2025 INSTRUCTIONAL ANNUAL PROGRAM PLANNING WORKSHEET

CURRENT YEAR: 2024-25 **PROGRAM(S): BIOLOGICAL SCIENCES**
CLUSTER: STEM **AREA OF STUDY: BIOLOGY**
LAST YEAR CPPR COMPLETED: 2020-21 NEXT SCHEDULED CPPR: 2025-26 CURRENT DATE: 3/3/2025

The Annual Program Planning Worksheet (APPW) is the process for:

- reviewing, analyzing and assessing programs on an annual basis
- documenting relevant program changes, trends, and plans for the upcoming year
- identifying program needs, if any, that will become part of the program's **Resource Plan**, which can be downloaded from the **IPPR Program Review Documents Folder**. Please review the **Resource Allocation Rubric** when preparing the resource plan.
- highlighting specific program accomplishments and updates since last year's APPW
- tracking progress on a Program Sustainability Plan if established previously

Note: Degrees and/or certificates for the ***same*** program ***may be consolidated*** into one APPW.

This APPW encompasses the following programs of study (degrees and/or certificates):

Biology AS-T

GENERAL PROGRAM UPDATE

Describe changes and improvements to the program, such as changes to the mission, purpose, or direction. In particular, indicate any changes that have been made to address equity gaps.
NONE

PROGRAM SUSTAINABILITY PLAN UPDATE

Was a Program Sustainability Plan established in your program's most recent Comprehensive Program Plan and Review?

Yes ☐ If yes, please complete the Program Sustainability Plan Progress Report below.
No ☒ If no, you do not need to complete a Progress Report.

If you selected yes, please complete the Program Sustainability Plan Progress Report below after you complete the Data Analysis section. That data collection and analysis will help you to update, if necessary, your Program Sustainability Plan.

DATA ANALYSIS AND PROGRAM-SPECIFIC MEASUREMENTS

Your responses to the prompts for the data elements below should be for the entire program. If this APPW is for multiple degrees and/or certificates, then you MAY want to comment on each degree and/or certificate or discuss them holistically for the entire program being sure to highlight relevant trends for particular degrees and/or certificates if necessary. Responses in this document need only reference the most recent year's available data.

