

Comprehensive Program Review

A. Department Information

Mission

Please enter your department's mission statement here.

The Geology department seeks to foster an awareness, understanding, and appreciation of the complexity of the planet that De Anza College's students, faculty, staff, and all of humanity live on. Some of this drive stems from the desire to enable our students to be better-informed citizens of our increasingly crowded world, while some of it comes from the faculty's desire to draw the students into the sheer fascination of the Earth's dynamism and complexity.

In terms of concrete educational goals, the department's mission is to give students an opportunity to successfully complete science coursework for transfer, Associate degree, or lifelong learning. Transfer is the primary goal of most Geology students, and the department expects to provide students with an opportunity to earn transferable general education credits. This outcome applies to most of the students in Geology 10 and 20, with smaller fractions of them taking the class for the A.A. Degree, personal interest, or lifelong learning.

How does your program mission statement relate to the mission, vision and values of the college? (<https://www.deanza.edu/about-us/mission-and-values.html>)?

The departmental and college goals "mesh" along multiple lines. Most important of these alignments is that to be "socially responsible leaders in their communities, the nation and the world," our students must understand the nature and challenges facing the physical environment around them. Additionally to understand the diversity of our cultural heritage, we must understand the environmental context from which those cultures emerged.

Program Goals

Enter 1-3 goals for your department to be achieved by spring 2027. Each annual reflection will ask your department to report on progress in meeting your goals. Each goal should be aligned to your department's mission and the college mission. All resource requests and personnel requests should be aligned with your program's mission and goals.

Goal title	Goal description	Responsible parties	Collaboration with	Guided Pathways engagement	What evidence will be used to monitor progress?	How will you assess achievement of the goal?
Development of a AS-T Degree in Geology	Following previous recommendations from the administration the Geology Department is developing an AS-T transfer degree along California State guidelines.	Christopher DiLeonardo, current department chair.	Marek Chicanski	The development of an AS-T degree in Geology would allow students seeking transfer a structured course program. Additionally, as the lower-division preparation in Geology reflects preparation for most STEM transfer areas, the degree program will serve as a model for those transferring to 4-year institutions in other STEM fields.	The new degree program will require development of new course curriculum around the discontinued course GEOL 11 (Earth History). This course is part of the curricular pattern for the state guidelines for the AS-T. It will also require the development of a new field class Geology in the Outdoors, to parallel the lower-division requirements for the degree programs at our closest transfer institution San José State University. Our measure of progress will be the development and certification of these two courses at De Anza.	We will know that this goal is achieved when we have final curricular approval for the AS-T.

Changes Imposed by Internal/External Regulations or Factors

Are there factors unique to your program that may affect your enrollment, success rates or staffing that RAPP should be aware of? (e.g., curriculum changes, program reorganization, noncredit curriculum, loss of personnel, legislative mandates, etc.)

There are no internal/external regulations or factors that are unique to our program that will impact success rates or staffing in the near future.

B. Enrollment Trends

Enrollment Variables and Trends

Enrollment Trends						
Physical Sciences/Math/Engin - Geology-FD						
	2018-19	2019-20	2020-21	2021-22	2022-23	5-yr %Inc
Unduplicated Headcount	454	472	538	505	511	12.6%
Enrollment	467	484	560	519	524	12.2%
Sections	16	17	17	17	16	0.0%
WSCH	830	860	1,021	1,075	1,085	30.8%
FTES (end of term)	57	58	70	74	72	26.3%
FTEF (end of term)	1.7	1.7	1.8	2.0	2.1	25.8%
Productivity (WSCH/FTEF)	488	493	552	530	507	4.0%

In the data table above, what does the Enrollment trend indicate? For definitions of enrollment terms, please see the glossary (<https://www.deanza.edu/ir/documents/Glossary.pdf>).

- the data trend shows an increase in Enrollment
- the data trend shows a decrease in Enrollment
- the data trend shows no change and/or flat in Enrollment

Reflect on Enrollment Trends

Discuss the factors that would help the college understand your programs' enrollment trends. How may these trends align with your program mission and goals?

