

PROGRAM REVIEW Fall 2022

Program: Drone Technology

Division: PATH

Date: 11/1/2022

Writer(s): Daniel Cearley

SLO/SAO Point-Person: Daniel Cearley

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 (three) 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.

1. The first section focuses on general program reflection and planning.
2. The second section focuses on data analysis, including SLOs/SAOs/PSLOs
3. 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 As a new program, we had a successful launch and stakeholder event in Spring of 2022. This included the creation of a website presence, marketing materials, and coordination with our outreach team to the many different companies and institutions who use drones. It was well received with strong connections made which bodes well for the creation of an oversight board to meet in the Spring of 2023.
2 Prior the launch, we created a drone Internship program in partnership with the Climate and Sustainability Fellows in 2021/2022. Two students participated in a yearlong project with the horticulture program to create a campus tree and CO2 sequestration survey. A formal report is being prepared by a subsequent group of interns.
3 The program was awarded two Perkins Grants to continue the drone related projects . The first focuses on funding two drone student interns to continue a monthly vineyard survey and follow-up with the completion of the previously mentioned tree survey. The second grant will involve offsetting the cost of the FAA certification exam for students of need, this will be implemented in Spring of 2023.
4 An important achievement for the program is the creation of a system of documentation and protocols for flying drones on campus. This included developing a working relationship with public safety, an appropriate announcement process, and a series of documents that addresses safe flying practices.
5 During the spring and summer intersessions we demonstrated drones to a wide group of potential students. We partnered with Foothill College by incorporating drones into two archaeological field schools, one in Ireland and another in Palo Alto. In August, we worked closely with the summer Drone Camp sponsored by the Leeds program to showcase our own work and facilitated the involvement of industry partners, like PG&E.
6 The program was successful in developing three Canvas Courses which can be used as a template for subsequent semesters.

7 We were able to locate an outdoor storage space for drone related equipment at upper grass athletic field.
8 A major accomplishment was a strong enrollment trend for this Spring with a diverse demographic profile for students. For the younger students, representation was equitable for gender, this was positive sign given that tech industries can be overly represented by males.
9 The program conducted a Flex Day workshop which was well represented with positive feedback.

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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. As a program that is technological dependent, we have found that there is considerable time spent in preparing for each course session. This involves charging batteries, updating software, transporting equipment, and setting up a flight area.
2. Although M&O has provided canopies, chairs, and tables, they are not able to set these up on weekends. The instructor, and at times, the students did set-up and break-down. We are considering shifting course times to weekdays to resolve this issue.
3. In our beginner class, we found that we had limited battery life for the drones and we were unable to fly continuously throughout the session. One solution would be to invest in more batteries, which was part of our IER request. Another option may be to use a dedicated drone for entry level learners, one that is smaller and cheaper with longer batteries life.
4. As the program progresses, it may be necessary to define a dedicated space where the equipment is more secure, provides a workspace for charging, and maintenance. At the moment, the anthropology lab is currently doubling in this capacity.
5. The main challenge on the horizon will be to retain local qualified staff to act as instructors either during weekends or during the week.

6. Access to an electric utility vehicle with a flatbed would help facilitate the movement and transport of equipment from storage to flight areas.

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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

We would like to continue the Perkins Grant funded internship program. Positive feedback from interns shows the value of applying skills in real-life projects.

Given the success of using drones in our viticulture and horticulture programs, it makes sense to further integrate drones into regular operations of campus and support our wider campus goals.

We would like to continue to demonstrate drone in more programs to highlight the wide range of applications and uses. Examples might include public safety, fire technology, engineering, and videography. A goal would be to more formally integrate drones into curriculums across various disciplines.

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

The program directly relates to the first and second Value Statements, "Encouraging and celebrating lifelong learning" and "Responding to the needs of the ever-changing workplace and society."

Our first two classes were primarily represented by retirees. Only two out of 15 students already owned a drone and wished to become better pilots. The majority had never flown a drone yet had varied interests from recreational to commercial prospects. This older demographics indicates that this course may be a candidate for community education.

The program was developed as a direct response to drones being considered an emergent technology with various applications and areas for growth. The focus has primarily been on being nimble and

able to change to how this technology is being used. We have various types of drones with different sensors that will allow us to be relevant and inventive as the technology changes.

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

_____N/A

Plan	New	Continuing	Short term	Long term
Consider a credit-based semester length course and summer-based drone camp for high school students.	X			
Integrate drones more with photography, videography, and other programs.		X		
Further develop the student internship program to work a wider array of more campus-based projects.		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 have engaged in numerous conversations with students.
What did you learn?	Generally positive, students consistently request more opportunities to operate the drones.
How will you use the feedback?	We will consider expanding the program and create "open" periods of time where students can operate the equipment under supervision.

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
The program requires support from facilities to set-up pop-up, tables and chairs on the weekends. This set-up and break down was carried out by the instructor and students each session. Weekend support would be beneficial.	Unsure of how to negotiate with weekend set-up, moving the course to the weekday might solve the problem.

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/2lYaFu7>
- Course Set Standard Overview & Success Rates Dashboard can be found in the middle of this page: <https://bit.ly/2Y9vGpl>

Data has not been generated, courses began this semester, Fall 2022.

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?
☐ 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.

Data has not been generated, courses began this semester, Fall 2022.

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.

Data has not been generated, courses began this semester, Fall 2022.

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

3) Non-disaggregated Analysis of PSLO(s): In general, what conclusions can be drawn about student learning in your program?

Data has not been generated, courses began this semester, Fall 2022.

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 the apply.

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

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

Data has not been generated, courses began this semester, Fall 2022.

- 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)

Data has not been generated, courses began this semester, Fall 2022.

- 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.

Data has not been generated, courses began this semester, Fall 2022.

- 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.

Data has not been generated, courses began this semester, Fall 2022.

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?

Data has not been generated, courses began this semester, Fall 2022.

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

Data has not been generated, courses began this semester, Fall 2022.

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

___X___ No. The Program Map for ___Noncredit CDCP_____(degree/certificate name)____Drone Photography, Mapping, and Piloting_____

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

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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).

_____YES ____X_____No

Course Name & Number

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](#).

_____YES ____X_____No

Certificate or Degree

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

The program may propose a Summer Drone camp and a credit based course, however this will not be ready for Fall 2023, instead preparations will be for 2024.

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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