

Interim Report

Computer Science

University of Scranton

The University of Scranton program in Computer Science underwent a general review in the 2016-2017 academic year. In the process of that review, two shortcomings were identified. The first was a weakness with respect to Criterion 4, Continuous Improvement. The second was a concern with respect to Criterion 8, Institutional Support. This document will address each shortcoming in turn, and will describe progress that has been made in each of these areas.

Criterion 4, Continuous Improvement

The following text (in italics) presents the original language from the '16-17 self-study regarding Continuous improvement:

Continuous Improvement

The continuous improvement process depends on individual faculty members collecting data through assessment instruments (typically within courses). This data is then given to the department assessment committee in the form of assessment result reports. The committee analyzes these results¹ and forms recommendations. Depending on the nature of the recommendation, it may be passed along to a particular faculty member or the entire department². The assessment committee is then responsible for follow-up oversight and determining the impact of these changes.

Being a relatively new continuous improvement process, a number of recommendations have focused on improving the assessment process itself. While most of the recommendations are data-driven, the committee has also made a number of other recommendations intended to improve documentation practices and the assessment process.

Data-driven recommendations

- 1. For outcome D, one indicator considered equality in CVS commit activity as a proxy for shared team effort. In analyzing the data, the results were found to be lower than expected. However, it was noted that this result may be due to (otherwise functional) teams designating a particular member as having responsibility for the CVS. The assessment committee recommended changes to be implemented by the instructor. As a result, performance on the indicator increased, and exceeded the target. This activity is documented in assessment committee minutes from 5/22/14, 6/5/15 and 2/5/16.*

¹ This analysis is documented in assessment committee minutes.

² Department-wide discussion is documented in department meeting minutes. Both Assessment Committee minutes and Department meeting minutes are available at <http://www.cs.scranton.edu/~bishop/resources.zip>

2. *For outcome H, low student attendance at ACM events was noted. The committee made a number of recommendations to resolve this issue. In particular, a first-year course will be added that will help introduce computing students to the major. As of Spring 2016, this curriculum proposal has been submitted but it has not yet been approved. Secondly, a colloquium course was discussed that would require students to attend such events. While the department was receptive to this idea, we lack the consensus needed to move forward with a formal curriculum proposal. In the meantime, another suggestion was to use extra-credit assignments in particular courses. Bishop implemented this suggestion in CMPS 240. However, only a small number of students participated in the extra-credit options. The committee suggests increasing the incentives for Fall 2016. These recommendations are discussed in assessment committee minutes from 5/22/14, 1/28/15, 6/10/15, and 4/22/16.*
3. *For outcomes E and G, the committee found the assessment to be performed without a proper rubric (the evaluation was informal). Committee action has been to help educate the instructor and to revise the rubric. However, instructor turn-over for this course is expected soon. As of Spring 2016, a proper assessment of these outcomes has not occurred despite two attempts. The committee recommends searching for a relevant pre-existing assessment instrument and incorporating this into the senior exit survey, which would shift responsibility to within the department. These activities are documented in assessment committee minutes from 6/20/14, 8/11/15, 8/26/15, 2/5/16, and 4/22/16.*
4. *For outcome A, the assessment instruments require that a particular set of assignments is given every semester. However, it has been challenging for the instructor to ensure that all of the assignments are covered. The committee recommended rearranging the order of material in the course in order to ensure that the necessary assignments are given. However, for the indicators that were assessed, no issues were evident. This outcome is documented in the assessment committee minutes from 6/20/14, 8/28/14 and 6/10/15.*
5. *For a number of outcomes, scores were satisfactory or borderline and the committee decided to take no action. In particular, this would apply to outcomes B, C, F, I, J, and K. This decision was documented in the assessment committee minutes from 5/22/14 and 4/22/16.*

Other recommendations

1. *The committee noted that a number of changes to the undergraduate curriculum are necessary, and that the undergraduate curriculum committee should be reactivated in order to address these changes. In particular, the prerequisite structure for CMPS 144 is to be updated. The addition of a freshman seminar computing course is also suggested. These recommendations are discussed in assessment committee minutes from 6/20/14, and 1/28/15.*
2. *The committee recommended an updated assessment plan. As documented in the 1/28/15 assessment committee minutes, this proposal was adopted by the department. The new assessment plan is now posted to the department web site.*
3. *The assessment committee had identified problems with the minute-taking process for department meetings. In particular, minutes were generally recorded on paper (by a faculty member) and were not always available in electronic form. The committee suggested that the department secretary take responsibility for taking minutes and providing them in an electronic form. This recommendation has been implemented as of 6/5/15, as documented in the assessment committee minutes from 1/28/15 and 6/5/15.*

4. *The assessment committee recommended the adoption of a “rolling advisory board” which will help gather input from employers and external professionals in order to inform decisions about student outcomes and program educational objectives. The idea is to leverage pre-existing ACM events as a way to gather input from guests on campus. Although the committee endorsed this proposal, no data has been collected as of Spring 2016. This discussion was documented in the assessment committee minutes from 2/5/16.*

The most serious issue identified in the final statement was that significant changes were not being made when deemed appropriate based on assessment data. The final statement focuses mainly on the structural issue of an inactive curriculum committee. However, “institutional inertia” also played a role in filtering out changes that might seem too radical to be viable.

As a result of constructive criticism received during the accreditation process, the assessment committee has felt emboldened to recommend curricular change, especially significant change. As an example, the assessment committee recommended the addition of lab sections to CMPS 134 and 144³. This recommendation was quickly adopted and implemented for the 2017-2018 academic year⁴. The assessment committee continues to operate and make additional recommendations⁵.

The structural issue identified in the final statement has also been addressed. The previously inactive curriculum committee has been disbanded. The assessment committee now makes recommendations directly to the entire department during department meetings⁶.

Criterion 8, Institutional Support

The final statement notes a concern related to the vacant system administrator position. We are pleased to report that the position has been filled by Joe Krisanda, who is well-qualified for the role.

³ See 11/29/16 assessment committee minutes.

⁴ See the University of Scranton catalog program of study for Computer Science at http://catalog.scranton.edu/preview_program.php?catoid=40&poid=6702&returnto=4836.

⁵ See 2/21/18 assessment committee minutes.

⁶ Please see department meeting minutes.

