



Annual Assessment Report 2020-2021

BS Computer Science Computer Science College of Science

CONTACT

Name of Program Assessment Lead Hao Ji

Name of Person Completing Report Hao Ji

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 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/Program Website - provide URL: <https://www.cpp.edu/sci/computerscience/programevaluation/accreditationand-assessment.shtml>

ASSESSMENT ACTIVITIES IN 2020-2021

This section provides the opportunity for programs to share and discuss assessment activities conducted in **AY 2020-2021**. 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?

- 6

How many SLOs did your program assess this past year in 2020-2021?

- My program assessed SLOs in AY 2020-2021.

Please list the SLOs examined

- SLO #1: An ability to analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- SLO #2: An ability to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- SLO #3: Communicate effectively in a variety of professional contexts.
- SLO #4: Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- SLO #5: Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- SLO #6: Apply computer science theory and software development fundamentals to produce computing-based solutions.

Student Learning Outcome (SLO): SLO 1: An ability to analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
<ul style="list-style-type: none"> Created/modified/discussed assessment procedures (e.g., SLOs, curriculum matrix, mechanism to collect student work, rubric, survey, etc.) 		
<ul style="list-style-type: none"> Collected direct evidence (e.g., student work, exam items, etc.) Scored direct evidence of student learning 	<ul style="list-style-type: none"> Assignment/exam/paper as part of regular coursework 	<ul style="list-style-type: none"> Scored exams/tests/quizzes
<ul style="list-style-type: none"> Collected indirect evidence of student learning (e.g., surveys, interviews, focus groups, etc.) Scored and/or analyzed indirect evidence of student learning 	<ul style="list-style-type: none"> Student survey/interview/focus group with self-reports of SLO achievement Alumni survey/interview/focus group that contains self-reports of SLO achievement Employer meetings/discussions/survey/interview of student SLO achievement 	
<ul style="list-style-type: none"> Discussed assessment results to make program decisions to improve SLO achievement (e.g., design new course, modify assignments, etc.) 		
<ul style="list-style-type: none"> Implemented closing the loop strategies to improve SLO achievement 		

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
241	70%	Yes	

Student Learning Outcome (SLO): SLO 2: An ability to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
<ul style="list-style-type: none"> Created/modified/discussed assessment procedures (e.g., SLOs, curriculum matrix, mechanism to collect student work, rubric, survey, etc.) 		
<ul style="list-style-type: none"> Collected direct evidence (e.g., student work, exam items, etc.) Scored direct evidence of student learning 	<ul style="list-style-type: none"> Assignment/exam/paper as part of regular coursework 	<ul style="list-style-type: none"> Scored exams/tests/quizzes
<ul style="list-style-type: none"> Collected indirect evidence of student learning (e.g., surveys, interviews, focus groups, etc.) Scored and/or analyzed indirect evidence of student learning 	<ul style="list-style-type: none"> Student survey/interview/focus group with self-reports of SLO achievement Alumni survey/interview/focus group that contains self-reports of SLO achievement Employer meetings/discussions/survey/interview of student SLO achievement 	
<ul style="list-style-type: none"> Discussed assessment results to make program decisions to improve SLO achievement (e.g., design new course, modify assignments, etc.) 		
<ul style="list-style-type: none"> Implemented closing the loop strategies to improve SLO achievement 		

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
205	70%	No	

Student Learning Outcome (SLO): SLO 3: Communicate effectively in a variety of professional contexts.

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
<ul style="list-style-type: none"> Created/modified/discussed assessment procedures (e.g., SLOs, curriculum matrix, mechanism to collect student work, rubric, survey, etc.) 		
<ul style="list-style-type: none"> Collected direct evidence (e.g., student work, exam items, etc.) Scored direct evidence of student learning 	<ul style="list-style-type: none"> Assignment/exam/paper as part of regular coursework 	<ul style="list-style-type: none"> Scored exams/tests/quizzes
<ul style="list-style-type: none"> Collected indirect evidence of student learning (e.g., surveys, interviews, focus groups, etc.) Scored and/or analyzed indirect evidence of student learning 	<ul style="list-style-type: none"> Student survey/interview/focus group with self-reports of SLO achievement Alumni survey/interview/focus group that contains self-reports of SLO achievement Employer meetings/discussions/survey/interview of student SLO achievement 	
<ul style="list-style-type: none"> Discussed assessment results to make program decisions to improve SLO achievement (e.g., design new course, modify assignments, etc.) 		
<ul style="list-style-type: none"> Implemented closing the loop strategies to improve SLO achievement 		

