

**Academic Affairs Assessment of Student Learning**

**Report for Academic Year 2023-2024**

**Department/Program: Computer Science**

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1. **Which learning outcomes did you measure this past year?** The computer science program measured PLOs 1, 3, 5, and 6.
2. **In which course(s) were assessments conducted?**

Outcomes were measured in CS 102 (initial assessment) and CS 408 (final assessment). Data were collected in CS 102 and CS 408 in both Fall 2023 and Spring 2024. Unfortunately, data was not collected for CS 250 in Spring 2024.

**How did you assess the selected program learning outcomes?** All outcomes were measured using standard department exams combined with item analyzis.

1. **How many students were included in the assessment(s) of each PLO in a course?**

For the initial measurement of PLOs 1 and 3, five students were included in Fall 2023 and nine in Spring 2024.. For the final assessment of PLOs 1, 3, 5, 6, three students were included in Fall 2023, two in Spring 2024.

1. **How were students selected to participate in the assessment of each outcome?**

All students who were present the day the test was given were included

1. **In general, describe how each assessment tool (measure) was constructed** (i.e. in-house, national, adapted).

All instruments were constructed in-house.

1. **Who analyzed results and how were they analyzed**

The data was run through two computer programs to generate a score for each PLO and an item analysis of the test results. These were then discussed by the department’s assessment committee with an eye towards whether PLO scores improve from measurement to measurement. Portfolios were evaluated by the department’s assessment committee.

1. **Provide a summary of the results/conclusions from the assessment of each measured Program Learning Outcome.**

*Data:*

Test 1:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Term |  PLO 1 |  |  PLO 3 |  |  |  |  |
| Fall 2023 | 2 |  | 3 |  |  |  |  |
| Fall 2023 | 1 |  | 1 |  |  |  |  |
| Fall 2023 | 2 |  | 2 |  |  |  |  |
| Fall 2023 | 2 |  | 1 |  |  |  |  |
| Fall 2023 | 2 |  | 1 |  |  |  |  |
| Average:  | 1.8 |  | 1.6 |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Distribution by student of PLO results |  |  |  |  |
|  | Inchoate |  | Emerging |  | Developed |  | Mastered |
| PLO 1 | 1 |  | 4 |  | 0 |  | 0 |
| PLO 3 | 3 |  | 1 |  | 1 |  | 1 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Term |  |  PLO 1 |  |  PLO 3 |  |  |  |
| Spring 2024 |  | 2 |  | 2 |  |  |  |
| Spring 2024 |  | 3 |  | 3 |  |  |  |
| Spring 2024 |  | 2 |  | 3 |  |  |  |
| Spring 2024 |  | 2 |  | 1 |  |  |  |
| Spring 2024 |  | 3 |  | 2 |  |  |  |
| Spring 2024 |  | 1 |  | 1 |  |  |  |
| Spring 2024 |  | 2 |  | 2 |  |  |  |
| Spring 2024 |  | 2 |  | 2 |  |  |  |
| Spring 2024 |  | 3 |  | 4 |  |  |  |
| Average:  |  | 2.22 |  | 2.22 |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Distribution by student of PLO results |  |  |  |  |
|  | Inchoate |  | Emerging |  | Developed |  | Mastered |
| PLO 1 | 1 |  | 5 |  | 3 |  | 0 |
| PLO 3 | 2 |  | 4 |  | 2 |  | 1 |

As the initial measurement, the students are at or above the expected level for these PLOs.

Test 3

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Term |  PLO 1 |  |  PLO 3 |  |  PLO 5 |  |  PLO 6 |
| Fall 2023 | 3 |  | 4 |  | 4 |  | 3 |
| Fall 2023 | 2 |  | 4 |  | 3 |  | 3 |
| Fall 2023 | 3 |  | 4 |  | 4 |  | 4 |
| Average:  | 2.67 |  | 4 |  | 3.67 |  | 3.33 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | Inchoate |  | Emerging |  | Developed |  | Mastered |
| PLO 1 | 0 |  | 1 |  | 3 |  | 0 |
| PLO 3 | 0 |  | 0 |  | 0 |  | 3 |
| PLO 5 | 0 |  | 0 |  | 1 |  | 2 |
| PLO 6 | 0 |  | 0 |  | 2 |  | 1 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Term |  |  PLO 1 |  |  PLO 3 |  |  PLO 5 |  |  PLO 6 |
| Spring 2024 | 2 |  | 4 |  | 3 |  | 4 |
| Spring 2024 | 3 |  | 4 |  | 4 |  | 3 |
| Average:  |  | 2.5 |  | 4 |  | 3.5 |  | 3.5 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | Inchoate |  | Emerging |  | Developed |  | Mastered |  |
| PLO 1 | 0 |  | 1 |  | 1 |  | 0 |  |
| PLO 3 | 0 |  | 0 |  | 0 |  | 2 |  |
| PLO 5 | 0 |  | 0 |  | 1 |  | 1 |  |
| PLO 6 | 0 |  | 0 |  | 1 |  | 1 |  |

Overall, students seem to be near the expected final level for these PLOs.

Graduation Competencies: Using the table suggested by Dr. Ladner, PLO 1 is related to GC 1a, 2b, 2c and PLO 3 is related to GC 2b, 2c. Based on the above data, it looks as though students are progressing satisfactorily in regards to these graduation competencies. .

1. **What are next steps?** (e.g., will you measure this same learning outcome again? Will you change some feature of the classroom experience and measure its impact? Will you try a new tool? Are you satisfied?)

An evaluation rubric for the portfolios will continue to be worked on.

The major problem right now is getting full faculty participation in the assessment process. For one reason or another, the data is not being collected. However, the department chair has been more proactive in reminding the department about assessment.

Finally, we are going to try to have students complete the General Education Quantitative Literacy test in CS 408 (Senior Seminar) to get direct measurements of GC 2b and 2d.

1. **Please attach an example of the assessment tool used to measure your PLO(s).** These can be added as an appendix, a link to the assessment, or sent separately in email with your report.