A. **General Enrollment (Insert Aggregated Data Chart)**

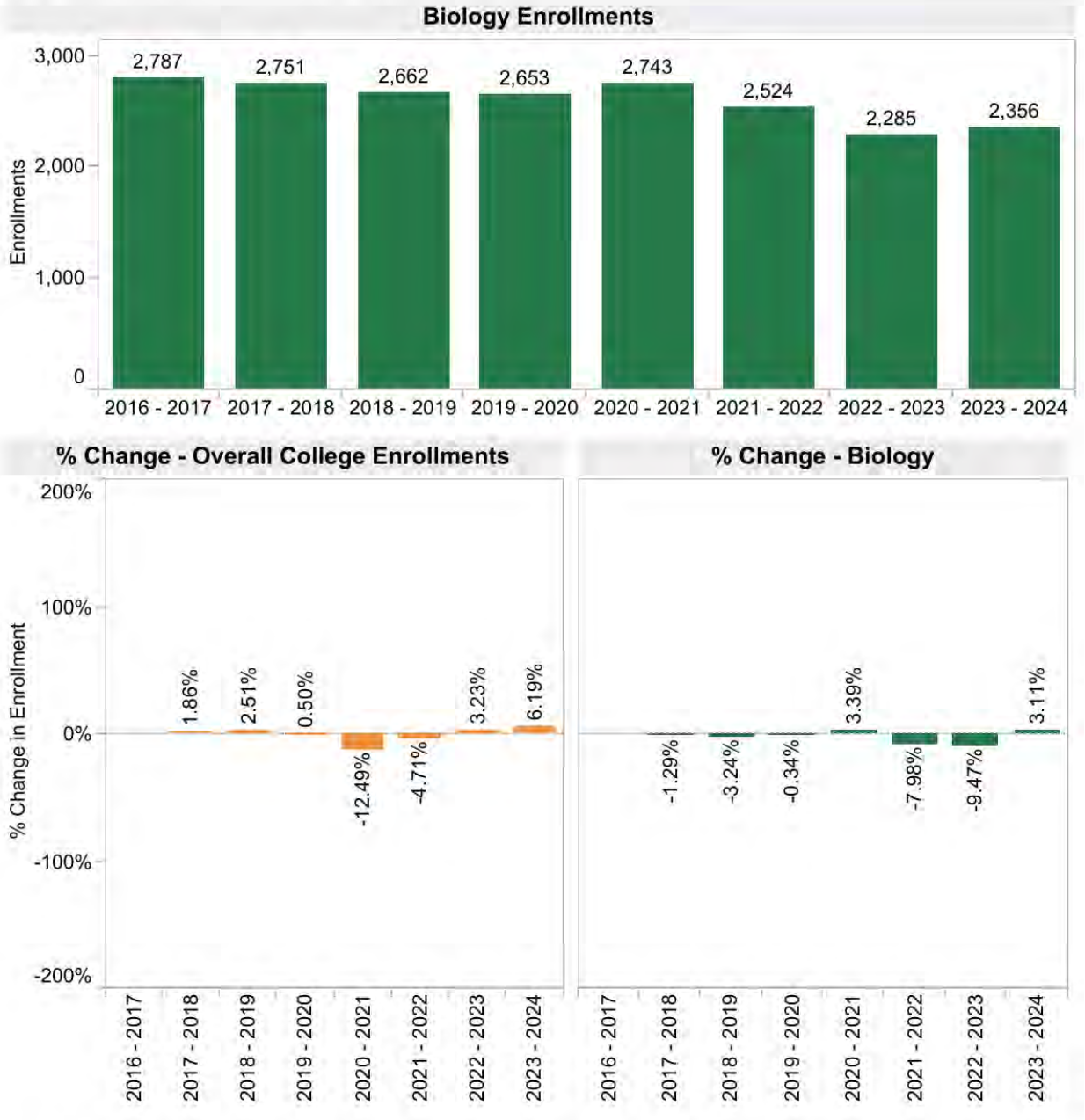
Insert the data chart and explain observed differences between the program and the college.

The 2023-24 school year saw Biology enrollment grow by 3.11% compared to the overall college enrollment growth of 6.2%. This is a reversal of the two-year trend of declining Biology enrollment.

SLOCCCD Program Review Data - Enrollment

Department:	Course:	Dual Enrollment:	Prison:
Biology	All	All	All

Region: All **TERM** All



Enrollment: Duplicated count of students who completed greater than 0 units in positive attendance courses or were present on census for all other accounting methods.

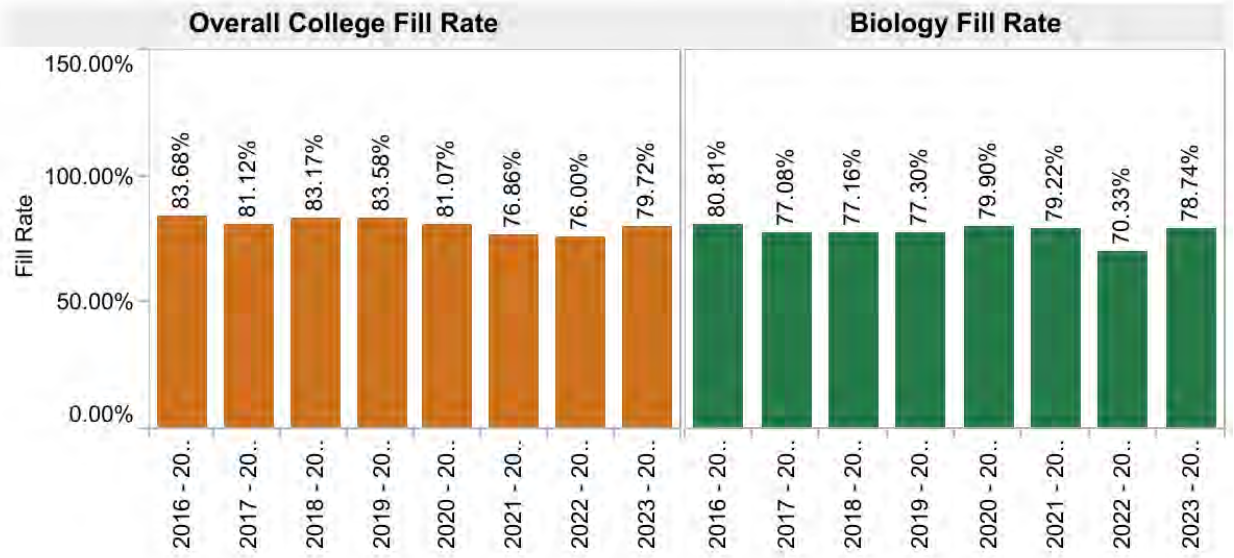
B. **General Student Demand (Fill Rate) (Insert Aggregated Data Chart)**

