# Five Year Assessment Plan template

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PLO 1</td>
<td>Students take Biology Concept Assessment (on paper) adapted from multiple validated instruments—revised and added to by CSUEB biology faculty; occurs at end of Spring term in capstone courses and any additional senior-level courses with faculty willing to participate</td>
<td></td>
<td></td>
<td></td>
<td>Students take Biology Concept Assessment (on paper) adapted from multiple validated instruments—revised and added to by CSUEB biology faculty; occurs at end of Spring term in capstone courses and any additional senior-level courses with faculty willing to participate</td>
</tr>
<tr>
<td>PLO 2</td>
<td>Students take BioSQuaRE online assessment tool for QR at end of Spring term in capstone courses and any additional senior-level courses with faculty willing to participate</td>
<td></td>
<td></td>
<td></td>
<td>Students take BioSQuaRE online assessment tool for QR at end of Spring term in capstone courses and any additional senior-level courses with faculty willing to participate</td>
</tr>
<tr>
<td>PLO 3</td>
<td>PLOs 3-5 bundled together in one assessment cycle, because they are easily assessed together using the same types of assignments. Students complete key signature assignments in capstone courses and any additional senior-level courses with faculty willing to participate; these will be ongoing assessments throughout the year. Rubrics embedded in Bb with criteria for biological communication, scientific method, and information literacy applied to signature assignments uploaded to Bb.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLO 4</td>
<td>PLOs 3-5 bundled together in one assessment cycle.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLO 5</td>
<td>PLOs 3-5 bundled together in one assessment cycle.</td>
<td>5-Year Program Review</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Closing the Loop: Programs will provide a narrative discussion of annual assessment results, analysis of those results, and any changes made as a result. This includes curriculum changes, pedagogy changes, changes in PLO’s, course SLO’s, etc. These results will be reported to CAPR.

1 Capstone Courses are designated for each Concentration/Pathway and are as follows:
   - Cell and Molecular Biology Concentration:
     - Cell and Molecular Biology Pathway: BIOL 426 Advanced Molecular and Cell Biology
     - Forensic Science: BIOL 426 Advanced Molecular and Cell Biology
     - Microbiology and Biomedical Lab Sciences: BIOL 430 Microbial Physiology and Metabolism
   - Integrative Biology Concentration
     - Physiology Pathway: BIOL 488 Environmental Physiology
     - Ecology and Evolution Pathway: BIOL 469 Conservation Biology

2 Undergraduate Program Student Learning Outcomes

Students graduating with a B.S. or B.A. in Biological Sciences from Cal State East Bay will be able to

PLO 1. demonstrate a basic mastery of biological concepts, particularly in the areas of evolution, cell/molecular biology, ecology, physiology, and organismal biology;

PLO 2. demonstrate the ability to reason analytically and quantitatively;

PLO 3. clearly communicate biological information in a variety of formats (written, oral, graphical, computational) using a style appropriate for the intended audience;

PLO 4. apply methods of scientific inquiry—specifically, students will be able to formulate testable hypotheses, collect and analyze data;

PLO 5. gather, interpret, and evaluate published scientific information.

3 Assessment Cycles

All five SLOs will be assessed in three-year cycles as follows.

I. Cycle 1
   - SLO 2 – BioSQuaRE (Quantitative Reasoning Assessment)

II. Cycle 2
   - SLO 1 – Biology Concept Assessment (basic mastery of key biological concepts)

III. Cycle 3. Bundled together, because same key signature assignments can serve as assessment for these linked SLOs.
- SLO 3 – Rubric for Assessment of Biological Communication
- SLO 4 – Rubric for Assessment of Scientific Method
- SLO 5 – Rubric for Assessment of Information Literacy