Annual Assessment Report 2023-2024

BS Civil Engineering and Construction Engineering & Management

Department of Civil Engineering

College of Engineering

CONTACT
Name of Program Assessment Lead Seema Shah-Fairbank and Ghada Gad
Name of Person Completing Report Seema Shah-Fairbank and Ghada Gad

DISCIPLINARY ACCREDITATION Yes

DEVELOPMENT AND DOCUMENTATION OF STUDENT LEARNING OUTCOMES
How were the program's SLOs developed? (select all that apply)
- o   Our disciplinary accrediting agency has <u>required</u> 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/ce/program-info/bsce.shtml
  and
- https://www.cpp.edu/engineering/ce/program-info/bscem.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 assessed SLOs in AY 2023-2024 (e.g., artifact collection, scoring, closing the loop, etc.).

Please list the SLOs examined

- SLO #1: an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- SLO #2: an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- SLO #3: an ability to communicate effectively with a range of audiences
- SLO #4: an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- SLO #5: an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- SLO #6: an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- SLO #7: An ability to acquire and apply new knowledge as needed, using appropriate learning

Student Learning Outcome (SLO): an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Capstone product (e.g., project, senior thesis, etc.) (Direct) • Oral performance (e.g., presentation, defense, conference presentation, etc.) (Direct) • Student survey/interview/focus group with self-reports of SLO achievement (Indirect) • Employer meetings/discussions/survey/interview of student SLO achievement (Indirect)	• Used rubric or scoring guide

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
25	Rating from 1 to 4, with 1 being unacceptable and 4 being exemplary, and 0: not observed	Will be analyzed this year 2024-2025	N/A

Student Learning Outcome (SLO): an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Capstone product (e.g., project, senior thesis, etc.) (Direct) • Oral performance (e.g., presentation, defense, conference presentation, etc.) (Direct) • Student survey/interview/focus group with self-reports of SLO achievement (Indirect) • Employer meetings/discussions/survey/interview of student SLO achievement (Indirect)	•

Findings			
N of Artifacts	**Criterion Used**	**Goal Met**	**Eye-opening Result**
25	Rating from 1 to 4, with 1 being unacceptable and 4 being exemplary, and 0: not observed	Will be analyzed this year 2024-2025	N/A

Student Learning Outcome (SLO): an ability to communicate effectively with a range of audiences

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Assignment/exam/paper completed as part of regular coursework (Direct) • Capstone product (e.g., project, senior thesis, etc.) (Direct) • Oral performance (e.g., presentation, defense, conference presentation, etc.) (Direct) • Student survey/interview/focus group with self-reports of SLO achievement (Indirect) • Employer meetings/discussions/survey/interview of student SLO achievement (Indirect)	• Used rubric or scoring guide

Findings			
N of Artifacts	**Criterion Used**	**Goal Met**	**Eye-opening Result**
25 for senior project rubric; 200+ capstone exit survey; 47 artifacts for Civil 14 artifacts for CEM for the executive summary paper	Rating from 1 to 4, with 1 being unacceptable and 4 being exemplary, and 0: not observed	Senior project and survey will be analyzed this year 2024-2025; for the executive summary, we met 3 of 4 criteria in the rubric in CE, and none for CEM	N/A

Student Learning Outcome (SLO): an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Capstone product (e.g., project, senior thesis, etc.) (Direct) • Oral performance (e.g., presentation, defense, conference presentation, etc.) (Direct) • Student survey/interview/focus group with self-reports of SLO achievement (Indirect) • Employer meetings/discussions/survey/interview of student SLO achievement (Indirect)	• Used a rubric or scoring guide

Findings			
N of Artifacts	**Criterion Used**	**Goal Met**	**Eye-opening Result**
25 for senior project rubric; 200+ capstone exit survey	Rating from 1 to 4, with 1 being unacceptable and 4 being exemplary, and 0: not observed	Senior project and survey will be analyzed this year 2024-2025	N/A

Student Learning Outcome (SLO): an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Capstone product (e.g., project, senior thesis, etc.) (Direct) • Oral performance (e.g., presentation, defense, conference presentation, etc.) (Direct) • Student survey/interview/focus group with self-reports of SLO achievement (Indirect) • Employer meetings/discussions/survey/interview of student SLO achievement (Indirect)	• Used a rubric or scoring guide

Findings			
N of Artifacts	**Criterion Used**	**Goal Met**	**Eye-opening Result**
25 for senior project rubric; 200+ capstone exit survey	Rating from 1 to 4, with 1 being unacceptable and 4 being exemplary, and 0: not observed	Senior project and survey will be analyzed this year 2024-2025	N/A

Student Learning Outcome (SLO): an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Capstone product (e.g., project, senior thesis, etc.) (Direct) • Oral performance (e.g., presentation, defense, conference presentation, etc.) (Direct) • Student survey/interview/focus group with self-reports of SLO achievement (Indirect) • Employer meetings/discussions/survey/interview of student SLO achievement (Indirect)	• Used a rubric or scoring guide

Findings			
N of Artifacts	**Criterion Used**	**Goal Met**	**Eye-opening Result**
25 for senior project rubric; 200+ capstone exit survey 64 CE executive summary artifacts 15 CEM	Rating from 1 to 4, with 1 being unacceptable and 4 being exemplary, and 0: not observed	Senior project and survey will be analyzed this year 2024-2025; For both CE and CEM, did not meet the goal	N/A

Student Learning Outcome (SLO): An ability to acquire and apply new knowledge as needed, using appropriate learning

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected/Analyzed/Developed/Modified/Discussed assessment tools	• Capstone product (e.g., project, senior thesis, etc.) (Direct) • Oral performance (e.g., presentation, defense, conference presentation, etc.) (Direct) • Student survey/interview/focus group with self-reports of SLO achievement (Indirect) • Employer meetings/discussions/survey/interview of student SLO achievement (Indirect)	• Used a rubric or scoring guide

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
25 for senior project rubric; 200+ capstone exit survey	Rating from 1 to 4, with 1 being unacceptable and 4 being exemplary, and 0: not observed	Senior project and survey will be analyzed this year 2024-2025	N/A

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
- Program/department assessment committee
- College assessment committee

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.

More resources are needed to implement useful assessment practices - Though we understand the need to submit this information at institutional level, this is not useful to the department assessment as we have 7 SOs that we repeatedly pot the same information for. Consider another format like an excel spreadsheet (with dropdowns) which is more user friendly. - As a department with multiple BS degree programs, we filled out one form since we have the same plan for all our programs.

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.

The graduating senior survey on Tableau is a great tool. We plan as a department to provide our program SOs, so they can be included in the survey and use it in assessment. Please let us know who we should contact to implement this change in the survey.

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 - No

Curriculum Matrix - No