2015-2016
Annual Assessment Report Template

For instructions and guidelines visit our **website**
or **contact us** for more help.

Report: | BS/BA Biology

Question 1: Program Learning Outcomes

Q1.1.
Which of the following Program Learning Outcomes (PLOs) and Sac State Baccalaureate Learning Goals (BLGs) **did you assess?** [**Check all that apply**]

- ☑ 1. Critical Thinking
- ☑ 2. Information Literacy
- ☑ 3. Written Communication
- ☑ 4. Oral Communication
- ☑ 5. Quantitative Literacy
- ☐ 6. Inquiry and Analysis
- ☐ 7. Creative Thinking
- ☐ 8. Reading
- ☐ 9. Team Work
- ☐ 10. Problem Solving
- ☐ 11. Civic Knowledge and Engagement
- ☐ 12. Intercultural Knowledge and Competency
- ☐ 13. Ethical Reasoning
- ☐ 14. Foundations and Skills for Lifelong Learning
- ☐ 15. Global Learning
- ☐ 16. Integrative and Applied Learning
- ☐ 17. Overall Competencies for GE Knowledge
- ☐ 18. Overall Competencies in the Major/Discipline
- ☐ 19. Other, specify any assessed PLOs not included above:

a. [   ]
b. [   ]
c. [   ]

Q1.2.
Please provide more detailed background information about **EACH PLO** you checked above and other information such as how your specific PLOs are **explicitly** linked to the Sac State BLGs:

Critical thinking falls under intellectual and practical skills in the Baccalaureate Learning Goals.

Q1.2.1.
Do you have rubrics for your PLOs?

- ○ 1. Yes, for all PLOs
- ○ 2. Yes, but for some PLOs
- ○ 3. No rubrics for PLOs
- ○ 4. N/A

○ 5. Other, specify: | The data collected in 2015-16 were self assessment data collected during a gradu... |

Q1.3.
Are your PLOs closely aligned with the mission of the university?

◉ 1. Yes

○ 2. No

○ 3. Don't know

Q1.4.
Is your program externally accredited (other than through WASC Senior College and University Commission (WSCUC))?

○ 1. Yes

◉ 2. No (skip to **Q1.5**)

○ 3. Don't know (skip to **Q1.5**)

Q1.4.1.
If the answer to Q1.4 is **yes**, are your PLOs closely aligned with the mission/goals/outcomes of the accreditation agency?

○ 1. Yes

○ 2. No

○ 3. Don't know

Q1.5.
Did your program use the *Degree Qualification Profile* (DQP) to develop your PLO(s)?

○ 1. Yes

◉ 2. No, but I know what the DQP is

○ 3. No, I don't know what the DQP is

○ 4. Don't know

Q1.6.
Did you use action verbs to make each PLO measurable?

○ 1. Yes

◉ 2. No

○ 3. Don't know

(**Remember**: Save your progress)

Question 2: Standard of Performance for the Selected PLO

Q2.1.
Select **ONE(1)** PLO here as an example to illustrate how you conducted assessment (be sure you *checked the correct box* for this PLO in Q1.1):

| Critical Thinking |

Q2.1.1.
Please provide more background information about the **specific PLO** you've chosen in Q2.1.

During the 2015-2016 academic year, we had planned to use a validated test of critical thinking, the Critical Thinking Assessment Test (CAT) to compare to the data collected in 2014-15 as part of an embedded assignment. However, we were unable to get the CAT exams graded in time for the current assessment report. Therefore, the data we are presenting this year are from a graduating senior survey where we have asked students to self- evaluate their competency for the five PLOs shown in 1.1 above. The survey link was sent to 140 graduating seniors in Biological Sciences and we received 42 responses. For questions related to learning outcomes, only 30 students responded.

Q2.2.
Has the program developed or adopted **explicit** standards of performance for this PLO?

