

PROGRAM REVIEW Fall 2022

Program: Biology

Division: Science, Technology, Engineering and Mathematics

Date: 11/1/22

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SLO/SAO Point-Person: Dana Nakase

Audience: Deans, Vice Presidents of Student Services and Academic Services, All Planning and Allocation Committees. This document will be available to the public.

Uses: This Program Review will be used to inform the campus and community about your program. It will also be used in creating Division Summaries, determining College Planning Priorities, and allocating resources. The final use is to document fulfillment of accreditation requirements.

Please note: Program Review is NOT in itself a vehicle for making requests. All requests should be made through appropriate processes (e.g., Instructional Equipment Request Process) or directed to your Dean or supervisor.

Time Frame: This Program Review should reflect on program status during the 2022-23 academic year. It should describe plans starting now and continuing through 2023-24.

Sections: There are two sections to this document. Sections and questions identify the name of the committee or office that will use the information and where you can get additional help.

- The first section focuses on general program reflection and planning.
- The second section focuses on data analysis, including SLOs/SAOs/PSLOs
- The final section is a review of your pathway maps and curriculum, to be filled out only by programs with curriculum offerings.

Topics: The Program Review Glossary defines key terms. Writers should review this glossary before writing: <https://bit.ly/2LqPxOW>

For Help: Contact Nadiyah Taylor: ntaylor@laspositascollege.edu.

A list of contacts for help with specific sections is provided on the Program Review website under the “tools for writers” tab. [<https://bit.ly/3fY7Ead>]

Instructions:

- 1) Please respond to each question with enough detail to present your information, but it doesn't have to be very long.
- 2) If the requested information does not apply to your program, write "Not Applicable."
- 3) Optional/suggested: Communicate with your dean while completing this document.
- 4) Send an electronic copy of this form to Nadiyah Taylor and your dean **by November 1, 2022**

Helpful Links:

[Program Review Home Page](#)

[Fall 2021 Program Reviews](#)

[Frequently Asked Questions](#)

Throughout this document you'll see that equity is a guiding principle.

Here is the LPC definition:

Las Positas College will achieve equity by changing the impacts of structural racism, ableism, homophobia, and systematic poverty on student success and access to higher education, achieved through continuous evaluation and improvement of all services. We believe in a high-quality education focused on learning and an inclusive, culturally-relevant environment that meets the diverse needs of all our students.

LPC Equity Definition: Equity is parity in student educational outcomes. It places student success and belonging for students of color and disproportionately impacted students at the center of focus.

Section One: Your Program In 21-22 – Please check N/A where relevant

A. Accomplishments: Identify accomplishments from the 21-22 AY.

Some areas you may want to note in your explanation are:

- Did your accomplishments support your program's plans identified in 21-22 PR
- Did they relate to guided pathways, and/or
- Did they support areas in the equity definition above

_____ N/A

Accomplishments
1 We hired a new faculty member to teach Cellular and Molecular biology. This has been a top priority for our program and was identified in the 2021-2022 Program Review.
2 We developed new Smart Shops for anatomy and for microscope skills. These Smart Shops were designated for students that did not have face-to-face labs during the COVID-19 pandemic. The Smart Shops were designed to promote student success and retention in our Allied Health program because the hands-on Anatomy skills and microscope skills are foundational to the series. Both students and faculty felt these workshops promoted student skills and confidence.
3 We submitted a successful California Learning Lab Grant (\$394K) with a team of faculty from community college (Las Positas and Diablo Valley), California State University (Stan State) and University of California (UC Berkeley). We will create two cohorts of year-long, cross-institution Communities of Practice to support faculty in adopting and iteratively developing active learning modules that are inclusive, group-based, and assessment-driven. The grant aims to promote student belonging and STEM identity. Two biology faculty ran a workshop at Flex Day F2022 to expose faculty to education materials we developed with a prior CA Learning Lab Seed grant and promote the new Community of Practice.
4 Thanks to work by Dean Ho we partnered with the San Jose State University Center for Advancing Women in Technology on a grant with their Applied Programming Experiences (APEX) program (\$75K). One LPC Biology faculty and one LPC Math faculty member are the lead faculty on the LPC based grant. LPC was the pilot school to help test and develop faculty learning communities to support faculty in embedding new Python-based computing modules into existing Statistics and Biology courses. We have two Biology faculty in the LPC based learning community and have implemented modules in multiple sections of three biology classes. This grant aims to expose all students to new career and education opportunities in interdisciplinary computing.

5 We established a partnership with the University of California, Division of Agriculture and Natural Resources, to offer the California Naturalist Program at LPC. This was one of our plans mentioned in prior program reviews. We offered the initial cohort in Spring 2022 through the LPC Community Education Program. The class was full with a waitlist and exposed community members to LPC. We adjusted our Field Biology class to have a P/NP option so that community members will be more likely to take it when we offer the California Naturalist Certificate program as part of Field Biology. Offering as a LPC class will allow us to reduce costs and make it more accessible to LPC students.

6 We updated the pre-reqs for BIO 2A. We asked the LPC Institutional Research office to do an analysis of how many students were eligible to take Bio2A with the previous pre-reqs. The number of students eligible was extremely low so we removed a number of the pre-reqs to make the class more accessible to all students. It will now be a general education class that students can take early in their career. Our new Cell and Molecular full-time faculty member plans to lead this class and offer it in the 2023-2024 academic school year. This change pairs well with our new Python lab in Biology 30, because Biology 30 is one possible prerequisite for the class. We advertised Bio 2A and the Computation Biology degree and certificate during the new Python based labs that we added as part of the APEX grant (see above).

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B. Challenges, Pain Points, and Needs:

What significant challenges or obstacles did your Program face during AY 21-22 especially related to accomplishing program goals/plans? You may want to consider areas in the equity definition on page 2.

_____ N/A

Challenges/Pain Points/Needs

1. We need more full-time faculty for Allied Health courses. These courses are typically the first to fill during registration, often with waitlists that fill too. Impacted courses affect our students negatively, unnecessarily increasing their time to completion, and causing students to take allied health courses at other community colleges.

