

<u>2A Algorithms</u> G4, G5	Exit Survey questions 6d, m, n	Average response on Exit Survey at or above “Mostly Mastered”	Exit Survey – roughly half rated themselves at or below “somewhat mastered”.	
<u>2B Large Software Projects</u> G4, G5	685/695/699 Evaluation question 5d	All students rated on Evaluation questions at or above “Some Mastery”	Average rating slightly closer to “Full” than “Some” mastery, some students rated below “some”.	
<u>2C Independent Research</u> G3, G4, G5	685/695/699 Evaluation question 5e	All students rated on Evaluation questions at or above “Some Mastery”	Average rating slightly above “some” mastery, some students rated below “some”.	
<u>3A Working in Groups</u> G1, G2	Exit Survey questions 6q	Average response on Exit Survey at or above “Somewhat Mastered”	Average response below “somewhat mastered”.	
<u>3B Presentation Skills</u> G1	Exit Survey questions 6r 685/695/699 Evaluation question 5f	Average response on Exit Survey at or above “Some Mastered” All students rated on Evaluation questions at or above “Some Mastery”	Average response between “Mostly Mastered” and “Fully Mastered”. Almost all students rated at or above “Some Mastery”, average rating in between “some” and “full”.	
<u>3C Writing Skills</u> G1	Exit Survey questions 6s 685/695/699 Evaluation question 5g	Average response on Exit Survey at or above “Some Mastered” All students rated on Evaluation questions at or above “Some Mastery”	Average response of “Mostly Mastered”. Almost all students rated at or above “Some Mastery”, average rating halfway between “Some Mastery” and “Full Mastery”	

* See <https://www2.indstate.edu/graduate/forms/review.pdf>.

If you would like to report on more than three outcomes, place the cursor in the last cell on the right and hit “tab” to add a new row.

Notes

- Use your outcomes library as a reference.
- Each outcome must be assessed by at least one direct measure (project, practica, exam, performance, etc.). If students are required to pass an examination to practice in the field, this exam must be included as one of the measures. At least one of the outcomes must use an indirect measure (exit interview, focus group, survey, etc.). Use your curriculum map to correlate outcomes to courses.
- Identify the score or rating required to demonstrate proficiency (e.g., Students must attain a score of “3” to be deemed proficient; at least 80% of students in the program will attain this benchmark.”

- d. Note what the aggregate level of proficiency actually was and the number of students included in the cohort or sample (e.g., “85% of the 25 students whose portfolios were reviewed met the established benchmark).
- e. This may be a specific individual, a position (e.g., assessment coordinator), or a group such as the department assessment committee. Minutes should reflect that results are shared with members of the department at least annually.

Part Two

In no more than one page, summarize 1) the discoveries assessment has enabled you to make about your students’ learning, the curriculum, departmental processes, and/or the assessment plan itself; 2) the changes and improvements you have made or will make in response to these discoveries and/or the coordinator’s feedback on the previous summary; and 3) what your assessment plan will focus on in the coming year.

If you would like to reference any supporting materials (departmental meeting minutes, detailed assessment results, etc.), please provide the URL at which they can be found.

Response to comments from 2015-2016 assessment. The Outcomes Library has been updated to be more “active”, describing what students can *do* rather than what they are exposed to. We are using two main methods of evaluation – one indirect (an exit survey) and one direct (evaluation of students’ culminating experience project by program faculty). The direct measure is now performed for *all* students. The exit survey has been “opt-in”, with slightly more than 50% completing the survey. We have considered making the exit survey required; the trade-off is that then it would not be completely anonymous.

Further discussion The 2016-2017 academic year was the first year that a revised curriculum was completed. The revised curriculum has two concentrations, with one (the academic concentration) a “traditional” CS MS and the other (professional) being more focused on “applications”. In general, the students completing the traditional (more rigorous, and not available to all students) concentration have done well and meet all the goals of the program. The students completing the professional concentration are much more mixed. The best students in the professional concentration are similar to the good students in the academic concentration. The weakest students in the professional concentration struggle to meet basic program requirements.

The CS faculty have thoroughly discussed what to do with the weakest students for years. The development of the professional concentration was a result of those discussions. Even with the revised curriculum, the bottom students are not doing well enough. After reflecting on the 2016-2017 data, two things are clear. First, the two concentrations should have more divergence in the outcomes expected of the students (roughly, professional concentration students would not be expected to master advanced algorithms and programming techniques). Second, assessment of the minimal standards should be integrated into the curriculum process, and the focus for the professional concentration students should be on ensuring all students meet a minimal standard.

