3Annual Assessment Report 2021-2022

BS Computer Engineering

Electrical & Computer Engineering

College of Engineering

CONTACT

Name of Program Assessment Lead Anas Salah Eddin

Name of Person Completing Report Anas Salah Eddin

DISCIPLINARY ACCREDITATION Yes

DEVELOPMENT AND DOCUMENTATION OF STUDENT LEARNING OUTCOMES

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

- Our disciplinary accrediting agency has recommended learning outcomes, so we used and/or modified 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/ece/bsce.shtml

ASSESSMENT ACTIVITIES IN 2021-2022

This section provides the opportunity for programs to share and discuss assessment activities conducted in **AY 2021-2022.** 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 2021-2022?

- My program assessed SLOs in AY 2021-2022

Please list the SLOs examined

- SLO #1: 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 #2: an ability to communicate effectively with a range of audiences
- SLO #3: 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 #4: 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 #5: an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- SLO #6: an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

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 direct evidence (e.g., student work, exam items, etc.) • Scored direct evidence of student learning	• Capstone product (e.g., project, senior thesis, etc)	• Used rubric or scoring guide
• Other, please explain: Reviewed performance indicators		

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
49	Average scores above 75%, mastery at each level above 75%, flag heuristics	Yes	

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

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Collected direct evidence (e.g., student work, exam items, etc.) • Scored direct evidence of student learning • Interpreted and made meaning of findings for direct evidence	• Assignment/exam/paper completed as part of regular coursework • Capstone product (e.g., project, senior thesis etc) • Oral performance (e.g., presentation, defense, conference presentation etc)	• Used rubric or scoring guide

Findings			
N of Artifacts	**Criterion Used**	**Goal Met**	**Eye-opening Result**
138	Average scores above 75%, mastery at each level above 75%, flag heuristics	Yes	

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
• Created/modified/discussed assessment procedures (e.g., SLOs, curriculum matrix, mechanism to collect student work, rubric, survey, etc.)		
• Collected direct evidence (e.g., student work, exam items, etc.) • Scored direct evidence of student learning	• Exit exam created by the program	• Used rubric or scoring guide • Scored exams/tests/quizzes
• Discussed assessment results to make program decisions to improve SLO achievement (e.g., design new course, modify assignments, etc.)		

Findings			
N of Artifacts	**Criterion Used**	**Goal Met**	**Eye-opening Result**
65	Average scores above 75%, mastery at each level above 75%, flag heuristics	Yes	

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
• Created/modified/discussed assessment procedures (e.g., SLOs, curriculum matrix, mechanism to collect student work, rubric, survey, etc.)		
• Collected indirect evidence of student learning (e.g., surveys, interviews, focus groups, etc.) • Scored indirect evidence of student learning • Interpreted and made meaning of findings for indirect evidence	• Other, please explain: CATME (Comprehensive Assessment of Team Member Effectiveness)	
• Discussed assessment results to make program decisions to improve SLO achievement (e.g., design new course, modify assignments, etc.)		

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
49	Average scores above 75%, mastery at each level above 75%, flag heuristics	Yes	

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 direct evidence (e.g., student work, exam items, etc.) • Scored direct evidence of student learning • Interpreted and made meaning of findings for direct evidence	• Assignment/exam/paper completed as part of regular coursework	• Used rubric or scoring guide
• Discussed assessment results to make program decisions to improve SLO achievement (e.g., design new course, modify assignments, etc.)		

Findings			
N of Artifacts	**Criterion Used**	**Goal Met**	**Eye-opening Result**
69	Average scores above 75%, mastery at each level above 75%, flag heuristics	Partially, we had a marginal red flag, a yellow flag, and another marginal yellow flag	Computer engineering majors had some problems attaining this SO6; whereas, Electrical Engineering Majors did not have any issues. This might have been because the number of labs required in the EE major is less than the number of required labs in the CpE major. Other issues were also discussed in 2 department meetings

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

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
• Created/modified/discussed assessment procedures (e.g., SLOs, curriculum matrix, mechanism to collect student work, rubric, survey, etc.)		
• Collected direct evidence (e.g., student work, exam items, etc.) • Scored direct evidence of student learning • Interpreted and made meaning of findings for direct evidence	• Assignment/exam/paper completed as part of regular coursework	• Used rubric or scoring guide • Scored exams/tests/quizzes
• Collected indirect evidence of student learning (e.g., surveys, interviews, focus groups, etc.) • Scored indirect evidence of student learning • Interpreted and made meaning of findings for indirect evidence	• Student survey/interview/focus group with self-reports of SLO achievement	
• Discussed assessment results to make program decisions to improve SLO achievement (e.g., design new course, modify assignments, etc.)		

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
135	Average scores above 75%, mastery at each level above 75%, flag heuristics	2 yellow flags were raised and 1 performance indicator's goal was met	

IMPROVING THROUGH ASSESSMENT

Overall, what best describes how the program used the results in 2021-2022? Select all that apply.

- Results indicated no action needed because students met expectations
- Other, please explain: Yellow flags are cautionary and indicates potential problems. The program decided to reassess 2 SLOs that raised yellow flags in AY 22/23

Ideas to improve student learning can come from different constituents. With whom did the program discuss assessment planning and/or share results during AY 2021-2022? Select all that apply.

- Program/department faculty as whole
- Program/department 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 2021-2022 so that others may learn from your experiences.

Last year was very productive and our department was able to assess 6 out of 7 SLOs. Some of the data was analyzed over the summer thanks to your support.

CPP's GI2025 goals What assessment-related efforts do you already implement, or would implement to support the campus' diversity, equity, and inclusion (DEI) efforts? (e.g., planned or current disaggregation of assessment data by race/ethnicity, etc.) Undergraduate programs may wish to refer to CPP's GI2025 goals. (Not Mandatory)

<narrative here>

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