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
207	70%	Yes	

Student Learning Outcome (SLO): SLO 4: Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
<ul style="list-style-type: none"> Created/modified/discussed assessment procedures (e.g., SLOs, curriculum matrix, mechanism to collect student work, rubric, survey, etc.) 		
<ul style="list-style-type: none"> Collected direct evidence (e.g., student work, exam items, etc.) Scored direct evidence of student learning 	<ul style="list-style-type: none"> Assignment/exam/paper as part of regular coursework 	<ul style="list-style-type: none"> Scored exams/tests/quizzes
<ul style="list-style-type: none"> Collected indirect evidence of student learning (e.g., surveys, interviews, focus groups, etc.) Scored and/or analyzed indirect evidence of student learning 	<ul style="list-style-type: none"> Student survey/interview/focus group with self-reports of SLO achievement Alumni survey/interview/focus group that contains self-reports of SLO achievement Employer meetings/discussions/survey/interview of student SLO achievement 	
<ul style="list-style-type: none"> Discussed assessment results to make program decisions to improve SLO achievement (e.g., design new course, modify assignments, etc.) 		
<ul style="list-style-type: none"> Implemented closing the loop strategies to improve SLO achievement 		

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
222	70%	Yes	

Student Learning Outcome (SLO): SLO 5: Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
<ul style="list-style-type: none"> Created/modified/discussed assessment procedures (e.g., SLOs, curriculum matrix, mechanism to collect student work, rubric, survey, etc.) 		
<ul style="list-style-type: none"> Collected direct evidence (e.g., student work, exam items, etc.) Scored direct evidence of student learning 	<ul style="list-style-type: none"> Assignment/exam/paper as part of regular coursework 	<ul style="list-style-type: none"> Scored exams/tests/quizzes
<ul style="list-style-type: none"> Collected indirect evidence of student learning (e.g., surveys, interviews, focus groups, etc.) Scored and/or analyzed indirect evidence of student learning 	<ul style="list-style-type: none"> Student survey/interview/focus group with self-reports of SLO achievement Alumni survey/interview/focus group that contains self-reports of SLO achievement Employer meetings/discussions/survey/interview of student SLO achievement 	
<ul style="list-style-type: none"> Discussed assessment results to make program decisions to improve SLO achievement (e.g., design new course, modify assignments, etc.) 		
<ul style="list-style-type: none"> Implemented closing the loop strategies to improve SLO achievement 		

Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
264	70%	Yes	

Student Learning Outcome (SLO): SLO 6: Apply computer science theory and software development fundamentals to produce computing-based solutions.

Assessment Activities	Evidence Used	Evaluation and Interpretation of Evidence
<ul style="list-style-type: none"> Created/modified/discussed assessment procedures (e.g., SLOs, curriculum matrix, mechanism to collect student work, rubric, survey, etc.) 		
<ul style="list-style-type: none"> Collected direct evidence (e.g., student work, exam items, etc.) Scored direct evidence of student learning 	<ul style="list-style-type: none"> Assignment/exam/paper as part of regular coursework 	<ul style="list-style-type: none"> Scored exams/tests/quizzes
<ul style="list-style-type: none"> Collected indirect evidence of student learning (e.g., surveys, interviews, focus groups, etc.) Scored and/or analyzed indirect evidence of student learning 	<ul style="list-style-type: none"> Student survey/interview/focus group with self-reports of SLO achievement Alumni survey/interview/focus group that contains self-reports of SLO achievement Employer meetings/discussions/survey/interview of student SLO achievement 	
<ul style="list-style-type: none"> Discussed assessment results to make program decisions to improve SLO achievement (e.g., design new course, modify assignments, etc.) 		
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Findings			
N of Artifacts	Criterion Used	Goal Met	Eye-opening Result
264	70%	Yes	

IMPROVING THROUGH ASSESSMENT

Overall, what best describes how the program used the results in 2020-2021? Select all that apply.

- Assessment procedure changes (SLOs, curriculum matrix, rubrics, evidence collected, sampling, communications with faculty, etc.)

Ideas to improve student learning can come from different constituents. With whom did the program discuss assessment planning and/or share results during AY 2020-2021? Select all that apply.

- Program/department faculty as a whole
- A committee of program/department faculty
- 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 2020-2021 so that others may learn from your experiences.

The ABET-accredited Bachelor of Science program in Computer Science was evaluated by the ABET team in Fall 2020. With the feedback received from ABET, the CS Department developed an improved assessment plan that presents a new yearly assessment cycle to timely collect and evaluate student outcomes. Since the direct performance indicator data was collected based on problem-specific scores rather than course grades, we have been working on creating a new baseline based on the assessment data collected in AY2020-21. In addition, university administration evaluation survey and meeting as new assessment activities were conducted to collect the administrators' input on the program's PEOs.

CPP's GI2025 goals focus on eliminating equity gaps. What plans 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.)

The CS department has been collaborating with the College of Science (CoS) Advising Center to guide our students, i.e., conducting orientation sessions for incoming freshman and transfer students, helping them register for their first semester, and identifying and reaching out to students who didn't register for courses on time. Moreover, the CS department has been collaborating with the CoS Advising Center and the CPP Career Center to organize a career advising workshop for all CS majors, to ensure that students are systematically advised regarding career matters. Furthermore, the CS department has diverse student clubs such as the Computer Science Society (ACM student chapter) club and the CPP SheCodes (ACM-W student chapter) club to engage students and support their success.

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