We have slightly tightened our admissions standards (rejecting roughly 20-30% of applicants). We also are discussing implementing a “hard” barrier in one of the key courses in the curriculum, giving students an incomplete if they do not pass an assessment (possibly using a programming assessment quiz similar to what is used for undergraduates). Importantly, this will be clearly communicated to students. Data from particular courses shows that students who put in a good effort do well. The problems we are having with underperforming students seem to come largely due to the student side of the equation. The feedback from the exit survey indicates that closely relating the curriculum to job preparation should motivate students. We also will attempt to better collect data on “student effort” in the coming year.

There are positive things to report. The students graduating from the academic concentration are well prepared for the competitive jobs they are interested in. Based on anecdotal numbers, I estimate that around 70% or higher of academic concentration graduates either have a job or admission with support to a PhD program at the time of graduation. The more diligent professional concentration graduates are also well prepared and have done well finding jobs.

In the past year, students have been admitted with support to PhD programs at the University of Arizona, University of California-Merced, and University of Miami (FL). Students have obtained job offers at Google, Naval Surface Warfare Center – Crane Division, GyanSys, Salesforce, Chinese Academy of Sciences, GlobalFoundries, Euclid Elementz, and GalaxE Solutions.

Student Learning Summary Report Rubric :: Office of Assessment & Accreditation :: Indiana State University

Degree Program: **BS in Computer Science**

Date: **01.14.18**

	Level 0 – Undeveloped	Level 1 – Developing	Level 2 – Mature	Level 3 – Exemplary
1. Student Learning Outcomes	<input checked="" type="checkbox"/> No outcomes were identified. <i>(in this report)</i> <input type="checkbox"/> No Curriculum Map was provided.	<input type="checkbox"/> Outcomes were identified. <input type="checkbox"/> Some of the outcomes are specific, measurable, student-centered, program-level outcomes. <input type="checkbox"/> A Curriculum Map was provided.	<input type="checkbox"/> Outcomes are specific, measurable, student-centered, program-level outcomes. <input type="checkbox"/> Outcomes at least indirectly support Foundational Studies Learning Outcomes or the Graduate Learning Goals. <input type="checkbox"/> The Curriculum Map identifies where/to what extent each outcome is addressed. <input type="checkbox"/> At least one outcome was assessed in this cycle.	<input checked="" type="checkbox"/> Outcomes are important, specific, measurable, student-centered program-level outcomes that span multiple learning domains. <input checked="" type="checkbox"/> Outcomes directly integrate with Foundational Studies Learning Outcomes or the Graduate Learning Goals. <input type="checkbox"/> Outcomes reflect the most important results of program completion (as established by an accreditor or other professional organization). <input type="checkbox"/> Learning outcomes are consistent across different modes of delivery (face-to-face and online.) <input type="checkbox"/> Outcomes are regularly reviewed (and revised, if necessary) by the faculty and other stakeholders. <input checked="" type="checkbox"/> The Curriculum Map identifies where/to what extent each outcome is addressed and offers evidence that students have sufficient opportunity to master the associated learning outcomes.

				<input checked="" type="checkbox"/> Two or more outcomes were assessed in this cycle.
2. Measures & Performance Goals	<input type="checkbox"/> No measures are provided. <input type="checkbox"/> No goals for student performance are identified.	<input checked="" type="checkbox"/> Measures are provided, but some are vague and/or do not clearly assess the associated outcomes. <input type="checkbox"/> Measures are primarily indirect. <input type="checkbox"/> Performance goals are identified, but they are unclear or inappropriate. <input type="checkbox"/> Some performance goals are based on course and/or assignment grades, but there is no evidence that grades are calibrated to the outcomes.	<input checked="" type="checkbox"/> At least one direct measure was provided for each outcome. <input type="checkbox"/> Some information is provided to suggest that measures are appropriate to the outcomes being assessed. <input checked="" type="checkbox"/> Clear and appropriate standards for performance are identified. <input type="checkbox"/> Some performance goals are based on course and/or assignment grades, and general information is provided to demonstrate that grades are calibrated to the outcomes. <input type="checkbox"/> Mechanisms used to assess student performance (rubrics, checklists, exam keys, etc.) were provided.	<input type="checkbox"/> Multiple measures were employed, and most are direct. <input type="checkbox"/> Detailed information is provided to show that measures are appropriate to the outcomes being assessed. <input type="checkbox"/> Measures assess some high impact practices (internships, capstone course projects, undergraduate research, etc.) <input type="checkbox"/> If students are required to pass a certification or licensure exam to practice in the field, this was included as a measure. <input type="checkbox"/> Some measures allow performance to be gauged over time, not just in a single course. <input type="checkbox"/> If a measure is used to assess more than one outcome, a clear explanation is offered to substantiate that this is appropriate. <input type="checkbox"/> Clear and appropriate standards for performance are identified and justified. <input type="checkbox"/> Mechanisms used to assess student performance (rubrics, checklists, exam keys, etc.) were summarized as well as provided

