Assessment Report Summaries
2017-2018

Biology

This AAR presents data from the assessment of the four-year curriculum in the Department of Biology. The assessment focused on two major aspects of student learning – an established knowledge base within the biological sciences and a demonstrable competency in regard to the analysis of data and the application of biological concepts. Data were collected from responses of senior students to a locally produced examination that emphasized a knowledge of fundamental concepts and the analysis of presented data. Overall, the results indicate that our students have a well-developed knowledge base in biology related concepts; however, a majority of the students struggled in their ability to apply the information, at least in the context of a rigorous exam. In the context of the first year courses, the Department of Biology has already initiated a curricular agenda that places greater emphasis on analysis of data and the application of concepts. Similar practices will be utilized in more advanced classes as we continue with our curricular changes.

Chemistry

The chemistry department is carrying out direct assessment of student learning through the incorporation of tracked questions in exams, quizzes, and assignments. This will allow us to look at the trajectory of individual students on their performance throughout the chemistry sequence. At this point in time, our new assessment strategy is in its infancy. Because we are tracking individual students throughout their four academic years, we anticipate that it will take 4-6 years to begin to gather data that will inform the direction of our efforts to improve student performance.

Computer Science

The Computer Science (CS) department administers a standardized test – the Major Field Test, developed by ETS – to all graduating seniors. This test provides an overall score for the department as well as subscores of three content areas that we can compare to other departments who administered the test. Two factors that complicate assessment are the small sample sizes and high variability in instruction quality. This year, we had just 7 graduating seniors, and the majority of courses in the major have been taught by visiting and adjunct faculty during their time here. Therefore, drawing meaningful conclusions from the results is difficult, but we look for any consistency and trends in the data. This year, our results show a continuation of our relatively high scores in one area ("Discrete Math and Algorithms") and drops in the other two ("Programming and Software Engineering" and "Architecture and Systems"). The latter might be explained by the staffing of the relevant courses when this cohort was taking them, but we will monitor the category in future cohorts.

Economics

The Department of Economics has conducted an assessment exercise on an annual basis over the last six years. Such diligence has been recognized by the assessment committee to all academic units and to the larger faculty body. Presently, the department is short-staffed and going through a transition phase with the recent resignation, retirement, and upcoming retirement of tenure-line faculty members. So, in the 2017-18 academic year we focused on our efforts in closing the assessment loop. We underscored the pedagogical and curriculum implications of our previous assessment exercises as we now have enough data to identify the strengths and weaknesses of our program. This has already led to certain curricular changes.

Another earlier student request was for more proof preparation before students get to upper-level courses that assume they are proficient at writing proofs. In response to that request, we developed a new Calculus sequence that merges the traditional Calculus sequence with the first-year Analysis sequence. The conceptual content of this new sequence is higher than that of the traditional sequence, which allows for greater emphasis on concepts and proof. The new sequence also incorporates computer skills. The first two courses in the sequence have a weekly computer lab component. The goal is to introduce basic programming skills early in the curriculum, thereby allowing more time for the development of specialized computational and programming skills in subsequent upper-level courses. We also moved our 400-level, proof-based courses to the 300 level (while keeping the same course contents) and moved some of our applied courses to the 400 level. This change was made to ensure continuity from sophomore year to junior year in terms of teaching concepts and proof writing, and also to provide an opportunity for offering applied courses with more theoretical content.

one learning tool starting in a Fall 2013 class that made the tenets of critical thinking more overt in an assignment. A decision to retain the CCTDI was made to assure analysis across decades of data and because no superior direct

practice. We know that we need to incorporate more assignments that give students instruction

toward the major or minor, requiring Introductory Sociology would negate Social Problems. Further, we were curious about how learning outcomes might differ between introductory-level courses.)

Hispanic Studies

In 2017-2018 academic year the Hispanic Studies Department assessed the critical thinking skills of students in one 400-level literature class using direct measure. Preliminary results show that our students are meeting our goals. Hispanic Studies is considering the creation of assessable learning goals for the obligatory study abroad requirement and also creating a signature work project.