Finding highly qualified adjuncts to teach in these areas has been problematic since we compete with surrounding community colleges for the limited pool of specialized adjuncts. Employing a faculty member who is less than highly qualified to teach in Allied Health is a disservice to our students, both in persistence in the allied health pathway - especially for historically underserved minority populations - and in preparation for highly competitive professional programs. We have put many hours into training part time faculty and then have lost many of them to other colleges who are hiring for full-time positions.

Moreover, more full-time faculty members in Allied Health would bring more consistency in instruction, mentoring opportunities for students, independent studies, and honors projects.
2. One obstacle that our program faces is the need for more facilities and specialty faculty due to the size of the program. With the exception of section cuts due to COVID-19, we typically add classes to the schedule to meet students' needs, which results in back-to-back labs and lectures. This has led to increased challenges with scheduling in our existing lab space, and with the lab technicians' ability to prepare for the lab classes. There are current discussions about moving the campus to a shortened calendar, this would prove a major challenge to fitting in the same number of sections in one semester.
3. Biology and Chemistry faculty collaborate on the Environmental Studies and Environmental Science program with no dedicated faculty-lead to coordinate efforts. This is a slow-going process by nature, as it is an interdisciplinary field, and requires a significant amount of time and energy.
4. In all of our laboratory courses, lab activities and lab manuals need reviewing and reevaluation to improve student learning, ideally with more inquiry-based instruction. For this, full-time faculty have to collaborate with part-time faculty and lab technicians, which takes a significant amount of time.
5. Our department would like to learn more about equity issues in our classrooms and how these issues impact enrollments in our classes.
6. There are discussions taking place concerning a shortened semester, which would affect scheduling our classes and labs, thereby further compounding the problem of our limited space.
7. Many Biotechnology related activities require reagents that expire yearly and aren't included in the current supply budget. Many of our course-level and program-level SLOs reflect student competency in lab skills using industry-level equipment. There is currently no budget for fixing any equipment.
8. We still do not have an efficient system in place for students to check out supplies such as insect nets and binoculars. An electronic check-out system would help students keep track of due dates, and avoid late fees and holds on registration.
9. Most of our classes are back in person, however there are changing student and faculty expectations about how in-person classes are run. During the pandemic period when most courses were online, we relied heavily on online material, and we now need to readjust our teaching methodologies, for example to determine what online aspects should be retained for in-person classes.
10. We have struggled in many classes with student attendance. The school has a clearly stated attendance requirement policy, but with COVID still occurring and students asked to not come in when sick, expectations are now different. We are working to navigate varying levels of missed classes.
11. We need to improve and streamline our onboarding process for new part-time faculty, especially for last minute hires. We spend a large quantity of time hiring new staff each semester, and many extra hours onboarding new individuals. We have realized that some updated form of onboarding for lab classes would be extremely useful.
12. The district scheduling of academic calendars and class schedules lags behind other districts in the Bay Area. This affects our ability to recruit high quality full-time faculty, after other colleges have completed their recruiting from the same applicant pool. It also affects our ability to rehire part-time faculty each semester, and forces us to hire new part-time faculty more often.

C. Reflecting on your program's experiences from 2020 - to 2022, what innovations or new processes did you integrate that you would like to continue?

_____ N/A

From 2020 to 2022, we have experimented with a variety of innovations and processes to practice teaching more effectively through a pandemic; we expect to continue the use of some of these tools. Both BIO50 Anatomy and Physiology and BIO7C Microbiology were taught using 'flipped classrooms' by one instructor, who continues this practice. Many instructors have continued to use Zoom as a communication tool for hybrid classes, office hours, and meetings, and have felt this ease of access is useful for connecting with students.

Both BIO30 Introduction to College Biology and BIO50 Anatomy and Physiology were taught in online-only modalities, and this seems to be in high demand from our students, therefore we expect to continue offering a double section of each online. BIO30 also utilized the creation of take-home kits for students to complete hands-on labs at home, and this has been essential in providing a high quality lab for students in their own homes.

Many different classes have utilized more technology-based tools to encourage student learning, student interactions, and to promote discussions. Specifically, we have added computer-based labs in both BIO1A Botany and BIO1B Zoology, which have replaced older, less advanced or less interesting labs that were previously taught. We were forced to get very creative over the past few years, and some of that creativity has substantially improved these labs.

D. Explain one way that your program is connected to the College Mission and/or Educational Master Plan. Identify the specific elements.

- [College Mission](#)
- [Educational Master Plan](#) (see pages 72-76)

_____ N/A

One way that our program is connected to the College Mission is that we have been building, testing out, and implementing innovative new labs for a variety of our Biology courses. The new curriculum content and activities have been grant-funded, so that faculty and staff have either had release time or have been paid to build and improve new labs that provide improved **educational opportunities for students**. They are **learning-centered**, built with our students in mind, and increase the integration of more modern equipment and methodologies into our labs, some of which needed updating. This newer technology in labs has a double benefit: it exposes all of our students to these higher-level techniques, which can help alleviate **equity** issues for students who would otherwise not gain experience with modern labs; additionally experience with these updated techniques helps students to be more competitive in the **technical-career** environment.

E. Planning: What are the most important plans, either new or continuing, for your Program?

_____ N/A

Plan	New	Continuing	Short term	Long term
We are applying for a full-time faculty hire in the specialty area of Anatomy and Allied Health. We have had significant turnover of our highly qualified PT faculty for Anatomy (BIO7A) and Physiology (BIO7B) classes. A significant amount of hours are used each semester to search for, interview, hire, and onboard and train new instructors in this area. Since 2019 we have been applying for new full-time faculty members in the Allied Health area. The department's continued growth of sections has resulted in a low full-time to part-time faculty ratio.		x		x
Planning for a new Science Building is another short- and long-term goal. We plan to re-evaluate the plans made pre-pandemic in the Facilities Master Plan, to update our plans for the new building.		x	x	x
We plan to work with the lead lab technician and Dean to assess that our supply budget is able to fund the new kits and unexpected expenses for our lab courses. We currently only have lab kits for three courses, and will likely want to purchase kits for other classes in the future such as BIO30 and BIO10		x		x
Our department would like to learn more about, and hopefully decrease, potential areas of inequity for students in our programs. This will involve collaboration with adjunct faculty, the Student Equity committee, and the Office of Research, Planning and Institutional Effectiveness. This is both a short- and long-term goal.		x		x
As part of Guided Pathways, we are continuing to examine our degree requirements, course scheduling, and potential completion barriers for students. This often requires extensive collaboration with faculty in other disciplines that offer courses required for biology degrees and certificates. This is a short- and long-term goal.		x	x	x
We are turning the BioTech Bootcamp from a community Ed class into 2 non-credit classes.		x	x	
One of our full-time faculty members is preparing our BIO 50 course (Human Anatomy & Physiology) for OEI approval. We are hoping to run it for the first		x	x	x