Insert the data chart and explain observed differences between the program and the college.

The Biology Division fill rate was not substantially different from the average fill rate of Cuesta College for the 2023-24 academic year. The 2022-23 year showed an uncharacteristic decline in Biology course fill rate that rebounded in the 2023-24 year. Both years were characterized by substantial Biology faculty turnover in courses with reliably strong enrollment. Between this uncertainty in faculty and the lingering effects of returning to school post-pandemic, it is difficult to say what caused the decline in 2022-23.

SLOCCCD Program Review Data - Student Demand (Fill Rate)

Department:	Course:	Dual Enrollment:	Prison
Biology	All	All	All



Fill Rate: The ratio of enrollments to class limits. Cross listed class limits are adjusted appropriately. Also, courses with zero class limits are excluded from this measure.

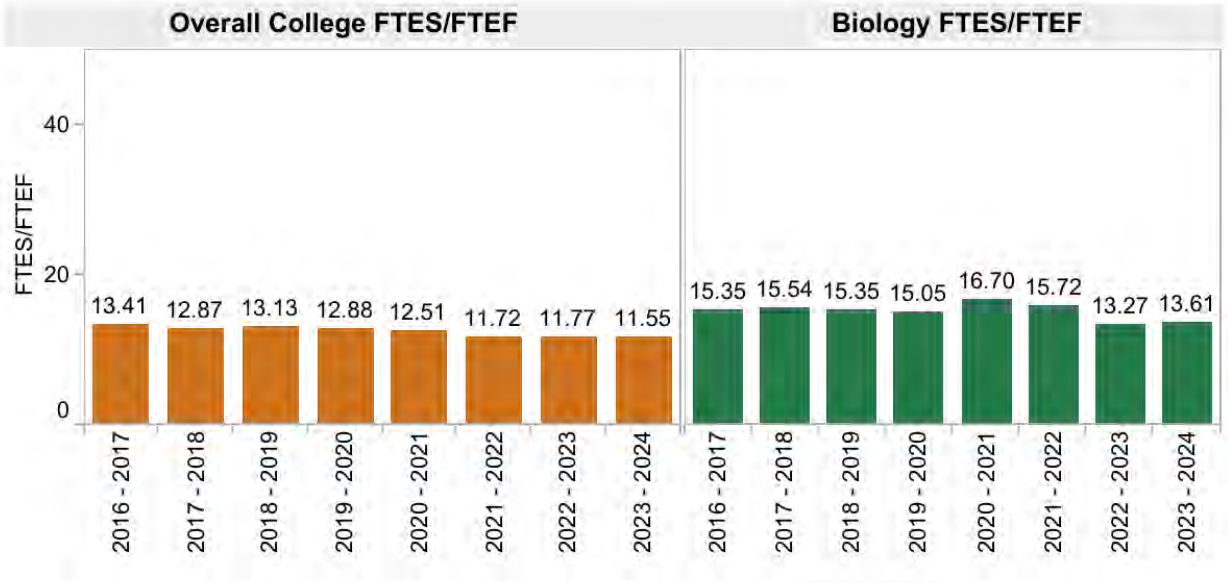
C. **General Efficiency (FTES/FTEF) (Insert Aggregated Data Chart)**

Insert the data chart and explain observed differences between the program and the college.