Generally, the enrollment trends are positive and may reflect the popularity of the online Introductory Geology class. The department had an online class in Oceanography going into the pandemic. The need to convert the GEOL 10 (Introductory Geology) class to online during the pandemic created an online lecture/laboratory course for general education. Given changing patterns of work/life situations of our student body post-pandemic the course has remained popular. We have struggled to get similar enrollments on campus for the same class. Demand for the face-to-face class is increasing and we look towards a constant 2 sections on campus and 4 online in the future.

CTE Programs - Statewide and Regional Labor Market Trends

CTE Programs Only

1. Review and summarize the Lightcast Analyst Occupational Outlook data for your CTE program (<https://foothilldeanza.sharepoint.com/:f:/s/dactedepartments/EiRTueQ8GrNLqItlQw2twpsBMFCs7X5djTVeo6Jss3W0Jg?e=1ybpmY>).
2. Cite current industry trends.
3. Provide an overview of your program advisory committee's recommendations relating to existing and new course and certificate/degree offerings. Cite additional data when applicable.

N/A

D. Course Success

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Course Success

Geology-FD

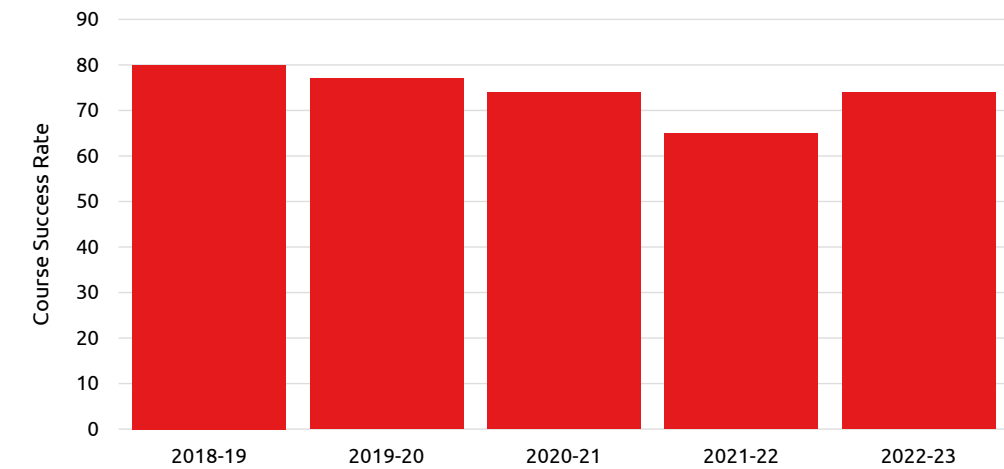
Who uses this report:

All users who want to further explore their enrollment or course success data.

What is this report:

This report is an extension of the Program Review Data Sheet. It has additional student characteristics and users can compare two groups of students at the same time.

Limits:



Limits:

Measures: Enrollments and Course Success Rate and Success Count

	2018-19			2019-20			2020-21			2021-22			2022-23		
	Enrollments	Course Success Rate	Success Count	Enrollments	Course Success Rate	Success Count	Enrollments	Course Success Rate	Success Count	Enrollments	Course Success Rate	Success Count	Enrollments	Course Success Rate	Success Count
Measures	467	80%	375	484	77%	374	560	74%	413	519	65%	336	524	74%	390

Data loaded 17-Aug-2023

In the data table above, what overall trends are you seeing in Course Success?

- the data trend shows an increase in Course Success
- the data trend shows a decrease in Course Success
- the data trend shows no change in Course Success

Exploring Course Success Rate Trends

1. What could be factors that influence success rates in your department?
2. What strategies does your department have in place to increase or maintain current success rates?
3. Are there other trends that you see when exploring different courses in the same department (How to access success rates by course: https://www.deanza.edu/ir/documents/How_to_Access_Your_Program_Review_Data.pdf)
4. How do course success rate trends align with your program goals?

There were minor shifts in success rates coming out of Covid where there was drop and then an increase. Overall success rates were within a few percentage points. An exception was seen in 2021-22 where there was a noticeable drop in overall success rate. It is hard to

describe what impact the pandemic had in success. Overall for several years piloted projects showed increase in success rates in historically underperforming groups on campus. This was done largely through including collaborative exams. We are working in our online courses to inspire more collaborations amongst students.

