Program Learning Goals Assessment Activity Report Due April 21, 2017 to the Office of Academic Planning

Program Learning Goals template Resources about writing measurable program learning objectives/goal/outcomes can be found on: http://air.sfsu.edu/assessment/resources

Program Learning Goals Rubric - developed and used by the University Academic Assessment Advisory Committee (UAAAC) to provide feedback to programs about their program learning goals.

Learning objectives should reflect the program's distinct mission in connection with the university's broader educational goals, as well as aligning with the individual courses in which they are addressed. They should allow faculty to communicate their expectations, students to reflect on their own growth, and programs to measure and improve their educational results.

<table>
<thead>
<tr>
<th>DEVELOPED</th>
<th>DEVELOPING</th>
<th>NEEDS DEVELOPMENT</th>
<th>ABSENT</th>
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</thead>
<tbody>
<tr>
<td>Learning goals are clear and can be accurately assessed</td>
<td>Learning goals are mostly clear; some can be assessed</td>
<td>Learning goals are present but vague; unclear how an evaluator could determine whether goals met</td>
<td>Program learning goals are absent or incomplete</td>
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Department _Chemistry & Biochemistry_

College _Science and Engineering_

1. List your most recent program learning goals prior to any revisions.

Undergrad Program

1. Demonstrate an understanding of key concepts and an ability to solve problems in the five chemistry sub-disciplines: analytical chemistry, biochemistry, inorganic chemistry, organic chemistry and physical chemistry.
2. Perform basic chemistry laboratory procedures, including the use of modern instrumentation, for the synthesis, separation, isolation, analysis and characterization of molecules.
3. Effectively communicate the results of scientific experiments in oral reports, technical graphics and written reports.
4. Demonstrate the retention and synthesis of prior learning in advanced classes.
5. Search the chemical literature for published work relevant to a project of interest, read and understand technical literature related to the discipline.
6. Draw on classroom knowledge to contribute to solutions of problems encountered in a laboratory.
7. Articulate an understanding of the relationship between chemistry and related disciplines such as biological science, materials science and environmental science.
8. Contribute to solving problems encountered in chemistry as part of a team.
9. Understand the key experiments that led to the development of chemical theories and models.

Graduate Program

1. Demonstrate in-depth knowledge in a subdiscipline of chemistry.
2. Organize and communicate scientific information clearly and concisely, both verbally and in writing.
3. Use the scientific literature to develop and implement a research project.
4. Demonstrate independence in designing and conducting experiments, analyzing data and interpreting results.
5. Keep accurate records of experiments and data.
6. Demonstrate an ability to engage in collaborative scientific activities in research and coursework.

2. Please describe the process of revising your program learning goals this semester. How were department faculty members involved? Were the revised learning goals developed in department meetings or other gatherings?

We initiated the process of revising our program learning goals in department meetings this semester. As interim department chair, I asked the faculty to consider the following in the review process.

a. Do our current learning outcomes, as written, reflect our current expectations?

b. Are our current learning outcomes clearly written and understandable by current and prospective students?

c. What are the measurable qualities that we should use in assessing whether we as a department are achieving the desired learning outcomes?

During the meetings, I asked the faculty to work in small groups on different learning outcomes using the guiding questions.

3. What informed your decision to revise your learning goals (e.g. changes in the profession, new focus of the department, outcome of assessment)?

At this point, we have not finished the revision as the discussions have been evolving. Given the importance of this task and how it may shape the direction of the department, I have elected to continue the revision process and not submit revisions that are incomplete.

4. What are your new program learning goals?

Please see the response to question 3.

Give that this year you have revised your program learning goals, the next step would be to assess one of them in the 2017-18 academic year and complete the Assessment Findings Report. Please let the Associate Dean of Academic Planning know if that is not the case. Thank you!