2024 INSTRUCTIONAL ANNUAL PROGRAM PLANNING WORKSHEET

CURRENT YEAR: 2023-24 **PROGRAM(S): BIOLOGY**
CLUSTER: STEM **AREA OF STUDY: BIOLOGY**
LAST YEAR CPPR COMPLETED: 2020-21 **NEXT SCHEDULED CPPR: 2025-26**
CURRENT DATE: Click here to enter a date.

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 this **SharePoint 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.

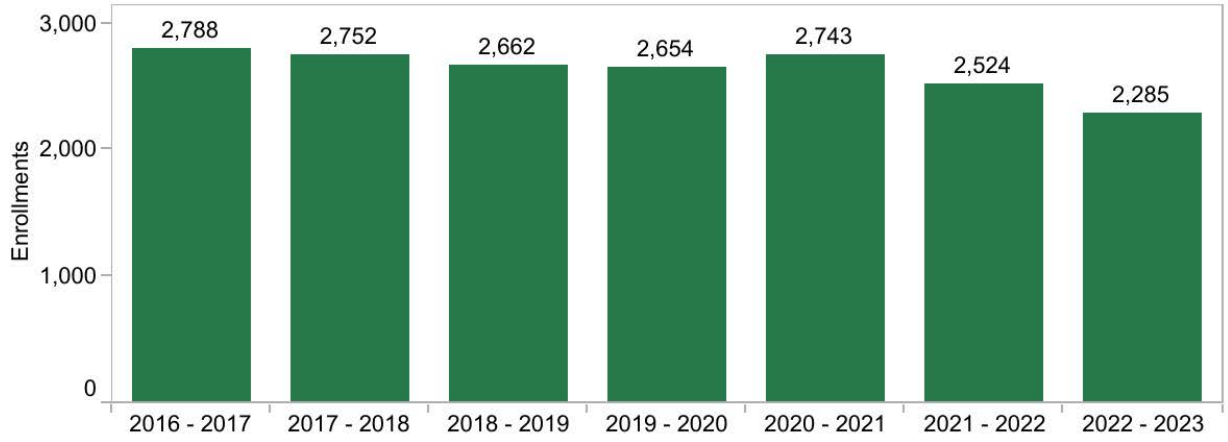
A. **General Enrollment (Insert Aggregated Data Chart)**
and explain observed differences between the program and the college.

Though total enrollment in biology courses recovered to a pre-pandemic level in 2020-2021, the following year, there was a nearly 8% drop in biology enrollment. Investigating the data further, it becomes clear this loss in enrollment was due to dropping distance education enrollment. In 2020-21, there were approximately 2,500 distance education enrollments in Biology. As more courses were scheduled in a face-to-face format during the 2021-22 academic year, there was a drop of approximately 600 distance education enrollments. For the 2022-23 academic year, the Division returned to scheduling primarily in a face-to-face format with 1,600 fewer DE enrollments. The overall enrollment declined by 9.5% as the overall college enrollment increased by 3.2%.

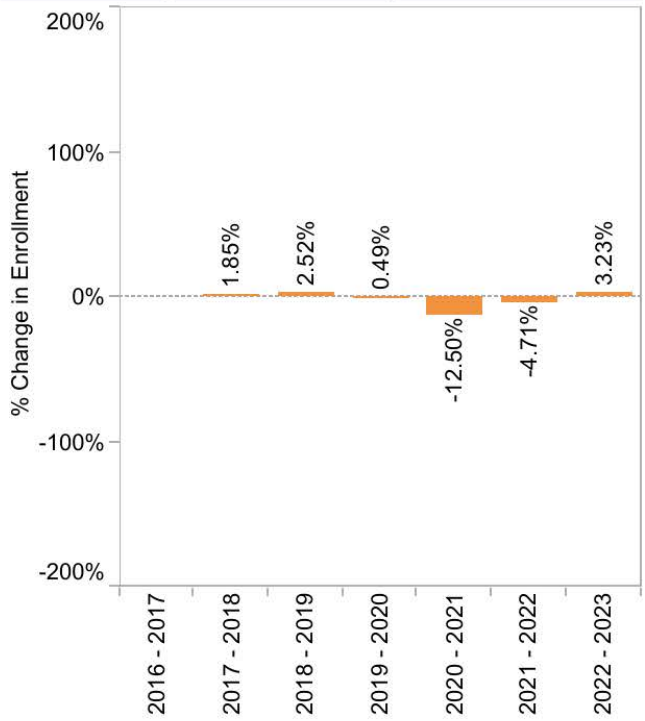
SLOCCCD Program Review Data - Enrollment