The Biology Division offers popular courses for Biology majors, non-majors, and pre-allied health students. Some of the Biology non-laboratory courses can be offered as large capacity lectures. Lab courses can, at times, be offered either as permutations, wherein the lecture is a combination of two lab sections, or with large lectures sections taking advantage of a shared, flexible open-lab schedule (the audio-tutorial lab). Efficiency is also high in several of our non-major's lab and field studies courses. These opportunities are quite popular with students who seek hands-on learning out in the environment. The high demand for our courses, large lecture offerings, and creative lab solutions enhance the efficiency of the Biology Division.

SLOCCCD Program Review Data - Efficiency (FTES/FTEF)

Department:	Course:	Dual Enrollment:	Prison:
Biology	All	All	All



FTES/FTEF: The ratio of total FTES to Full-Time Equivalent Faculty
(SXD4 Total-Hours/17.5)/XE03 FACULTY-ASSIGNMENT-FTE)

D. **Student Success—Course Completion by Modality (Insert Data Chart)**

Insert the data chart and explain observed differences between the program and the college.

Until the 2023-24 school year, the online and face-to-face course completion rates within the Biology Division were remarkably similar year after year. The 2023-24 year had a 3% lower success rate in the face-to-face modality, however.

SLOCCCD Program Review Data: Successful Course Completion

Select Department:
Biology

Course:
All

Legend:
Face to Face Modality
Online Modality

Successful Course Competion by Modality -Biology

Successful Course Competion by Modality Table - Biology

		Academic Year 2017 - 2018	Academic Year 2018 - 2019	Academic Year 2019 - 2020*	Academic Year 2020 - 2021	Academic Year 2021 - 2022	Academic Year 2022 - 2023	Academic Year 2023 - 2024
Face to Face Modality	Department S..	74.38%	75.17%	81.17%	77.61%	75.04%	77.93%	74.13%
	Total Depart..	2,757	2,666	2,658	272	645	2,000	2,026
Online Modality	Department S..				75.71%	75.45%	77.90%	77.74%
	Total Depart..				2,482	1,896	269	319

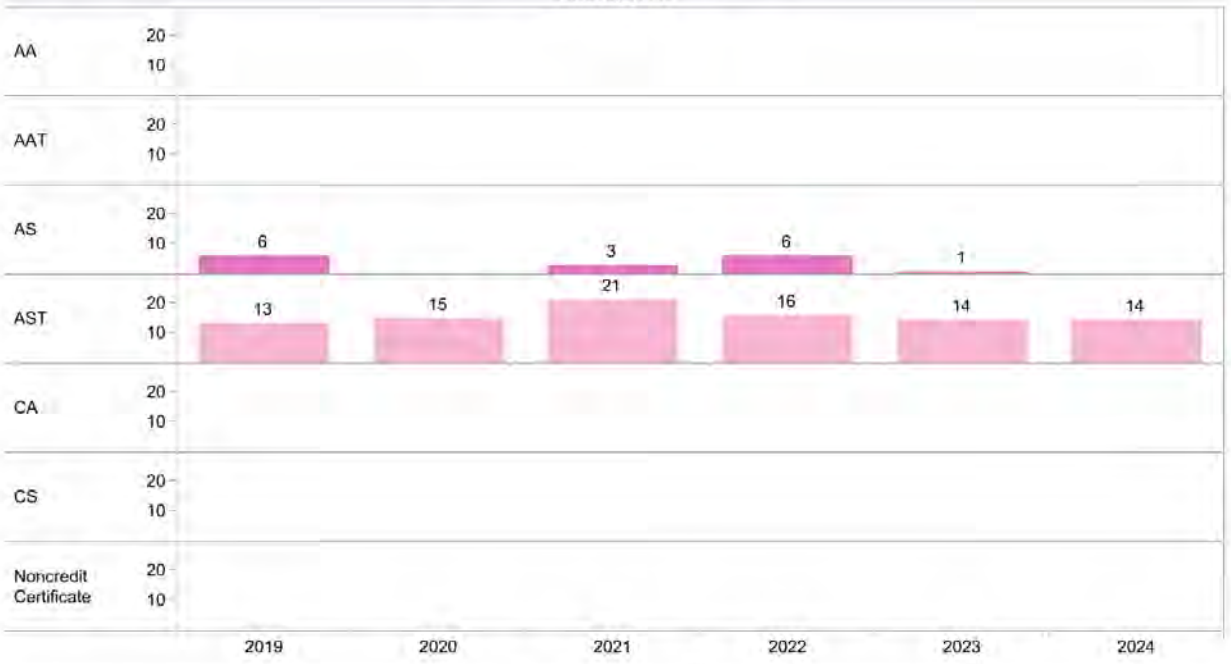
E. **Degrees and Certificates Awarded (Insert Data Chart)**

Insert the data chart and explain observed differences between the program and the college.

