completing Report Payam Parsa

DISCIPLINARY ACCREDITATION No

DEVELOPMENT AND DOCUMENTATION OF STUDENT LEARNING OUTCOMES

How were the program's SLOs developed? (select all that apply)

- Our disciplinary accrediting agency has required learning outcomes, so we use them.

Other than the CPP Catalog and the Office of Assessment and Program Review website, where else are your SLOs published? Select all that apply.

- Department Website - provide URL: https://www.cpp.edu/engineering/ime/undergraduate-programs/ie.shtml

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?

- 7

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

- My program engaged in other assessment activity not specific to any SLO (e.g., modified curriculum matrix or assessment plan, received all data for program review, etc.)

Please share the assessment activities the program engaged in that were not specific to any SLOs.

revised the assessment plan - revised and replaced assessment instruments in order to lift the excessive burden of assessment on the senior project reports and presentations - re-designed a new knowledge exam to be used as a direct assessment instrument - developed a new Engineering Ethics exam to be used as a direct assessment instrument - developed a new forecasting project to as a direct assessment instrument for SLO 6 - developed a new instrument for assessing teamwork directly from senior project teams - Revised the senior project guideline to directly assess students application of standards and constraints in the projects - Revised the senior project guideline to directly assess students application of standards and constraints in the project to directly assess students considerations of social, environmental, economic implications of engineering design

IMPROVING THROUGH ASSESSMENT

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.

- Program/department faculty as whole
- College assessment committee
- Advisory board(s): Industrial advisory board
- Other, please explain: Alumni

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.

In 2023-2024, several strategic improvements were made to the ABET assessment plan, yielding valuable insights for program assessment. Key changes included revising the overall assessment approach to reduce reliance on the senior project for evaluation and to incorporate more direct assessment methods. These enhancements included: New Direct Assessment Tools: A re-designed knowledge exam, an Engineering Ethics exam, and a forecasting project were introduced as direct assessment instruments, providing more specific measurements of student learning outcomes (SLOs) without overburdening the senior project. Targeted Teamwork Assessment: A dedicated instrument now assesses teamwork directly from senior project teams, focusing more accurately on this critical skill. Senior Project Guideline Enhancements: The senior project guidelines were revised to explicitly evaluate students' application of standards and constraints, as well as their awareness of social, environmental, and economic impacts in engineering design.

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.

Assessment Findings: Our ABET assessment process provides direct data on student learning outcomes, using tools such as knowledge exams, the Engineering Ethics exam, and the forecasting project, along with targeted evaluations within the senior project. These data points helped us monitor students' development of critical competencies throughout the program. Graduating Senior Survey: Using data from the CPP Graduating Senior Survey conducted by our department, we capture feedback on students' educational experiences and career readiness. This feedback is important in identifying program strengths and pinpointing areas where students feel they could have been better prepared. Course Evaluations: By analyzing these evaluations, we gain insights into potential gaps in our curriculum and opportunities for instructional development. This is something that our senior exit survey also provides to us.

Does the program offer a certificate or credential (e.g., teaching credential)?

- Yes: Six Sigma Green Belt Certifications

Please describe how the SLOs for the certificate/credential are assessed. Are they integrated into or separate from the degree program's assessment work, etc.?
This certification (Six Sigma Green Belt) is separated from the assessment work of college or department. It is a certification offered by an outside organization

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 - No

Curriculum Matrix - No