○ 1. Yes

○ 2. No

○ 3. Don't know

○ 4. N/A

Q2.3.
Please **provide the rubric(s)** and **standards of performance** that you have developed for this PLO here or in the appendix.

n/a

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Q2.4. PLO	Q2.5. Stdrd	Q2.6. Rubric	Please indicate where you have published the **PLO**, the **standard** of performance, and the **rubric** that was used to measure the PLO:
☑	☐	☐	1. In **SOME** course syllabi/assignments in the program that address the PLO
☑	☐	☐	2. In **ALL** course syllabi/assignments in the program that address the PLO
☐	☐	☐	3. In the student handbook/advising handbook
☐	☐	☐	4. In the university catalogue
☐	☐	☐	5. On the academic unit website or in newsletters
☑	☐	☐	6. In the assessment or program review reports, plans, resources, or activities
☑	☐	☐	7. In new course proposal forms in the department/college/university
☐	☐	☐	8. In the department/college/university's strategic plans and other planning documents
☐	☐	☐	9. In the department/college/university's budget plans and other resource allocation documents
☐	☐	☐	10. Other, specify:

Question 3: Data Collection Methods and Evaluation of Data Quality for the Selected PLO

Q3.1.
Was assessment data/evidence **collected** for the selected PLO?

◉ 1. Yes

○ 2. No (skip to **Q6**)

○ 3. Don't know (skip to **Q6**)

○ 4. N/A (skip to **Q6**)

Q3.1.1.
How many assessment tools/methods/measures **in total** did you use to assess this PLO?

1

Q3.2.
Was the data **scored/evaluated** for this PLO?

◉ 1. Yes

○ 2. No (skip to **Q6**)

○ 3. Don't know (skip to **Q6**)

○ 4. N/A (skip to **Q6**)

Q3.2.1.
Please describe how you collected the assessment data for the selected PLO. For example, in what course(s) or by what means were data collected:

Graduating seniors received an email asking them to complete a survey. We sent email reminders three times over a four week period starting in the week before graduation and ending in mid-June, 2016.

(**Remember**: Save your progress)

Question 3A: Direct Measures (key assignments, projects, portfolios, etc.)

Q3.3.
Were direct measures (key assignments, projects, portfolios, course work, student tests, etc.) used to assess this PLO?

- ○ 1. Yes
- ◉ 2. No (skip to **Q3.7**)
- ○ 3. Don't know (skip to **Q3.7**)

Q3.3.1.
Which of the following direct measures were used? [**Check all that apply**]

- ☐ 1. Capstone project (e.g. theses, senior theses), courses, or experiences
- ☐ 2. Key assignments from required classes in the program
- ☐ 3. Key assignments from elective classes
- ☐ 4. Classroom based performance assessment such as simulations, comprehensive exams, or critiques
- ☐ 5. External performance assessments such as internships or other community-based projects
- ☐ 6. E-Portfolios
- ☐ 7. Other Portfolios
- ☐ 8. Other, specify:

Q3.3.2.
Please **explain** and **attach** the direct measure you used to collect data:

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Q3.4.
What tool was used to evaluate the data?

- ○ 1. **No** rubric is used to interpret the evidence (skip to **Q3.4.4.**)
- ○ 2. Used rubric developed/modified by the faculty who teaches the class (skip to **Q3.4.2.**)
- ○ 3. Used rubric developed/modified by a group of faculty (skip to **Q3.4.2.**)
- ○ 4. Used rubric pilot-tested and refined by a group of faculty (skip to **Q3.4.2.**)
- ○ 5. The VALUE rubric(s) (skip to **Q3.4.2.**)
- ○ 6. Modified VALUE rubric(s) (skip to **Q3.4.2.**)
- ○ 7. Used other means (Answer **Q3.4.1.**)

Q3.4.1.
If you used other means, which of the following measures was used? [**Check all that apply**]

☐ 1. National disciplinary exams or state/professional licensure exams (skip to **Q3.4.4.**)

☐ 2. General knowledge and skills measures (e.g. CLA, ETS PP, etc.) (skip to **Q3.4.4.**)

☐ 3. Other standardized knowledge and skill exams (e.g. ETC, GRE, etc.) (skip to **Q3.4.4.**)

☐ 4. Other, specify: _____ (skip to **Q3.4.4.**)

Q3.4.2.
Was the **rubric** aligned directly and explicitly **with the PLO**?