The number of Biology AS-T degrees has remained fairly steady over the past several years.

SLOCCCD Program Review Data: Degrees and Certificates Awarded

Program: Biology, General
Award Type: All
Area of Study All



Program Awards Table

Award Type	Award	2019	2020	2021	2022	2023	2024
AS	Biological Science (AS)	6		3	6	1	
	Total	6		3	6	1	
AST	Biology (AST)	13	15	21	16	14	14
	Total	13	15	21	16	14	14
Grand Total		19	15	24	22	15	14

Program Awards: The number of degress and certificates awarded by program type

F. **General Student Success – Course Completion (Insert Aggregated Data Chart)**

Insert the data chart and explain observed differences between the program and the college.

The average successful course completion for the Biology Division mirrors that of the college.

SLOCCCD Program Review Data: Successful Course Completion

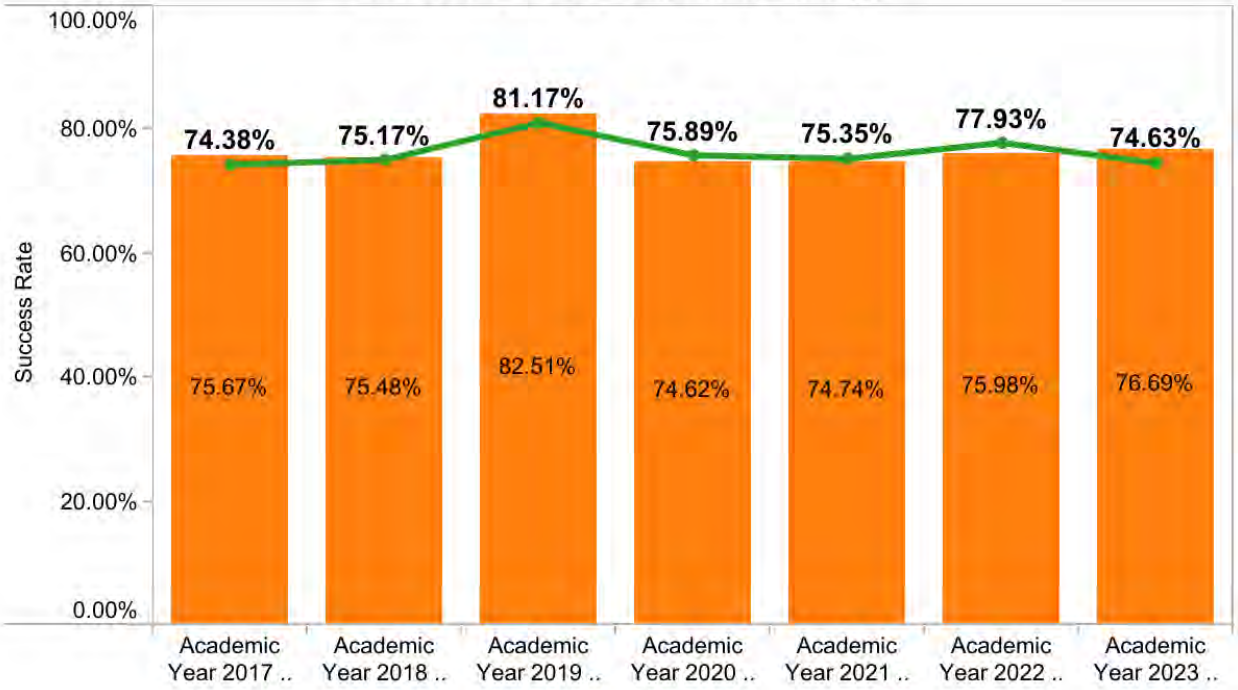
Select Department:
Biology

TERM
All

Measure Names
Department Success Rate
Overall College Success Rate

COURSE
All

Successful Course Completion - Biology



Biology Success Rate Table

	Academic Year 2017 - 2018	Academic Year 2018 - 2019	Academic Year 2019 - 2020*	Academic Year 2020 - 2021	Academic Year 2021 - 2022	Academic Year 2022 - 2023	Academic Year 2023 - 2024
Department Success..	74.38%	75.17%	81.17%	75.89%	75.35%	77.93%	74.63%
Total Enrollments	2,757	2,666	2,658	2,754	2,541	2,269	2,345

Success: The Percentage of student enrollments resulting in a final grade of "C" or better

G. Review the **Disaggregated Student Success** charts; include any charts that you will reference. Describe any departmental or pedagogical outcomes that have occurred as a result of programmatic discussion regarding the data presented.

The following are some questions you might want to consider:

- What specific groups are experiencing inequities? What patterns do you notice in the data? How have the equity gaps changed since the previous academic year?
- What professional opportunities are your program faculty participating in to address closing equity gaps?