time in the fall of 22. Our plan is to regularly offer one section of BIO 50 as an online alternative.				
We are working on integrating new curriculum into multiple lab classes through grant-supported work. This includes bioinformatics-based labs for BIO30, DNA Barcoding in BIO1C, and ELISA-based labs for BIO1B and BIO1C.	x		x	x

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F. If you have outreached to students in your department, program, or classes, please share information about what you discovered and how you have used the feedback.

_____N/A

Describe student outreach used to gather feedback. For example, through surveys, conversations, etc.	We conducted student surveys as part of our grant work on the CA Learning Lab Seed Grant. We also conducted surveys on new lab materials that we developed for Biology 1A as part of our NSF Applied Technical Education Grant.
What did you learn?	We are still waiting to hear back from our partners at UC Berkeley about the 2022 data from student experience surveys. We surveyed students before and after they participated in the new set of Biotechnology Labs in General Botany in Fall 2021 and Spring 2022. After completing the module students were more interested in a career in biotechnology (2.8 to 3.5 on a 5 point scale). They also had gained skills. For example, after the module was completed 100% of spring 2022 students were able to choose the correct pipette to use to transfer 80uL of liquid but before the modules only 66% of students chose the correct pipette. Students were also more confident that they could list their laboratory skills on a LinkedIn Profile (2.1 to 4.1 in 2021 and 2.2 to 3.3 in 2022) and that they had the desired qualifications for a paid internship as entry level technician (3 to 4.3 in 2021 and 3 to 3.8 in 2022). In 2021 we did not survey students effectively about their income status, but in 2022 we learned that 14% of students were very low income, meeting the income

	qualifications for a California College Promise Grant (< \$40,000K per year for a family of 4).
How will you use the feedback?	One of the objectives of this grant is to increase the retention of Latinx students in the biology majors sequence. We examined the data from the entire Biology Department and one trend that emerges is that Latinx students were much more likely to withdraw from classes during the pandemic (2019-2020 and 2020-2021 academic years) compared to their Asian and White peers. However, the number of all students failing classes declined in all groups. This was likely due to the fact the withdrawal policies were more lenient during the pandemic (starting Spring 2020). The sample size of Latinx students in the sections that participated in the grant in Fall 2021 was too small to analyze, but we hope with expanding to more classes we will be able to examine future trends. We do have data from the cohort of students that started General Botany (Bio 1A) in Fall 2019 and finished Molecular Biology (Bio 1C) by Summer 2021. In Fall 2021 72% of Latinx students and 79% of White students successfully completed Botany. The withdrawal rate for Latinx students was almost double White students (20% vs. 11%). Of the students that succeeded in Bio 1A in Fall 2019, Latinx students enrolled in Bio 1C at lower rates than White students (39% vs. 47%), and all students who enrolled succeeded. The throughput rate through the sequence was lower for Latinx students (28%) compared with White (37%) and Asian (53%) students. Clearly we still have work to do to improve retention of Latinx students in our program. The next phase of the grant will incorporate student focus groups to learn more from the students and we will collect more demographic data and data on student efficacy and STEM identity. We are working with an evaluator from UC Berkeley Lawrence Hall of Science on this portion of the grant.

G. Are there institutional barriers to the equity work that your program would like to engage in, and what suggestions do you have for minimizing or eliminating these barriers? (See page 2, for the equity definition)

_____ N/A

Barrier	Suggestions
There are very few campus resources available for developing appropriate quantitative and qualitative metrics to survey students.	We are lucky to have funding from the National Science Foundation to work with a professional evaluator to help us develop some survey instruments, hold focus groups, and analyze the data from the focus groups. It would be helpful if other departments had access to this kind of support either through external or internal funding.

Section Two: Data Analysis – Quantitative and Qualitative

A. IR Data Review: Discuss any significant trends in the data provided by the Office of Institutional Research and Planning (or any other data you use for decision-making and planning).

(Note: Not all Programs have IR data available; if your program does not have a data packet or dashboard data, you may note that in the response box.)

- IR Data packets are available here (posted Fall 22): <https://bit.ly/2IYaFu7>
- Course Set Standard Overview & Success Rates Dashboard can be found in the middle of this page: <https://bit.ly/2Y9vGpl>

Enrollment & Enrollment Management

Mirroring trends across community colleges in the academic year 2021-2022, enrollment in the LPC Biology department has declined. Student headcount decreased 9.8% from the previous year (1969 in AC 20-21; 1776 in AC 21-22). Total course enrollment decreased 8.9% from the previous year (2049 in AC 20-21; 1865 in AC 21-22). WSCH and FTES decreased from AC 20-21 (WSCH: 14185 to 13533), while FTEF increased slightly (FTEF: 33.3 to 33.8). The percent FTEF from full-time faculty increased slightly from F2020 to F2021 (29% to 30%) and from S2021 to S2022 (36% to 37%). Fill rates declined from 97% in Fall 2020 and Spring 2021 to 92% in Fall 2021 and 87% in Spring 2022.

Success Rates & Equity

The Biology success rate for AC 21-22 was 71.3%, a slight decrease from 72.1% in AC 20-21, but above the set standard of 66.7%. Course success rates were 70% in Fall 2021 and 75% in Spring 2022. The difference in success rates was attributed to a higher Fall withdrawal rate, 19% in the Fall and 14% in the Spring.