○ 1. Yes

○ 2. No

○ 3. Don't know

○ 4. N/A

Q3.4.3.
Was the **direct measure** (e.g. assignment, thesis, etc.) aligned directly and explicitly **with the rubric**?

○ 1. Yes

○ 2. No

○ 3. Don't know

○ 4. N/A

Q3.4.4.
Was the **direct measure** (e.g. assignment, thesis, etc.) aligned directly and explicitly **with the PLO**?

○ 1. Yes

○ 2. No

○ 3. Don't know

○ 4. N/A

Q3.5.
How many faculty members participated in planning the assessment data **collection** of the selected PLO?

Q3.5.1.
How many faculty members participated in the **evaluation** of the assessment data for the selected PLO?

Q3.5.2.
If the data was evaluated by multiple scorers, was there a norming process (a procedure to make sure everyone was scoring similarly)?

○ 1. Yes

○ 2. No

○ 3. Don't know

○ 4. N/A

Q3.6.
How did you **select** the sample of student work (papers, projects, portfolios, etc.)?

Q3.6.1.
How did you **decide** how many samples of student work to review?

Q3.6.2.
How many students were in the class or program?

Q3.6.3.
How many samples of student work did you evaluated?

Q3.6.4.
Was the sample size of student work for the direct measure adequate?

○ 1. Yes

○ 2. No

○ 3. Don't know

(**Remember**: Save your progress)

Question 3B: Indirect Measures (surveys, focus groups, interviews, etc.)

Q3.7.
Were indirect measures used to assess the PLO?

◉ 1. Yes

○ 2. No (skip to **Q3.8**)

○ 3. Don't Know (skip to **Q3.8**)

Q3.7.1.
Which of the following indirect measures were used? [**Check all that apply**]

☐ 1. National student surveys (e.g. NSSE)

☐ 2. University conducted student surveys (e.g. OIR)

☑ 3. College/department/program student surveys or focus groups

☐ 4. Alumni surveys, focus groups, or interviews

☐ 5. Employer surveys, focus groups, or interviews

☐ 6. Advisory board surveys, focus groups, or interviews

☐ 7. Other, specify: [_____]

Q3.7.1.1.
Please explain and attach the indirect measure you used to collect data:

[   ]

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Q3.7.2.
If surveys were used, how was the sample size **decided**?

The survey link was sent to all graduating seniors in Spring 2017 (140 total)

Q3.7.3.
If surveys were used, how did you **select** your sample:

n/a

Q3.7.4.
If surveys were used, what was the response rate?

30%

Question 3C: Other Measures (external benchmarking, licensing exams, standardized tests, etc.)

Q3.8.
Were external benchmarking data, such as licensing exams or standardized tests, used to assess the PLO?

○ 1. Yes

◉ 2. No (skip to **Q3.8.2**)

○ 3. Don't Know (skip to **Q3.8.2**)

Q3.8.1.
Which of the following measures was used? [**Check all that apply**]

☐ 1. National disciplinary exams or state/professional licensure exams

☐ 2. General knowledge and skills measures (e.g. CLA, ETS PP, etc.)

☐ 3. Other standardized knowledge and skill exams (e.g. ETC, GRE, etc.)

☐ 4. Other, specify: [_____]

Q3.8.2.
Were other measures used to assess the PLO?