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

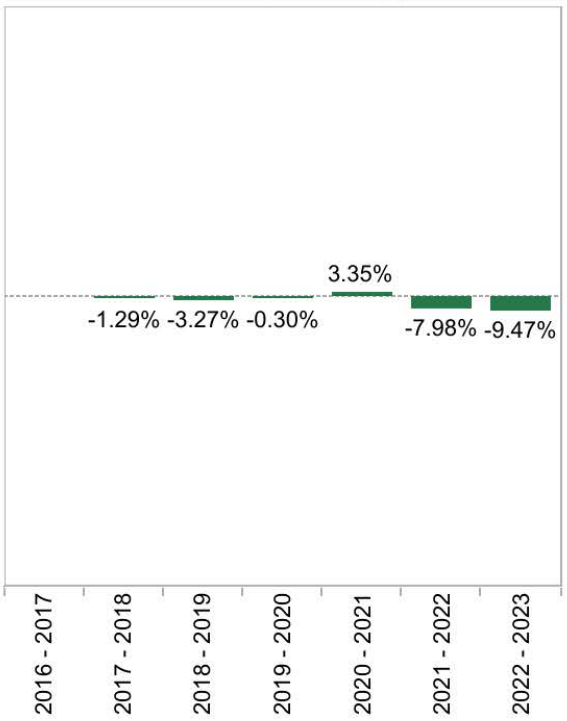
Biology Enrollments



% Change - Overall College Enrollments



% Change - Biology



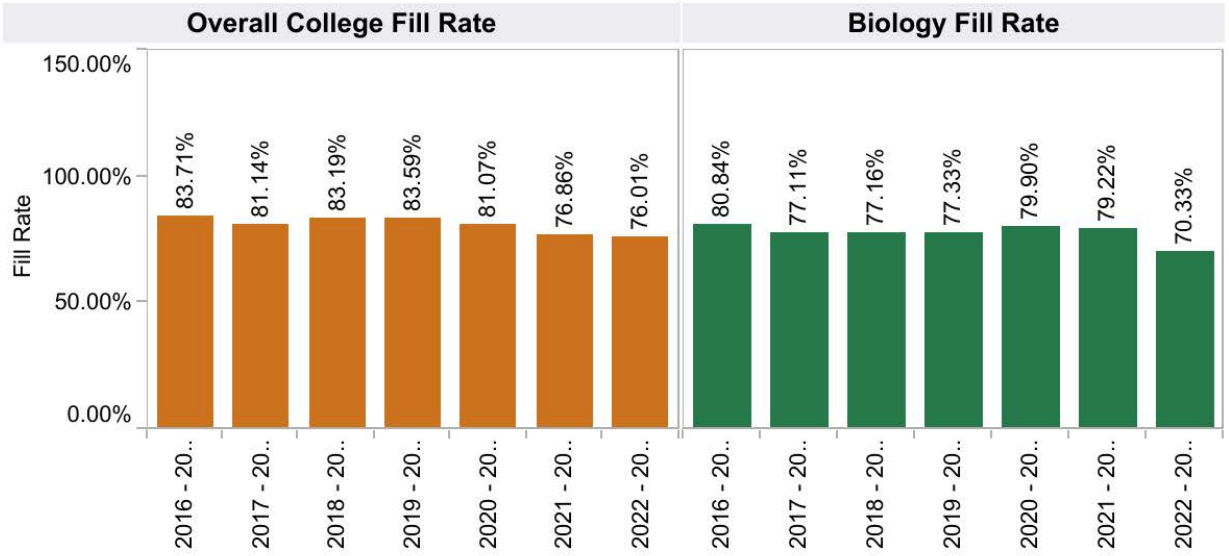
Enrollment: Duplicated count of students who completed greater than 0 units in positive attendance courses or were present on census for all other accounting methods.