According to the Chancellor's Office, "Disproportionate impact occurs when a subset of students based on student characteristics such as age, race, and gender are unjustifiably experiencing lower outcomes compared to the total student population." One method to measure disproportionate impacts is the [Percentage Point Gap Method](#) which compares the percentage in a particular outcome for a disaggregated subgroup to the percentage for all students. This gap is then compared to a margin of error that is adjusted by sample size. A disparity beyond the margin of error demonstrates a disproportionate impact. Using this method to assess course success rates in the Biology department for AC 20-21, disproportionate impacts were found for Hispanic/Latino students (See Table 1.). No disproportionate negative impacts were found for students with disabilities, gender, or low income status.

Table 1. Percentage Point Gap (PPG) of biology course success rate by ethnicity in 2021-22

	Size (n)	Success Rate	PPG	E	Comparison of Threshold (E) and PPG	Disproportionate negative impact?
African American	65	69%	-2.3%	12%	-12% < -2.3% < 12%	No
Asian	319	78%	6.7%	5%	6.7% > 5%	No
Filipino	146	74%	2.7%	8%	-8% < 2.7% < 8%	No
Hispanic/Latino	558	61%	-10.3%	4%	-10.3% < -4%	Yes
Multi-ethnic	159	78%	6.7%	8%	-8% < 6.7 < 8%	No
Native American	5	80%	8.7%	30%	-30% < 8.7% < 30%	No
Other/Unknown	30	68%	-3.3%	18%	-18% < -3.3% < 18%	No
Pacific Islander	9	62%	-9.3%	30%	-30% < -9.3% < 30%	No
White	485	76%	4.7%	4%	4.7% > 4%	No

Student Demographics in the Biology Department

Female students continue to be overrepresented in Biology courses compared to the LPC student body as a whole. The percentage of female students in biology classes has been above 60% since Spring 2017, representing 66% of enrollments in Fall 2021 and 64% in Spring 2022. In comparison, female representation in the LPC student body was 54% in Fall 2021 and 53% in Spring 2022.

Biology students skew slightly younger than the LPC student body as a whole. In both Fall 2021 and Spring 2022, 64% of biology students were 21 years or younger and 78% were 24 years of age or younger. In comparison, the LPC student body where 57% of students were 21 years or younger and 64% were 24 years of age or younger those same semesters.

The distribution of race and ethnicity of Biology students is similar to that of the campus-wide student body, with slightly higher representation of Filipino and Latino students and slightly less representation of White students.

B. Program-Set Standard (Instructional Programs Only):

The program-set standard is a baseline that alerts programs if their student success rates have dipped suddenly. There are valid reasons a program does not meet the Program Set Standard; when a program does not meet this standard, they are simply asked to examine possible reasons and note any actions that should be taken, if appropriate.

[Program-set standard data can be found on this page](#)

- Did your program meet its program-set standard for successful course completion?
__X__ Yes ____ No
- If your program did not meet your program-set standard, discuss possible reasons and how this may affect program planning or resource requests.

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C. SLOs/SAOs: Assessment of Student Learning and Support

Program Review is our major source of data on student learning for the college and is therefore regularly reviewed. *Each year programs must discuss how their PSLOs, CSLOs, or Service Area Outcomes (SAOs) support the College Mission. This helps us to see how our students are progressing in their learning.*

For assistance with these questions and instructions on how to run the necessary reports in eLumen, [click here](#).

You should complete at least one of the following three sections. Please choose the option(s) below that are appropriate for your program - Go directly to the section(s) you chose.

- C1: Instructional Programs with PSLOs (disaggregated PSLOs)
- C2: Instructional Programs with CSLOs (*Departments without degrees, non-major courses, and/or other courses up for assessment*)
- C3: Non-Instructional Programs (SAOs)

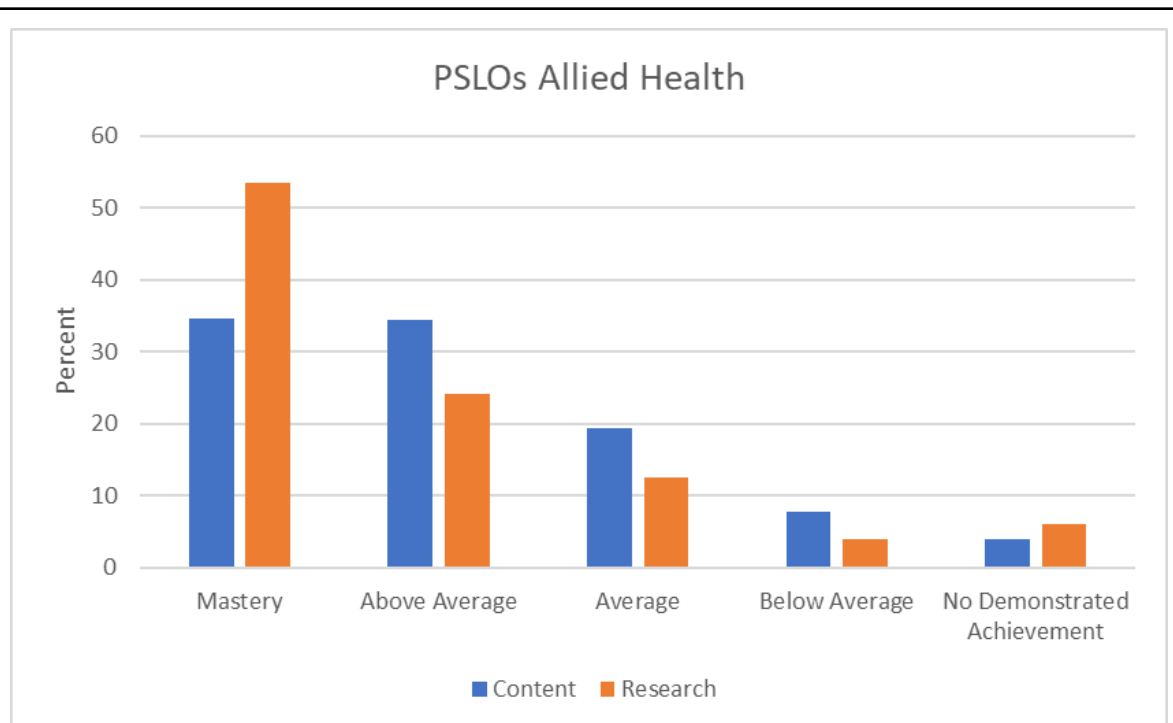
C1: Instructional Programs with PSLOs (disaggregated PSLOs)

