

**Academic Affairs Assessment of Student Learning**

**Report for Academic Year 2020-2021**

**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, 6. (PLOs 2, 4 are measured based on student portfolios, which were not collected during CS 408 in Fall 2020). During Fall 2020, outcomes 1, 3, 5, 6 (final measurement) were measured in senior seminar (CS 408). The initial measurement (in CS 102) of outcomes 1 and 3 was not carried out in Fall 2020 for some reason, but was done in Spring 2021. The second measurement (of outcomes 1, 3, 5, 6) was not done in Spring 2021, perhaps due to a new faculty member not being fully integrated in the assessment system.
2. **In which course(s) were assessments conducted?**

Outcomes were measured in CS 102 (initial measurement) and CS 408 (final measurement.

**How did you assess the selected program learning outcomes?** Outcomes 1, 3, 5, 6 were measured using standard departmental exams combined with item analysis. Outcomes 2 and 4 were to be measured using student portfolios, however, the portfolios were not collected in Fall 2020.

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 in Spring 2021, seven students were included. For the final measurement of PLOs 1, 3, 5, 6 in Fall 2020, six students were included.

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:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Inchoate |  | Emerging |  | Developed |  | Mastered |
| PLO 1 | 0 |  | 2 |  | 1 |  | 0 |
| PLO 3 | 0 |  | 0 |  | 2 |  | 1 |

Test 3:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Inchoate |  | Emerging |  | Developed |  | Mastered |
| PLO 1 | 2 |  | 2 |  | 0 |  | 0 |
| PLO 3 | 0 |  | 0 |  | 2 |  | 2 |
| PLO 5 | 1 |  | 1 |  | 2 |  | 0 |
| PLO 6 | 2 |  | 0 |  | 1 |  | 1 |

Compared to previous years, the results seem to show that students are having less trouble with the fundamentals (PLO 1), and program validity (PLO 5), while still having trouble understanding the connections between the major branches (PLO 6) (though this may be better determined from portfolios). Students do well in documentation (PLO 3).

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.

On a related note, an assessment plan for the MS in Computer Science program is being worked on – PLOs have been created, the curriculum map is being developed, but no instruments have been created yet.

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.