B. **General Student Demand (Fill Rate) (Insert Aggregated Data Chart)**
and explain observed differences between the program and the college.

The Biology division fill rate is not consistently different from the average fill rate of Cuesta College. Though the Biology course fill rate in the 2022-23 year shows a notable decline, there was a decline across a number of courses and no single, obvious indication why. This decline did not match the steady trend of college fill rate. There were a number of changes in Biology faculty assignments.

SLOCCCD Program Review Data - Student Demand (Fill Rate)

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



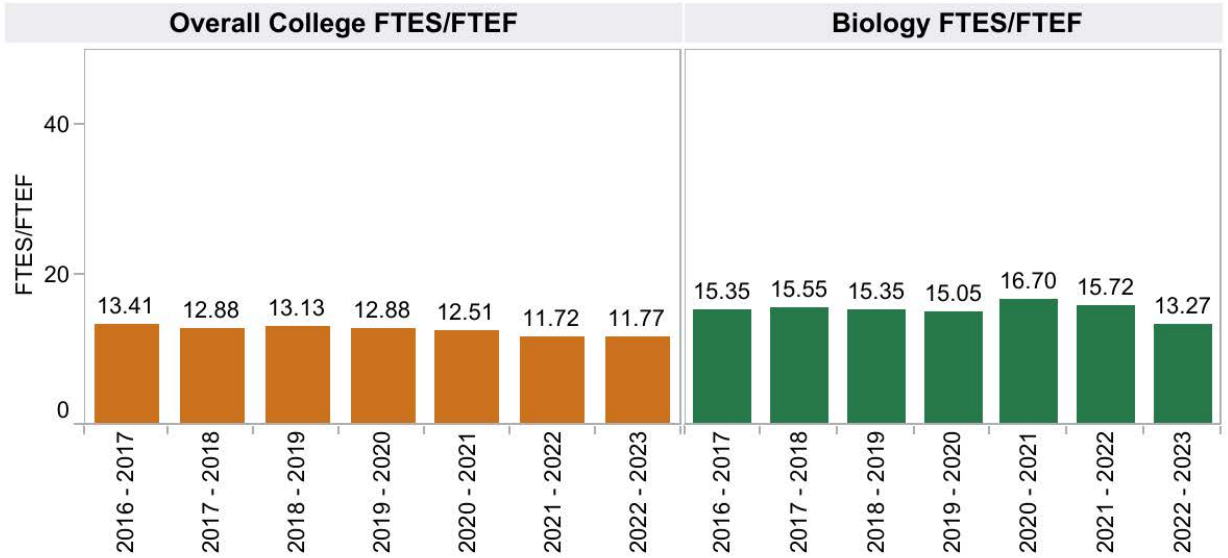
Fill Rate: The ratio of enrollments to class limits. Cross listed class limits are adjusted appropriately. Also, courses with zero class limits are excluded from this measure.

C. **General Efficiency (FTES/FTEF) (Insert Aggregated Data Chart)**
and explain observed differences between the program and the college.

The Biology Division offers popular courses for majors and non-majors, as well as those that fuel enrollment in Cuesta College's allied health programs. 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). Classes required for the allied health program applications are higher unit and tend to enroll well. These also strengthen the efficiency of the Biology Division. A combination of circumstances coupled with creative lab solutions improve the efficiency of Biology Division when compared to the college as a whole. The 2022-23 year shows an uncharacteristic drop in efficiency which corresponds to the lower fill rate this year.