- What strategies, policies and/or practices in your program have you implemented or what could be improved to better support students who experience equity gaps?

The Biology Division values being part of an Hispanic Serving Institution and prioritizes serving the North County Campus and its unique population of students. To that end, we consistently offer several Biology and Pre-Allied Health courses there each semester.

Faculty in the Biology Department (McConnico and Favoreto) partnered with colleagues in Physical Science, Engineering and Anthropology to apply for (and were awarded) a National Science Foundation ($300K). This grant supports undergraduate research initiatives at Cuesta College. The core goal of the grant is to improve STEM education for all students, while providing research opportunities at the community college. As a Hispanic Serving Institution, we have engaged with students from traditionally underrepresented groups at Cuesta College to recruit and retain them in STEM fields, particularly Biology.

Additionally, the Biology Department offers Marine Biology Lecture and Lab (Bio 222/222L) in Baja California, Mexico. This alternate class location offers students the opportunity to study abroad, affordably, while at community college. Students learn not only marine biology; they have the opportunity for Spanish language and cultural immersion in Mexico. Participants reflect ethnicities or groups that are traditionally underrepresented, including women, Latinas and those of Central and South American descent.

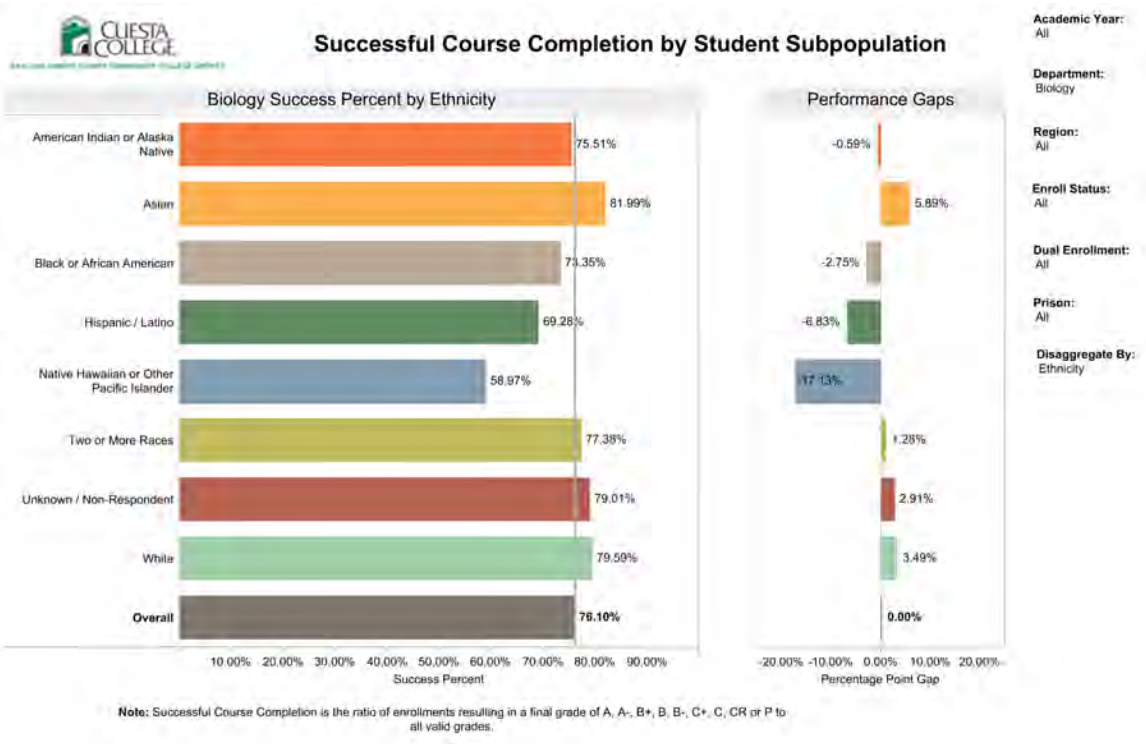
Our Division, together with the STEM-SST, has hosted scientist speakers from the Quantitative Biosciences Institute (QBI) of UC San Francisco the past two years. This is part of their DEI outreach initiative and grant funding. We are excited to bring this opportunity to our STEM students and hope to inspire curiosity and develop in them the confidence to pursue DEI fellowship opportunities at the QBI institute.

