



## Annual Assessment Report 2022-2023

### BS Physics Physics & Astronomy College of Science

#### CONTACT

Name of Program Assessment Lead Qing Ryan

Name of Person Completing Report Qing Ryan

#### DISCIPLINARY ACCREDITATION No

#### DEVELOPMENT AND DOCUMENTATION OF STUDENT LEARNING OUTCOMES

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

- We do not have disciplinary accreditation but drew from our disciplinary/professional organizations, and developed our SLOs as a program/department.
- 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.

- Department Website - provide URL: <https://www.cpp.edu/sci/physicsastronomy/about/program-assessment.shtml>

#### ASSESSMENT ACTIVITIES IN 2022-2023

This section provides the opportunity for programs to share and discuss assessment activities conducted in **AY 2022-2023**. 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?

- 1

**How many SLOs did your program assess this past year in 2022-2023?**

- My program assessed SLOs in AY 2022-2023 (e.g., artifact collection, scoring, closing the loop, etc.). May also have engaged in assessment planning activities unrelated to specific SLOs (e.g., modified curriculum matrix, assessment plan, etc.).

**Please list the SLOs examined**

- SLO #1: SLO 6: Students will be able to write professional-quality reports that describe the methods, results, and interpretation of the experimental or computational investigations of physics problems.

**Student Learning Outcome (SLO): SLO 6: Students will be able to write professional-quality reports that describe the methods, results, and interpretation of the experimental or computational investigations of physics problems.**

<b>Assessment Activities</b>	<b>Evidence Used</b>	<b>Evaluation and Interpretation of Evidence</b>
<ul style="list-style-type: none"><li>• Collected direct evidence (e.g., student work, exam items, etc.)</li></ul>	<ul style="list-style-type: none"><li>• Assignment/exam/paper completed as part of regular coursework</li></ul>	

## IMPROVING THROUGH ASSESSMENT

**Overall, what best describes how the program used the results in 2022-2023? Select all that apply.**

- Results indicated no action needed because students met expectations.

**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.**

- 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 2022-2023 so that others may learn from your experiences.**

According to our assessment plan, this year we are assessing students' written communication skills. Since university assessment this year is also about written communication, we decided to use the same rubric for our program assessment. . We collected data from senior-level courses in fall 2022: PHY4510L: Advanced Laboratory and AST 3240: Observational Astronomy. For PHY4510L, we collected two lab reports: Ferroelectricity (N=7) and Hall effect (N=8). Students in this course need to submit written lab reports after each lab activity. For AST3240 (N=10), we collected the final paper students submitted as a major component of their grade. A total of 25 artifacts from 19 different students were collected and scored. Data analysis process: The committee distributed the analysis process evenly among the members. Before scoring, the three committee member normed 6 training set, they met and discussed their scoring until they come to an agreement. Then the 25 artifacts were divided evenly among three members to finish scoring: member 1 and 2 each score eight artifacts and member 3 scored nine artifacts. To ensure the balance of expertise, each member was assigned a balanced mix of three different artifacts.

**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](#), course evaluations, etc.**

We triangulated our data by looking at students' course grades. The correlation coefficient between students' rubric score and their grades on their final paper (given by instructor) is around 0.74, which is pretty high. It indicates that the writing skills as measured by the rubric categories, correlate well with what the instructor care about for their students.

**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