Program Learning Goals template Please see resources on the Academic Planning website: http://air.sfsu.edu/assessment/resources

Department: Biology
College: College of Science and Engineering

List your learning goals prior to this semester.

The Biology Department is currently revising its Programmatic Student Learning Outcomes (SLOs), as well as SLOs for each of the emphases within the BS degree program, as part of the Teagle Curriculum Redesign Initiative. Below are the current Programmatic SLOs that we expect to revise by the end of the Spring 2017 semester:

1. Apply scientific habits of mind to all aspects of their professional efforts as a biologist.
2. Practice accessing peer-reviewed research in the biological sciences.
3. Evaluate student’s current skill set as a biologist and contract plans for iterative improvement
4. Practice crafting research questions, designing investigations, and collecting and interpreting results
5. Create materials for their professional portfolio as a biological professional

The revision of Programmatic SLOs will be organized around the National Science Foundation’s proposal for Vision and Change in the Biological Sciences. This proposal lists five core concepts and six core competencies that Biology students should master as part of their undergraduate education. The following paragraph taken from the Biology Teagle proposal describes the departmental goals for revising our Programmatic SLOs:

“The first issue our curriculum redesign will address is student learning. Our current curriculum is not systematically organized around a single set of SLOs. Some aspects of the Vision and Change proposal are more emphasized by one BS concentration than by others. For instance, a thorough background in the mechanisms underlying evolution is as important for ecologists for understand how new species develop as it is for pre-medical students in physiology to understand how antibiotic resistance develops. Despite the relevance of evolution to these disparate fields, an ecology major is likely to study the process of evolution in multiple classes while a physiology major may only study it in introductory biology. Similarly, all of our students in every BS program will benefit by developing their quantitative reasoning skills, regardless of whether they are a cell and molecular biology major or an ecologist. Ultimately, development of a set of programmatic SLOs organized around Vision and Change
will allow us to build curricula within each BS concentration that ensures our majors have mastered the knowledge and skills expected of modern biologists.”

Please address all questions. What was the process of revising your program learning goals this semester? How were department faculty members involved? Was it developed in department meetings or other gatherings?

We are actively engaged in revising the Program SLOs this academic year and anticipate finalizing the goals at the end of the Spring semester. To this end, all instructors have been asked to complete a survey regarding which of the core competencies and concepts from Vision and Change their courses address and to what extent they are addressed. We have scheduled a faculty workshop on 11/29/16 to review the results of the survey and to have faculty write SLOs that correspond to the core competencies and concepts addressed in their courses. These SLOs will then be used as a starting point for discussions during workshops and faculty meetings in the Spring to define a core set of Program SLOs for the Biology Department as a whole and supplementary sets of SLOs that are specific to particular emphases within the BS degree program.

What informed your discussions about your new or revised learning goals?

The discussion of student learning outcomes in Biology is taking place with the framework of the NSF Vision and Change proposal and is being driven by the desire to improve student graduation rates and to make sure that our students have mastered what we as a department think they ought to have mastered by the time they graduate from SFSU.

What are you new learning goals as of Fall 2016?

We are currently in the process of defining these learning goals and anticipate having finalized them by Spring 2017.

Give that this year you have revised your program learning goals, the next step would take one of them to assess in the academic year 2016-17. Please let the Associate Dean of Academic Planning know if that is not the case. Thank you!