Our Division staff and faculty participate in STEM outreach through the STEM-SST, STEM social gatherings, and through presentations to local visiting High School students and new Cuesta students at STEM Day.

Our Division continues to participate in the Los Osos Middle School visitation days and will continue to as the opportunity arises.

Members of our Division participate in MESA, Affinity Center, and Educate outreach events.

Several Biology faculty are either currently enrolled in the JEDI academy or have already completed it.



PROGRAMS AND CURRICULUM REVIEW PROGRESS

SECTION 1: PROGRESS CHECK ON SCHEDULED CURRICULUM UPDATES FROM CPPR

Directions:

For the following questions, please refer to #3 in Section 1 of the Programs and Curriculum Review Progress portion of last year's APPW.

1. List those programs of study (degrees and/or certificates) and courses that were scheduled for major or minor modification during the 2024 academic year in the 5-year calendar of the Curriculum Review Worksheet.

NONE

2. From the list generated in #1, identify those programs of study and courses that underwent the scheduled modifications during the 2024 academic year. Complete the table below for those items only.

Program of Study **OR** Prefix and Course #	Major/Minor Modification (select one)	Date completed (semester and year)
N/A		

3. From the list generated in #1, identify those programs of study and courses that did **not** undergo the modifications for which they were scheduled during the 2024 academic year. Complete the table below for those items only.

Program of Study OR Prefix and Course #	Past Due Date for Modification	Briefly state why modification was not completed on schedule	Re-scheduled date for modification (must be within 1 year)
N/A			

SECTION 2: PROGRESS CHECK ON PREVIOUSLY OUT-OF-DATE CURRICULUM UPDATES FROM CPPR

Directions: For the following questions, please refer to #3 in Section 1 of the Programs and Curriculum Review Progress portion of APPW from years before the previous academic year where incomplete curriculum updates were re-scheduled to be addressed in 2024.

1. List those programs of study and courses that are listed in the older APPW that were listed in #3. Complete the table below for those items only. If there were no courses included under #3 of previous APPW, please type "N/A" in the first box of the first row of the table.

Program of Study OR Prefix and Course #	Past Due Date for Modification	Re-scheduled date for modification	Completed (yes or no)

N/A			

2. From the list generated in #1, identify those programs of study and courses that did **not** undergo the modifications for which they were re-scheduled to during the 2024 academic year. Complete the table below for those items only. You may leave this table blank if you wrote "N/A" for the previous table.

Program of Study OR Prefix and Course #	Past Re-scheduled Due Date for Modification	Briefly state why modification was not completed as rescheduled	Second re-scheduled date for modification (must be within 6 months)
N/A			

OTHER RELEVANT PROGRAM DATA (OPTIONAL)

Provide and comment on any other data that is relevant to your program such as state or national certification/licensure exam results, employment data, etc. If necessary, describe origin and/or data collection methods used.