- 1) To assess PSLOs, CSLOs must be correctly mapped to only one PSLO within eLumen and every mapped CSLO must have assessment data. Please insert a checkmark in one of the following options that correctly describes your data and move on accordingly.
 - a. If the CSLOs are mapped correctly and there is data for each CSLO, then continue to question 2.
 - b. If the CSLOs have assessment data and the mapping needs to be completed, then complete the mapping within eLumen ([See SLO Handbook, p. 7](#)) and continue to question 2.
 - c. If not all of the mapped CSLOs have assessment data, then you cannot assess the PSLO. In this case, continue to question C2.
2. Based on your current [3-year plan](#), list the PSLO(s) for the academic year 2021-2022 that your program selected to review and explain why these were chosen.

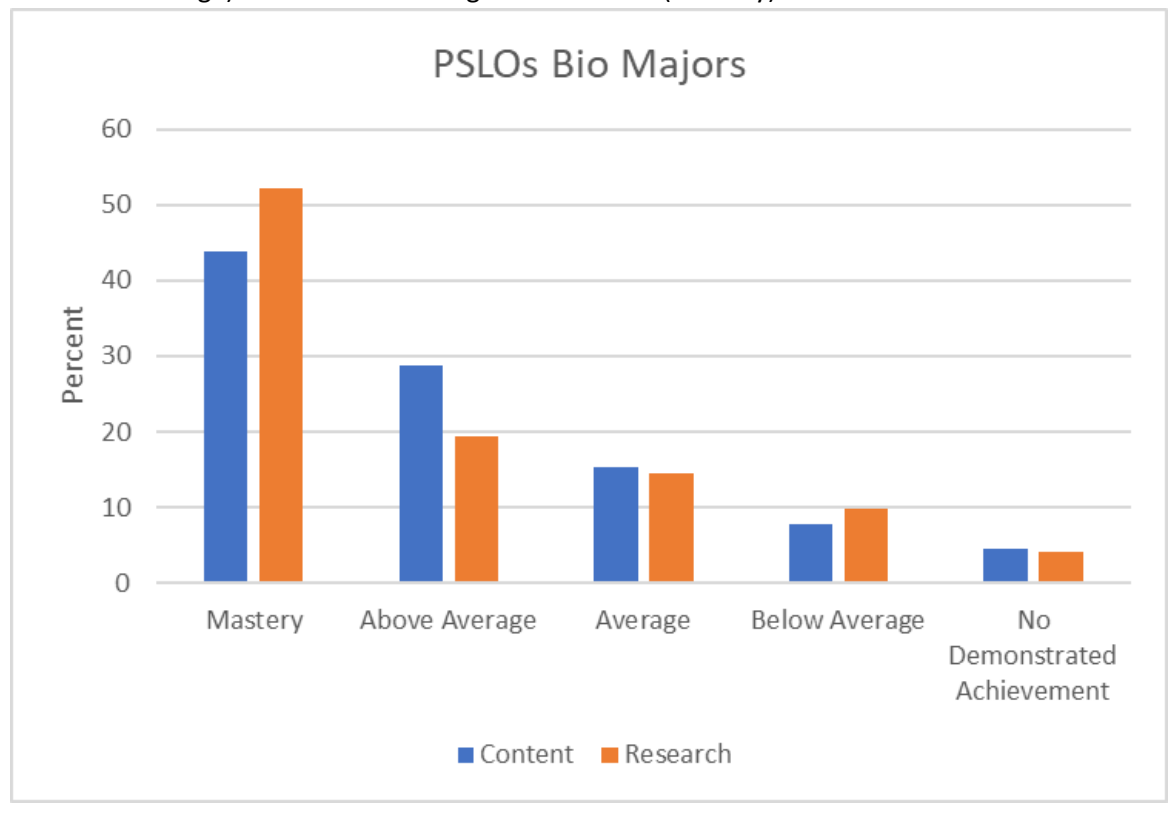
For our two pathways, AA Allied Health and AS Biology, we collected CSLO data from the courses that fed up to two of the three PSLOs. One PSLO was based on understanding the overarching themes (content) in the majors and the other PSLO was based on research skills (research). We did not assess the third laboratory-based PSLO in case the courses were taught remotely.

- 2) What percentage of faculty completed the planned assessments for the selected PSLO? ([run Faculty Participation report](#) from last year). __ Allied Health Major 94% (30/32 of the planned assessments); Bio Major 87.5% (14/16 of the planned assessments). __%
- 3) Non-disaggregated Analysis of PSLO(s): In general, what conclusions can be drawn about student learning in your program?

Allied Health major: Achievement in the content PSLO skews towards the higher end (mastery and above average) whereas there is high achievement (mastery) in the research PSLO.



Biology major: Achievement in the content PSLO skews towards the higher end (mastery and above average) whereas there is high achievement (mastery) in the research PSLO.