○ 1. Yes

◉ 2. No (skip to **Q4.1**)

○ 3. Don't know (skip to **Q4.1**)

Q3.8.3.
If other measures were used, please specify:

[   ]

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Question 4: Data, Findings, and Conclusions

Q4.1.
Please provide simple tables and/or graphs to summarize the assessment data, findings, and conclusions for the selected PLO for **Q2.1**:

The graduating senior survey that we conducted was meant to address two separate sets of questions. The Learning Outcome assessment was comprised of five questions that were intended to understand student perceptions of learning in oral communication, written communication, information literacy, critical thinking and quantitative literacy. The remaining questions in the survey were intended to understand how many of our students had the opportunity to participate in undergraduate research experiences. The student responses to the learning outcomes are given below:

Question:	Strongly agree	Agree	Neutral	Disagree	Strongly disagree

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Q4.2.
Are students doing well and meeting the program standard? If not, how will the program work to improve student performance of the selected PLO?

n/a

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Q4.3.
For the selected PLO, the student performance:

○ 1. **Exceeded** expectation/standard

○ 2. **Met** expectation/standard

○ 3. **Partially** met expectation/standard

○ 4. Did not meet expectation/standard

◉ 5. No expectation/standard has been specified

○ 6. Don't know

Question 4A: Alignment and Quality

Q4.4.
Did the data, including the direct measures, from all the different assessment tools/measures/methods directly align with the PLO?

◉ 1. Yes

○ 2. No

○ 3. Don't know

Q4.5.
Were **all** the assessment tools/measures/methods that were used good measures of the PLO?

○ 1. Yes

○ 2. No

◉ 3. Don't know

Question 5: Use of Assessment Data (Closing the Loop)

Q5.1.
As a result of the assessment effort and based on prior feedback from OAPA, do you anticipate *making any changes* for your program (e.g. course structure, course content, or modification of PLOs)?

○ 1. Yes

○ 2. No (skip to **Q5.2**)

◉ 3. Don't know (skip to **Q5.2**)

Q5.1.1.
Please describe *what changes* you plan to make in your program as a result of your assessment of this PLO. Include a description of how you plan to assess the impact of these changes.

Q5.1.2.
Do you have a plan to assess the *impact of the changes* that you anticipate making?

○ 1. Yes

○ 2. No

○ 3. Don't know

Q5.2.

How have the assessment data from the last annual assessment been used so far? [**Check all that apply**]	1. Very Much	2. Quite a Bit	3. Some	4. Not at All	5. N/A
1. Improving specific courses	○	○	◉	○	○
2. Modifying curriculum	○	○	○	◉	○
3. Improving advising and mentoring	○	○	○	○	◉

	1	2	3	4	5
4. Revising learning outcomes/goals	○	○	○	●	○
5. Revising rubrics and/or expectations	●	○	○	○	○
6. Developing/updating assessment plan	○	○	○	●	○
7. Annual assessment reports	●	○	○	○	○
8. Program review	○	○	○	●	○
9. Prospective student and family information	○	○	○	●	○
10. Alumni communication	○	○	○	●	○
11. WSCUC accreditation (regional accreditation)	○	○	○	●	○
12. Program accreditation	○	○	○	●	○
13. External accountability reporting requirement	○	○	○	●	○
14. Trustee/Governing Board deliberations	○	○	○	●	○
15. Strategic planning	○	○	●	○	○
16. Institutional benchmarking	○	○	○	●	○
17. Academic policy development or modifications	○	○	○	●	○
18. Institutional improvement	○	○	●	○	○
19. Resource allocation and budgeting	○	○	○	●	○
20. New faculty hiring	○	○	○	●	○
21. Professional development for faculty and staff	○	○	●	○	○
22. Recruitment of new students	○	○	○	●	○

23. Other, specify:

Q5.2.1.

Please provide a detailed example of how you used the assessment data above:

Faculty in the Department of Biological Sciences reviewed the assessment data during the process of scoring student work.   During this process, several questions came about regarding the writing assignment and also how few students were meeting the expectation that we had in their work. There was some discussion regarding how the prompt could be revised to provide a more appropriate assessment of student ability. Furthermore, there was some discussion of scaffolding these learning outcomes more explicitly into the core courses in the curriculum.

(**Remember**: Save your progress)

Additional Assessment Activities

Q6.