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)**
and explain observed differences between the program and the college.

The 2022-23 course completion rate whether face-to-face or online is quite similar within the Biology Division. When compared to the College average for face-to-face course completion (80.04%), the Biology Division averages slightly less (78.02%). For online courses, the Biology course completion rate (78.23%) was better than the College average (72.04%). For the online modality, this higher rate of course completion is consistently higher than the college average year after year.

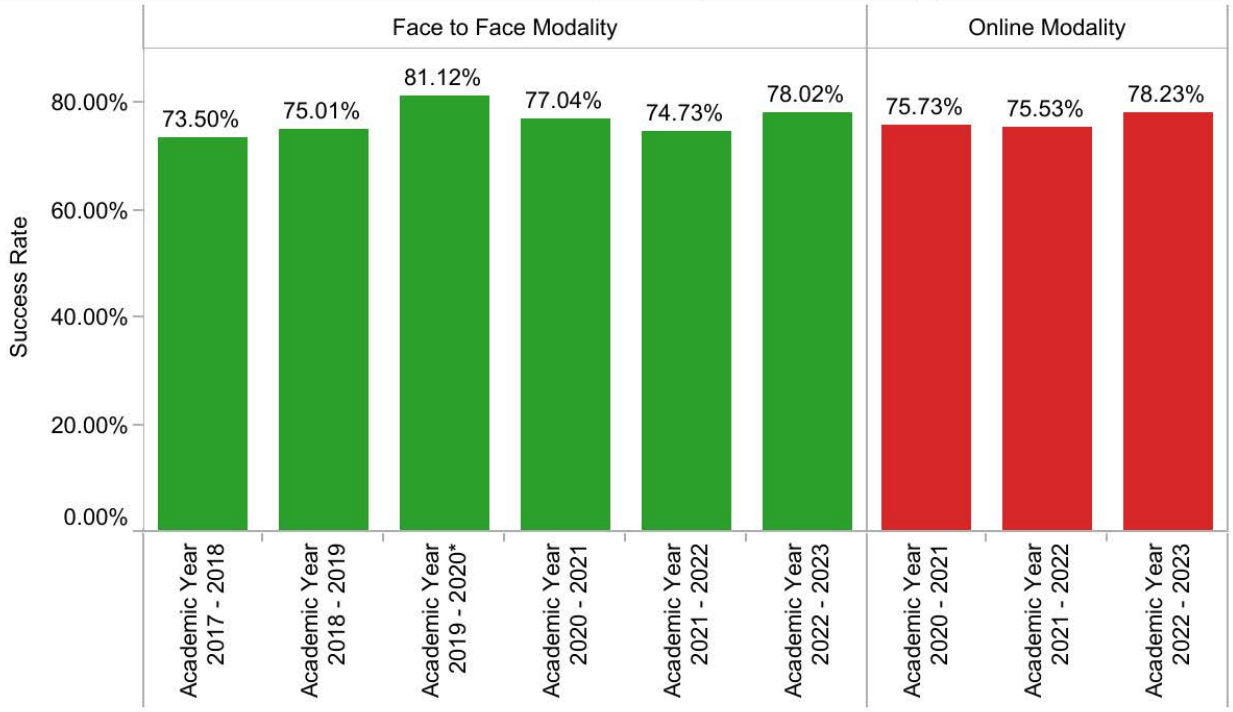
SLOCCCD Program Review Data: Successful Course Completion

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
Face to Face Modality	Department Success Rate	73.50%	75.01%	81.12%	77.04%	74.73%	78.02%
	Total Department Enrollm..	2,876	2,709	2,672	274	650	2,023
Online Modality	Department Success Rate				75.73%	75.53%	78.23%
	Total Department Enrollm..				2,512	1,918	273

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

and explain observed differences between the program and the college.