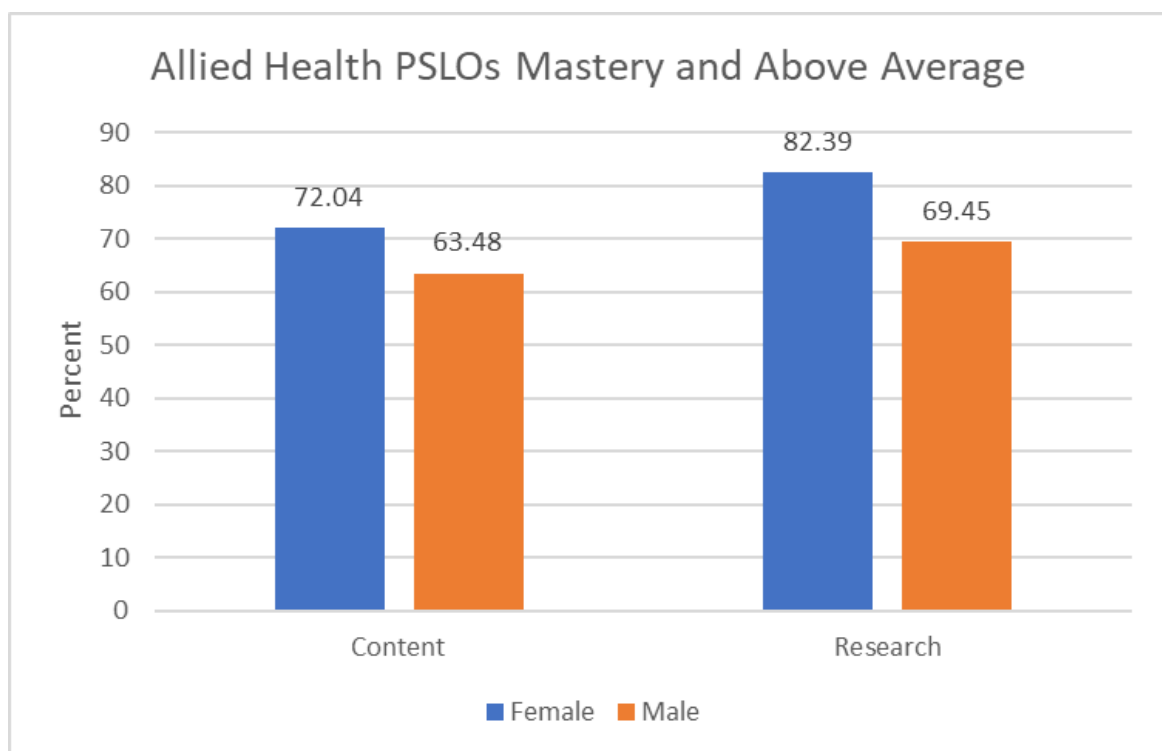
- 4) Disaggregated Analysis of PSLO(s) to identify potential inequity: Disaggregation allows you to examine inequities in student learning outcomes within sub-populations in your program. [See the Guide](#) for instructions on how to disaggregate PSLO data.

Which variables did you use to disaggregate the data? Mark all that apply.

- Gender
- Age
- Ethnicity
- EOPS
- Veteran
- BOG Recipient
- First Generation
- DE
- Online
- Hybrid
- Fact-to-Face

- 5) Did your data reveal any patterns of inequity? If so, please explain those patterns.

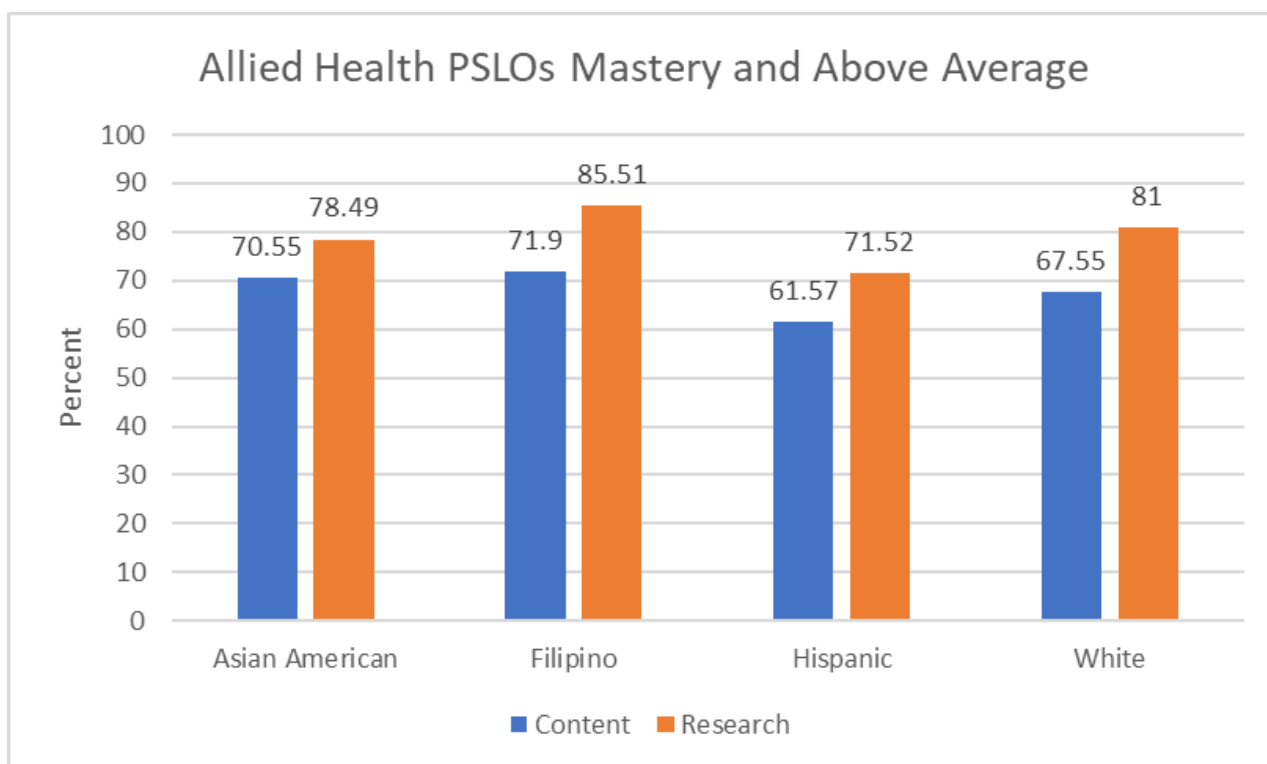
GENDER: In both majors, we have almost twice as many women than men. In the Biology Major Pathway, women and men achieve similarly in both the content and research PSLOs. In the Allied Health pathways, women score higher in both the content and research PSLOs.