Many academic units have collected assessment data on aspect of their program *that are not related to the PLOs* (i.e. impacts of an advising center, etc.). **If** your program/academic unit has collected data on program *elements*, please briefly report your results here:

In addition to surveying learning outcomes, we surveyed students in Biological Sciences to understand their plans after graduation from Sacramento State. These data indicate that 29/42 of respondents (53%) intend to apply to a graduate or professional program within the next two years. Of these, 14/42 respondents (33%) have already been accepted into a post-graduate program (Masters program, Pharmacy School, Teacher Credential Program, etc.). Furthermore, we asked students if they had accepted a job related to their Biology degree after graduation, and 4/42 responded yes (10%), although 26/38 (68%) said that they intended to apply for jobs in a Biology related field in the next year. Students were also asked about participation in research and internship programs during their undergraduate experience. Of these, 11/42 (26%) participated in undergraduate research outside of class and 18/41 (44%) participated in a non-research based internship.

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Q7.

What PLO(s) do you plan to assess next year? [**Check all that apply**]

☐ 1. Critical Thinking

- [ ] 2. Information Literacy
- [ ] 3. Written Communication
- [ ] 4. Oral Communication
- [ ] 5. Quantitative Literacy
- [ ] 6. Inquiry and Analysis
- [ ] 7. Creative Thinking
- [ ] 8. Reading
- [ ] 9. Team Work
- [ ] 10. Problem Solving
- [ ] 11. Civic Knowledge and Engagement
- [ ] 12. Intercultural Knowledge and Competency
- [ ] 13. Ethical Reasoning
- [ ] 14. Foundations and Skills for Lifelong Learning
- [ ] 15. Global Learning
- [ ] 16. Integrative and Applied Learning
- [ ] 17. Overall Competencies for GE Knowledge
- [ ] 18. Overall Competencies in the Major/Discipline
- [ ] 19. Other, specify any PLOs not included above:

a. _____

b. _____

c. _____

Q8. Please attach any additional files here:

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Q8.1.
Have you attached any files to this form? If yes, please list every attached file here:

Program Information (**Required**)

P1.
Program/Concentration Name(s): [by degree]

BS/BA Biology

P1.1.
Program/Concentration Name(s): [by department]

Biology BS/BA

P2.
Report Author(s):

P2.1.
Department Chair/Program Director:

P2.2.

Assessment Coordinator:

P3.
Department/Division/Program of Academic Unit

Biological Sciences

P4.
College:

College of Natural Science & Mathematics

P5.
Total enrollment for Academic Unit during assessment semester (see Departmental Fact Book):

P6.
Program Type:

- ◉ 1. Undergraduate baccalaureate major
- ○ 2. Credential
- ○ 3. Master's Degree
- ○ 4. Doctorate (Ph.D./Ed.D./Ed.S./D.P.T./etc.)
- ○ 5. Other, specify:

P7. Number of **undergraduate degree programs** the academic unit has?

Don't know

P7.1. List all the names:

P7.2. How many concentrations appear on the diploma for this undergraduate program?

Don't know

P8. Number of **master's degree programs** the academic unit has?

Don't know

P8.1. List all the names:

P8.2. How many concentrations appear on the diploma for this master's program?

Don't know

P9. Number of **credential programs** the academic unit has?

Don't know

P9.1. List all the names:

P10. Number of **doctorate degree programs** the academic unit has?

Don't know

P10.1. List all the names:

When was your **assessment plan**...	1. Before 2010-11	2. 2011-12	3. 2012-13	4. 2013-14	5. 2014-15	6. No Plan	7. Don't know
P11. developed?	○	○	○	○	○	○	○
P11.1. last updated?	○	○	○	○	○	○	○

P11.3.
Please attach your latest **assessment plan**:

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P12.
Has your program developed a **curriculum map?**

○ 1. Yes

○ 2. No

○ 3. Don't know

P12.1.
Please attach your latest **curriculum map**:

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P13.
Has your program indicated in the curriculum map where assessment **of student learning** occurs?

○ 1. Yes

○ 2. No

○ 3. Don't know

P14.
Does your program have a capstone class?

○ 1. Yes, indicate:

○ 2. No

○ 3. Don't know

P14.1.
Does your program have **any** capstone project?

- ○ 1. Yes
- ○ 2. No
- ○ 3. Don't know

(**Remember**: Save your progress)