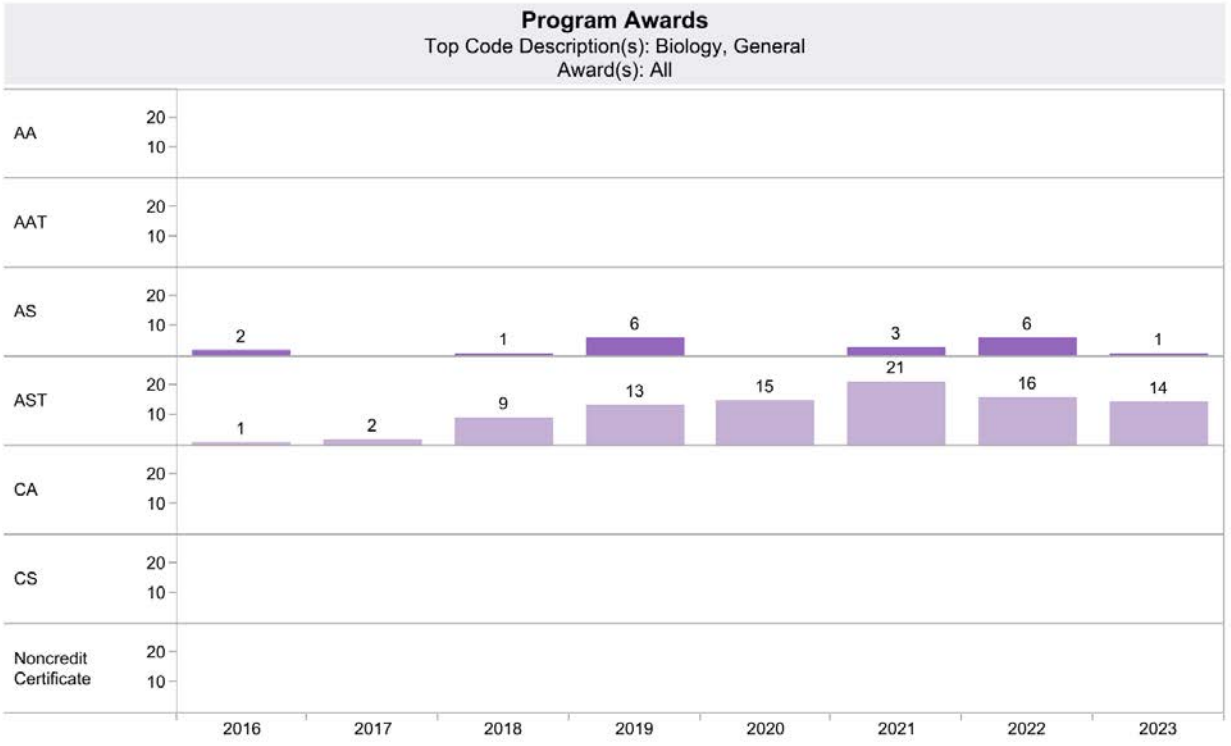
The number of Biology AS-T degrees awarded has been fairly steady over the past five years.

SLOCCCD Program Review Data: Degrees and Certificates Awarded

Program: Biology, General

Award Type: All

Area of Study All



Program Awards Table

Award Type	Award	2016	2017	2018	2019	2020	2021	2022	2023
AS	Biological Science (AS)	2		1	6		3	6	1
	Total	2		1	6		3	6	1
AST	Biology (AST)	1	2	9	13	15	21	16	14
	Total	1	2	9	13	15	21	16	14
Grand Total		3	2	10	19	15	24	22	15

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.

There has been little difference between the Biology Division course completion rate and

that of the college.