ETHNICITY:

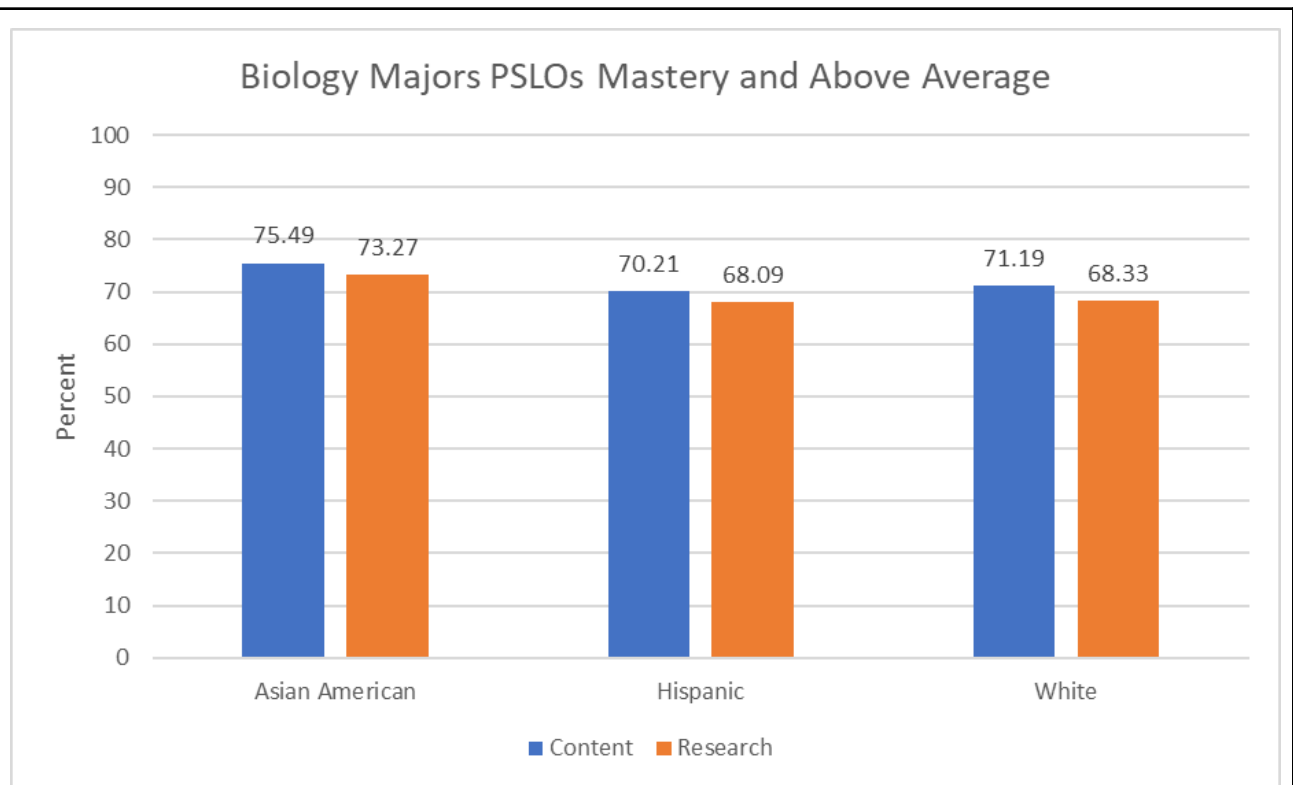
Allied Health major: Examining the disaggregated PSLOs for the Allied Health Pathway, there were sufficient numbers (>15) for the following groups Asian American, Filipino, Hispanic and White.: Across these four ethnic groups, the PSLO assessing research abilities was higher than the PSLO related to content. We think one reason the research project mastery is high is because there is a lot of scaffolding and support to help the students learn how to paraphrase scientific papers. Between

ethnic groups, the content PSLO varied when examining assessments “above average and mastery levels” with Filipino students scoring the highest, and Hispanic students scoring the lowest. The table indicates the total number of students for each group.



Ethnicity	Sample Size
Asian American	55
Filipino	57
Hispanic	64
White	114

Biology major: There was insufficient data for all but three ethnic groups. When grouping Mastery and Above Average, students scored similarly on the content and research PSLOs. Between ethnic groups, Asian students scored a bit higher than white and hispanic students. The table indicates the total number of students for each group. There are fewer students in the Biology major than in the Allied Health major.



Ethnicity	Sample Size
White	125
Asian	105
Hispanic	53

- 6) Identify any challenges facing your department that may contribute to inequitable outcomes as revealed by your disaggregated PSLO data. (Refer to section 1B if needed)

One challenge that may be contributing to the caps in inequitable outcomes in the Allied Health Pathway is the ongoing need for more full-time faculty for Allied Health courses. Employing a faculty member who is less than highly qualified to teach in Allied Health is a disservice to our students, both in persistence in the allied health pathway - especially for historically underserved minority populations - and in preparation for highly competitive professional programs. More full-time faculty members in Allied Health would bring more consistency in instruction, mentoring opportunities for students, independent studies, and honors projects.

- 7) Based on discussion with others in your program, explain potential changes that will improve student learning and address inequities identified through analysis of disaggregated PSLO data.

As a department, we need to discuss what is happening at the course level. This discussion needs to include part-time instructors to examine assessment methods and perhaps devise a common rubric for research assessments.

In both majors, we need to attract more male students and increase diversity.

- 8) The 2022-2023 Academic year is the last year in our 3-year assessment cycle. [Please review your 3-year plan](#) and verify that all of your courses will be assessed by June 2023.

Will all of your courses be assessed by June 2023?

☒ Yes ☐ No

If not, please update your 3-year plan to include any courses you missed or if you plan to revise your 3-year plan, then send your updated plan to the [Curriculum and SLO Specialist](#), and the [SLO Chair](#).

- 9) Are you planning on updating any CSLOs or PSLOs?

☐ YES ☒ NO

(If yes, then you may do this through eLumen, see the [SLO Handbook](#) if you need instructions on how to do this.)

- 10) If you experienced any challenges in completing your PSLO assessment process please list those in the box below along with any items that would help you improve this process in the future.