				<p>to demonstrate that the measure provides specific evidence of what students know/can do.</p> <p><input type="checkbox"/> If performance goals are based on course and/or assignment grades, specific evidence is provided to demonstrate that grades are calibrated to the outcomes.</p>
3. Results	<p><input type="checkbox"/> No data are being collected.</p> <p><input type="checkbox"/> No information is provided about the data collection process.</p> <p><input type="checkbox"/> No results are provided.</p> <p><input type="checkbox"/> Students are meeting few of the performance standards set for them.</p>	<p><input type="checkbox"/> Some data are being collected and analyzed.</p> <p><input type="checkbox"/> Some results are provided.</p> <p><input type="checkbox"/> Insufficient information is offered to demonstrate that data collection, analysis, and interpretation processes are valid.</p> <p><input type="checkbox"/> Students are achieving some of the performance standards expected of them.</p>	<p><input checked="" type="checkbox"/> Data are being collected and analyzed.</p> <p><input checked="" type="checkbox"/> Results are provided.</p> <p><input checked="" type="checkbox"/> Some information is offered to demonstrate that data collection, analysis, and interpretation processes are valid and meaningful.</p> <p><input type="checkbox"/> Students generally are achieving the performance standards expected of them.</p>	<p><input type="checkbox"/> Clear, specific, and complete details about data collection, analysis, and interpretation of results are provided to demonstrate the validity and usefulness of the assessment process.</p> <p><input type="checkbox"/> Students generally are achieving the performance standards expected of them and demonstrate continuous improvement on standards they have yet to achieve/achieve less well.</p> <p><input type="checkbox"/> If students are required to pass a certification or licensure exam to practice in the field, the pass rate meets the established benchmark.</p>
4. Engagement & Improvement	<p><input type="checkbox"/> No one is assigned responsibility for assessing individual measures.</p> <p><input type="checkbox"/> Assessment primarily is the responsibility of the program chair.</p>	<p><input checked="" type="checkbox"/> The same faculty member is responsible for collecting and analyzing most/all assessment results.</p> <p><input type="checkbox"/> It is not clear that results are shared with the faculty as a</p>	<p><input type="checkbox"/> Multiple faculty members are engaged in collecting and analyzing results.</p> <p><input checked="" type="checkbox"/> Results regularly are shared with the faculty.</p>	<p><input type="checkbox"/> All program faculty members are engaged in collecting and analyzing results.</p> <p><input type="checkbox"/> Faculty regularly and specifically reflect on students' recent achievement of</p>

	<input type="checkbox"/> No improvements (planned or actual) are identified. <input type="checkbox"/> No reflection is offered about previous results or plans.	<p>whole on a regular basis.</p> <input type="checkbox"/> Plans for improvement are provided, but they are not specific and/or do not clearly connect to the results. <input type="checkbox"/> Little reflection is offered about previous results or plans.	<input checked="" type="checkbox"/> The faculty regularly engages in meaningful discussions about the results of assessment. <input checked="" type="checkbox"/> These discussions lead to the development of specific, relevant plans for improvement. <input type="checkbox"/> Improvements in student learning have occurred as the result of assessment.	<p>performance goals and implement plans to adjust activities, expectations, outcomes, etc. according to established timelines.</p> <input type="checkbox"/> Faculty and other important stakeholders reflect on the history and impact of previous plans, actions, and results, and participate in the development of recommendations for improvement. <input type="checkbox"/> Continuous improvement in student learning occurs as the result of assessment. <input type="checkbox"/> Outcomes and results are easily accessible to stakeholders on/from the program website. <input type="checkbox"/> Assessment is integrated with teaching and learning.
Overall Rating	<input type="checkbox"/> Level 0 – Undeveloped	<input checked="" type="checkbox"/> Level 1 - Developing	<input type="checkbox"/> Level 2 – Mature	<input type="checkbox"/> Level 3 – Exemplary

Revised 02.01.17

Please list the program’s improved outcomes in the Student Learning Summary Report so that I can easily determine that they link appropriately to the assessment measures. (They do, and they are specific and measurable now—thank you.) The program used two measures to assess seven outcomes, and one them is direct. However, no details are provided about the evaluation completed by faculty. What are students expected to do? How is their success assessed? As was the case with the undergraduate program, only the director is involved in collecting and analyzing assessment data. But again, the faculty as a whole appears to be regularly engaged in reflecting on student learning and in devising plans to improve performance. Thank you!