SLOCCCD Program Review Data: Successful Course Completion

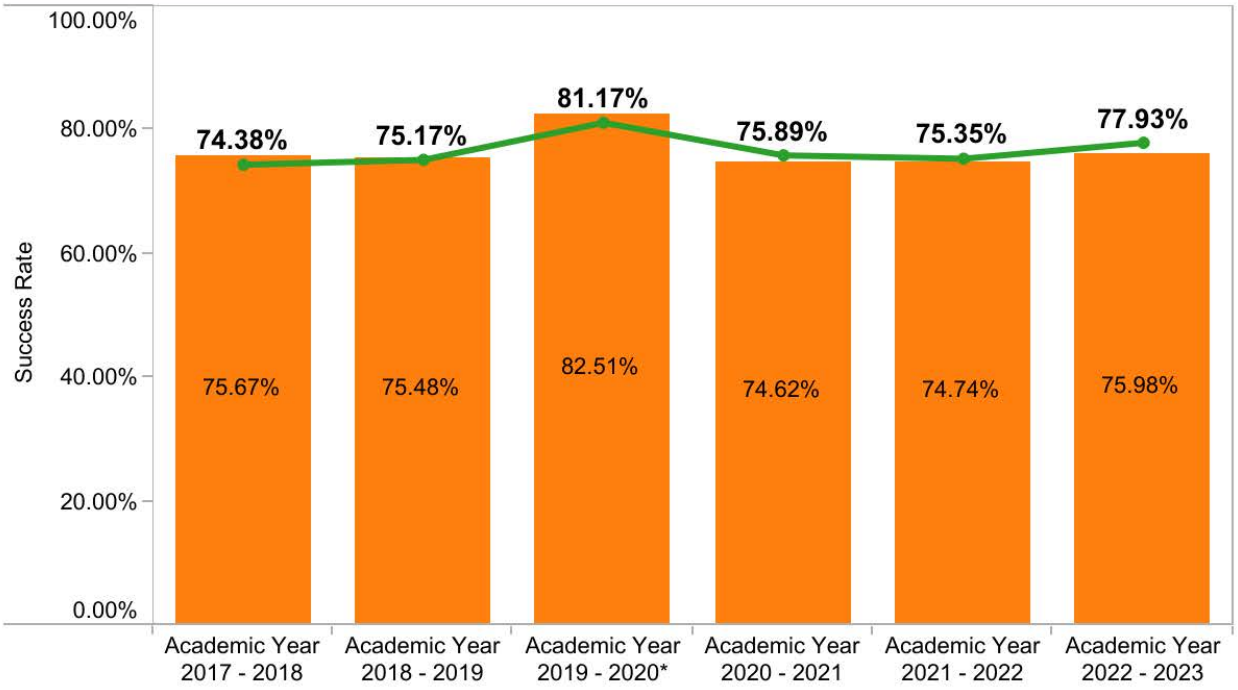
Select Department:
Biology

TERM
Multiple values

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 Successful Course Completion data presented below spans the Biology Division for the years 2016-17 through 2022-23 and is disaggregated by ethnicity.

The most glaring equity gap is with the Native Hawaiian or Other Pacific Islander population. It is important to consider that the number of enrollments for this group is 32 out of 18,426 total enrollments over that timespan; 20 of the 32 enrollments were successful.

Further efforts continue in an effort to improve the success of the Hispanic/Latino students through training, participation in outreach, and thoughtful scheduling.

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) have partnered with colleagues in Physical Science, Engineering and Economics to submit a grant proposal to National Science Foundation ($300K) that was funded and 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.