PROGRAM OUTCOMES ASSESSMENT CHECKLIST AND NARRATIVE

CHECKLIST

☒ SLO assessment cycle calendar is up to date.

☒ All courses scheduled for assessment have been assessed in eLumen.

☐ Program Sustainability Plan progress report completed (if applicable).

NARRATIVE

Briefly describe program changes, if any, which have been implemented in the previous year as a direct result of the Program or Student Services Learning Outcomes Assessment. *If no program changes have been made as results of Program or Student Services Learning Outcomes Assessment, indicate: NONE.*

PROGRAM PLANNING / FORECASTING FOR THE NEXT ACADEMIC YEAR

Briefly describe any program plans for the upcoming academic year. These may include but are not limited to the following: *(Note: you do not need to respond to each of the items below). If there are no forecasted plans for the program, for the upcoming year, indicate: NONE.*

A. New or modified plans for achieving program-learning outcomes and addressing equity gaps
B. Anticipated changes in curriculum, scheduling or delivery modality
C. Levels, delivery or types of services
D. Facilities changes
E. Staffing projections
F. Other

The Majors Biology classes, BIO201A and BIO201B, have been taught in the same classroom on different days for many years. Beginning Fall 2025, BIO201A will be taught in room 2204 while BIO201B remains in room 2200. This will allow simultaneous scheduling of these mutually-exclusive classes. This will add scheduling flexibility for our classrooms, and students' schedules taking Chemistry and Math classes.

Our Division continues to seek improvement to our 2401 forum. The furnishings have not been updated in decades, there has recently been a roof leak that flooded and stained the carpet, and there are no left-handed desks. The 2401 forum however, benefited from a recent AV upgrade.

The busiest lab facility we have, room 2201, serves all BIO205 Human Anatomy and BIO211 Life Sciences students. This lab is open long hours and had not had a deep clean for years. After a couple faculty and students suffered adverse respiratory reactions, an investigation was conducted by SIPE. The recommendations for improving the air quality in the 2200 building included an immediate deep cleaning (completed in January 2025) with more regular carpet cleaning, air filter changes, and a remodel with new ceiling tiles, replacing the carpet with smooth flooring, and replacement of all the fabric upholstered chairs (over 20 years old) with fabric-free seating.

The Microbiology laboratories would benefit from the safety enhancement of hands-free operational handwashing stations in lab rooms 2202 and N2440.

Regarding staffing, we have recently hired three new faculty members into our adjunct pool. In addition, at the conclusion of this Spring semester, John Veres is retiring and we will welcome our newest FT-TT faculty member, Erin Naegle in Fall 2025. While we are delighted to have our past Full-Time positions staffed, our division and the college would benefit from an additional Full-Time faculty position. We have many adjunct faculty covering a great deal of teaching load. These excellent faculty are under-compensated relative to tenured faculty. In addition, the college would benefit from the additional effort and insight from an additional tenured faculty participant in the shared governance process. Our students would certainly benefit from the support of additional tenured Biology faculty.

PROGRAM SUSTAINABILITY PLAN PROGRESS REPORT

This section only needs to be completed if a program has an existing Program Sustainability Plan. Indicate whether objectives established in your Program Sustainability Plan have been addressed or not, and if improvement targets have been met.

Area of Decline or Challenge	Identified Objective (Paste from PSP)	Planning Steps (Check all that apply)	Has the Improvement Target Been Met?
Enrollment		☐ Identified ☐ Resources Allocated ☐ Implemented	**Select one**
Student Demand (Fill Rate)		☐ Identified ☐ Resources Allocated ☐ Implemented	**Select one**
Efficiency (FTES/FTEF)		☐ Identified ☐ Resources Allocated ☐ Implemented	**Select one**
Student Success – Course Completion		☐ Identified ☐ Resources Allocated ☐ Implemented	**Select one**
Student Success — Course Modality		☐ Identified ☐ Resources Allocated ☐ Implemented	**Select one**
Degrees and Certificates Awarded		☐ Identified ☐ Resources Allocated ☐ Implemented	**Select one**

If Program Sustainability Plan is still necessary, provide a brief description of how you plan to continue your PSP and update your PSP to remove any objectives that have been addressed and include any new objectives that are needed.