C2: Instructional Programs With CSLOs - Departments without degrees, non-major courses, and/or other courses up for assessment

1. Based on your current [3-year plan](#), list the CSLO(s) for the academic year 2021-2022 that your program selected to review and explain why these were chosen.

2. What percentage of faculty completed the planned assessments for the selected CSLO? (run [Faculty Participation](#) report from last year). _____%

3. [Using the CSLO data and reflection questions](#), what are some conclusions?

4. List changes that you plan on making to improve student learning.

5. The 2022-2023 Academic year is the last year in our 3-year assessment cycle. [Please review your 3-year plan](#) and verify that all of your courses will be assessed by June 2023.

Will all of your courses be assessed by June 2023?

____ Yes ____ No

If not, please update your 3-year plan to include any courses you missed or if you plan to revise your 3-year plan, then send your updated plan to the [Curriculum and SLO Specialist, and the SLO Chair](#).

6. Are you planning on updating any CSLOs?

____ YES ____ NO

(If yes, then you may do this through eLumen, see the [SLO Handbook](#) if you need instructions on how to do this.)

7. If you experienced any challenges in completing your CSLO assessment process please list those in the box below along with any items that would help you improve this process in the future.

C3: Non-Instructional Programs (SAOs)

1. Based on your current [3-year plan](#), list the SAO(s) for the academic year 2021-2022 that your program selected to review and explain why these were chosen.

2. What percentage of staff completed the planned assessments for the selected SAO(s)? (run [Faculty Participation report](#) from last year). _____%

3. Based on discussion with others in your area: Using the [SAO data and reflection questions](#) or other sources of data, what conclusions can be made?

* If you used other sources of data, briefly explain below.

4. List changes that you plan to improve outcomes in your service area.

5. The 2022-2023 Academic year is the last year in our 3-year assessment cycle. Please review your [3-year plan](#) and verify that all of your courses will be assessed by June 2023.

Will all of your courses be assessed by June 2023?

____ Yes ____ No

If not, please update your 3-year plan to include any courses you missed, or if you plan to revise your 3-year plan, then send your updated plan to the Curriculum and SLO Specialist, and the SLO Chair.

6. Are you planning on updating any SAOs?

____ YES ____ NO

(If yes, then you may do this through eLumen, see the SLO Handbook if you need instructions on how to do this.)

7. If you experienced any challenges in completing your SAO assessment process please list those below, along with any items that would help you improve this process in the future.

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Note: There is an opportunity to give feedback on the PR template on the last page if you won't be completing the next sections

Section Three: Guided Pathways & Curriculum Review

(Programs with Courses Only)

For assistance with these questions, contact the [Curriculum Committee Chair](#)

Part One: Guided Pathways: Your program's work with guided pathways

A. Program Maps - [The Program Maps \(degree and certificate course sequences\) are found in Academic & Career Pathways](#)

Up-to-date Program Maps are used by students in your pathway, for data collection to support in-reach to students in your Pathway, predictive scheduling recommendations for Discipline Plans, and may influence the allocation of FTEF.

Please compare each Program Map to your current course offerings and course sequencing. Pay close attention to prerequisite information and to classes that may only be offered particular terms.

1) Are your Program Maps accurate?

- Yes, all of my maps are accurate
- No. The Program Map for _____ (degree/certificate name) _____
Requires an update
 - Requires a **non-curricular change** (ie: course sequencing) Please consult your [Pathway counseling faculty liaison](#)
 - **Curricular Change** (Program modifications) - Modifications are initiated through the Curriculum Committee. For mapping support contact the [Curriculum & SLO Specialist](#).

Part Two: Curriculum Review

For assistance with this section, contact the [Curriculum Committee Chair](#).

The following questions ask you to review your program's curriculum. To see the last outline revision date and revision due date follow the directions below:

1. Log in to CurricUNET
 2. Select "Course Outline Report" under "Reports/Interfaces"
 3. Select the report as an Excel file or as HTML

A. Title V Updates [Curriculum Committee]: Do you need to update any courses to stay within the 5-year cycle? List courses requiring updates below.

Reminder: updates to course title or units, and course deactivations, will require updating any program they are associated with. List programs requiring updating in question (C).

☒ X ☐ YES ☐ No

Course Name & Number
BIO 10 Introduction to the Science of Biology (Pending) — 12/4/2022 – Submitted for review
BIO 1C Cell and Molecular Biology (Active) — 4/17/2022 – New version approved and will be active in CNET next fall
BIO 29B Independent Study, Biology (Active) — 11/6/2022
BIO 29T Independent Study, Botany (Active) — 11/6/2022
BIO 29Z Independent Study, Zoology (Active) — 11/6/2022
BIO 55 Orientation to Health Care (Pending) — 12/4/2022 – Submitted for review

B. Degree/Certificate Updates [Curriculum Committee]: Do any programs require modification in this cycle? If yes, list them below.

Reminder: Program modifications sent to the Curriculum Committee for approval require an updated Program Map. For mapping and curriculum support please contact the [Curriculum & SLO Specialist](#).

☒ X ☐ YES ☐ No

Certificate or Degree
Allied Health degree is in process of being updated with goal of removing Chem 30B as requirement.

C. Are there any courses or programs for which a non-mandatory update is planned?

Reminder: Program modifications sent to the Curriculum Committee for approval require an updated Program Map. For mapping and curriculum support please contact the [Curriculum & SLO Specialist](#).

☐ YES ☒ X ☐ Not at this time

If yes, explain details, rationale, or any support that might be helpful to the committee.

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D. Does your program plan to create any new courses or programs this year?

*Reminder:: New program proposals require a Program Map for Senate approval. Please **contact the Curriculum & SLO Specialist** if you are planning a new program.*

☒X ☐YES ☐No

If yes, please provide details and the rationale

We are in the process of making non-credit versions of the biotech summer bootcamps for High School students. NBIO 1, Biotechnology 1, and NBIO 2, Biotechnology 2 have been submitted for review.
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E. Are there any courses that you plan to deactivate or sunset?

☐YES ☒X ☐No

Course Name & Number

Program Review Suggestions (optional): What questions or suggestions do you have regarding this year's Program Review forms or process?

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