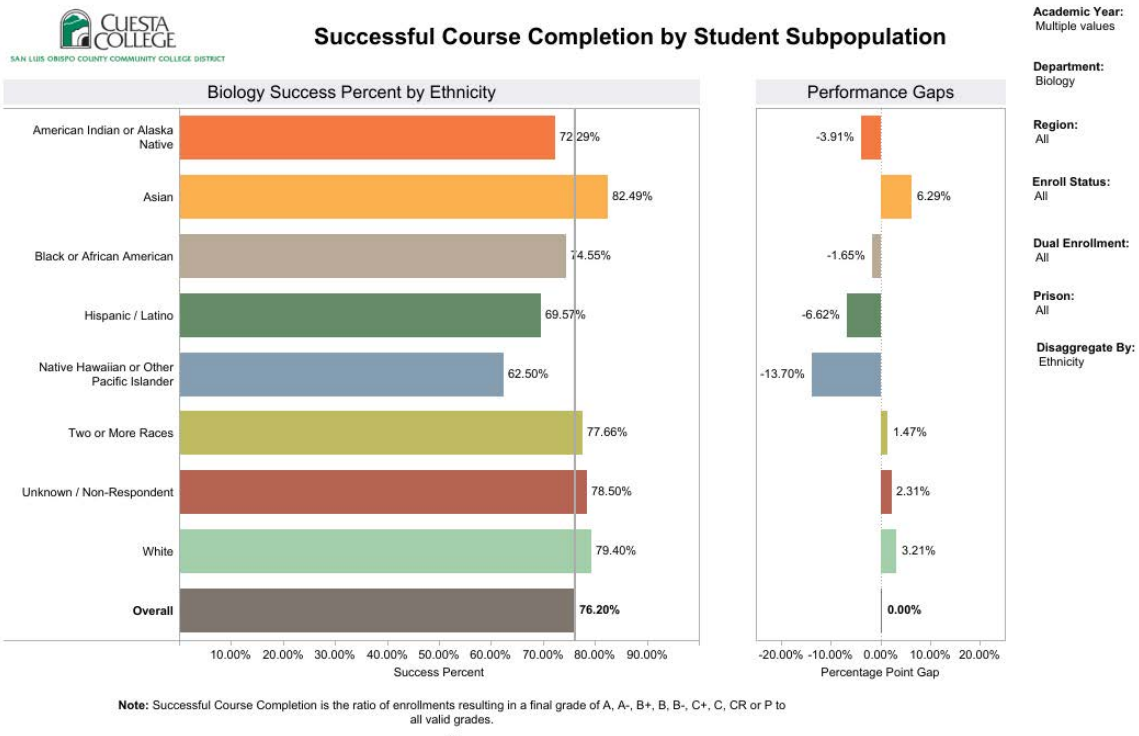
Additionally, the Biology Department offers Marine Biology Lecture and Lab (Bio 222/222L) in Baja California, Mexico. This alternate class location offers students the opportunity to study abroad, affordably, while at community college. Students will learn not only marine biology, but will have the opportunity for Spanish language 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, will again host scientist speakers from the Quantitative Biosciences Institute (QBI) of UC San Francisco this semester. 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 and Educate outreach events.



PROGRAMS AND CURRICULUM REVIEW PROGRESS

A. For the following questions, please refer to the 5-year update calendar in the **Curriculum Review Worksheet** (or classic template if your last CPPR was conducted before 2023) from your most recent CPPR.

List those programs of study (degrees and/or certificates) and courses that were scheduled for major or minor modification during the __3rd__ year in the 5-year calendar of the Curriculum

Review Worksheet.

NONE.

From the list generated in #1, identify those programs of study and courses that underwent the scheduled modifications during the ____ 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		

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 ____ 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			

B. For the following questions, please refer to Part A, #3 of the previous year's APPW (please also refer to any APPW completed since your most recent CPPR which have incomplete curriculum updates that aren't already referenced in the previous year's APPW).

List those programs of study and courses that are listed in previous APPW that were listed under #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 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			

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 ____ 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.*

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

In an effort to improve enrollment and access at the NCC, we will offer our first Summer Courses at the NCC this Summer. We plan to offer BIO212 Human Biology and BIO211 Life Sciences (non-majors).

The Biology Division continues to seek renovation of our 2401 Forum. There are no left-handed desks and the facility furnishings have not been updated in decades.

The Biology Division has had a number of retirements and new hires. We will continue hiring into the Adjunct Faculty Pool to stabilize our course availability, and will continue to seek additional full-time faculty positions to stabilize our Division and best serve the students and community of Cuesta College.

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.