Course Success with Disproportionate Impact (credit and non-credit)

Limits: 2022-23

Who uses this report:

All users who want to explore student equity and disproportionate impact in course success.

What is this report:

This report highlights student groups with a negative percentage point gap and student groups experiencing disproportionate impact. Data reflects credit sections. Student groups with "N/A" enrollment denotes suppressed data.

How to interpret the data:

A negative percentage point gap means a student group has a lower success rate than the comparison group consisting of all students not in the student group being examined. When a student group is experiencing disproportionate impact, this means that (1) there is a negative percentage point gap and (2) this gap is unlikely to be due to chance. Programs are encouraged to prioritize discussions and address the student groups experiencing disproportionate impact.

New features:

To display only student groups with disproportionate impact, click on the link "Click here to show only groups with disproportionate impact." To add a comparison unit that is one level higher (e.g., course level compared to department level), **be sure to select a college, division, department or course**, then click on the link "Click here to show and compare disproportionate impact with [X]".

Success rate

The number of students receiving an A, B, C or P grade divided by the total number of students receiving a grade. Rate is rounded.

Comparison success rate

The success of all students except for the group being examined (e.g., the comparison success rate for Latinx students is the success rate of all students who are not Latinx). Rate is rounded.

Additional successes needed to erase percentage point

This value provides a way for practitioners to think of gaps in terms of student successes, and illustrates the number of additional successes needed to avoid a percentage point gap.

Legend:

Yellow: Student groups experiencing a negative percentage point gap that is not statistically significant

Orange: Student groups experiencing disproportionate impact according to the Percentage Point Gap Minus One (PPG-1) method¹

Currently showing all groups. [Click here to show only groups with disproportionate impact.](#)

[Click here to show and compare disproportionate impact with .](#)

Hide cells with fewer than students

Physical Sciences/Math/Engin - Geology-FD						2022 Summer to 2023 Spring	
Number of sections: 16							
Student group	Enrollment at census	Student group success rate	Comparison success rate	Percentage point gap	Chart	Additional successes needed to erase percentage point gap	
All Students (Geology-FD, 16 sections)	524	74%	74%	0			
Asian	193	79%	72%	+8			
Black	30	77%	74%	+2			
Filipinx	31	68%	75%	-7		3	
Latinx	160	67%	78%	-11		18	
Native American	N/A						
Pacific Islander	N/A						
Unknown ethnicity	19	89%	74%	+16			
White	87	75%	74%	+0			
Female	231	71%	77%	-6		15	
Male	285	77%	72%	+5			
Non-Binary	0						
Unknown gender	N/A						
Foster youth	N/A						
Individuals with disabilities	16	81%	74%	+7			
Low Income	235	67%	80%	-13		31	
Not Low Income	289	80%	67%	+13			
Veterans	N/A						

¹The PPG-1 method follows the CCCCO method for calculating disproportionate impact. Disproportionate impact is when (1) a student group's PPG value is less than -2 (e.g., -3, -4, -5, etc.) and (2) the absolute PPG value is greater than the calculated margin of error. PPG is calculated by comparing a student group's success rate against the success rates of all students except for the group being examined (e.g., Latinx PPG is Latinx success minus the success of all students except for Latinx students).

In the data table above, what does the data indicate about the Success rate of various ethnic groups within your department compared to the comparison group for the most recent academic year? (i.e., as displayed in the Percentage point gap column)

The Percentage point gap between Asian students and all other students shows:

- there is no gap (e.g., 0)
- there is a negative gap of 5-percentage points or less (e.g., -5)
- there is a negative gap greater than 6 percentage points (e.g., -6)
- there is a positive percentage point gap (e.g., +2)

The Percentage point gap between Black students and all other students is:

- there is no gap
- there is a negative gap of 5-percentage points or less
- there is a negative gap greater than 6 percentage points
- there is a positive percentage point gap

The Percentage point gap between Filipinx students and all other students is:

- there is no gap
- there is a negative gap of 5-percentage points or less
- there is a negative gap greater than 6 percentage points
- there is a positive percentage point gap

The Percentage point gap between Latinx students and all other students is:

- there is no gap
- there is a negative gap of 5-percentage points or less
- there is a negative gap greater than 6 percentage points
- there is a positive percentage point gap

The Percentage point gap between White students and all other students is:

- there is no gap
- there is a negative gap of 5-percentage points or less
- there is a negative gap greater than 6 percentage points
- there is a positive percentage point gap

The Percentage point gap of one additional group of your choice:

- there is no gap
- there is a negative gap of 5-percentage points or less
- there is a negative gap greater than 6 percentage points
- there is a positive percentage point gap
- not applicable

Exploring Gaps in Successful Course Completion by Ethnicity

1. What differences do you see in successful course completion rates by ethnicity?
2. What are your thoughts on these differences?
3. Are there other trends that you see when drilling into the data that may be important for your department to explore (e.g., foster youth, individuals with disabilities, low income, veterans)?
4. Which additional student group did you choose to explore and why?
5. How do these trends align with your program's mission and goals?

Overall success rates for our college-level science courses are around 74% overall. Success rates in ethnic populations except for Latinx and Filipinx which have significantly lower success rates. Without correlating data between ethnicity and economic it is hard to evaluate what this trend means if anything. If disproportionate numbers from the Latinx and Filipinx communities are represented in the low-income population (that has the largest gap) then the explanation is not related as much to ethnicity by economic status. One concern maybe that student's suffering financial hardship may be working more which may interfere with success. Another factor maybe disparities in technology between low-income and other students. Access to computers rather than being limited to the use to smart phones may impact success rates.

Teaching and Learning Strategies

1. What teaching and learning strategies might be helpful in narrowing any gaps in successful course completion?
2. How do the listed teaching and learning strategies align with your program's mission and goals?

Our success rates in face-to-face classes saw an increase in underperforming groups over a three-year period prior to the pandemic. This was tied to a program to include collaborative testing models as part of the overall assessment strategy. We are attempting to implement a similar approach in our online offerings.

Trends in Awards

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Degrees and Certificates by Ethnicity

Who uses this report:

All users who need degree and certificate data.

What is this report:

This report provides the degree and certificate counts by college, division and department. Additionally, all users could explore degree and certificate awarded by ethnicity and gender.

Data loaded 24-Oct-2023

No data returned for the criteria selected

In the data table above, what are the trends in regard to the number of awards within your program?

Trends in Associate Degrees awarded show:

- an increase in the number of Associate Degrees awarded
- a decrease in the number of Associate Degrees awarded
- no change in the number of Associate Degrees awarded
- Not applicable

Trends in Associate Degrees for Transfer awarded show:

- an increase in the number of Associate Degrees for Transfer awarded
- a decrease in the number of Associate Degrees for Transfer awarded
- no change in the number of Associate Degrees for Transfer awarded
- Not applicable

Trends in Credit Certificates awarded show:

- an increase in the number of Credit Certificates awarded
- a decrease in the number of Credit Certificates awarded
- no change in the number of Credit Certificates awarded
- Not applicable

Trends in Non Credit Certificates awarded show:

- an increase in the number of Noncredit Certificates awarded
- a decrease in the number of Noncredit Certificates awarded
- no change in the number of Noncredit Certificates awarded
- Not applicable

Reflecting on Trends in Awards

1. What trends do you see across awards in your department?
2. How do the trends in awards align with your program's mission and goals?

N/A

Reflecting on Award Offerings

1. For each program leading to an award, identify any courses that have not been offered in the last two years. Briefly explain why the courses have not been offered. For courses that will not be offered, how does your program plan to update the program so that students can complete the requirements?
2. Based on a review of course offerings and the number of awards offered and conferred, is your department planning on removing any degrees or certificates from the college catalog? If so, please list those being removed and a short explanation as to why.
3. Does your department have any plans to offer new degrees or certificates? If so, please list and provide a short explanation as to why.

N/A

Staffing Trends

Faculty Workload

	2018-19	2019-20	2020-21	2021-22	2022-23	5-yr %Inc
Full Time Load	1.2	1.2	1.0	1.0	1.3	9%
Full Time %	71.1%	69.7%	54.2%	50.5%	61.5%	-13%
Overload	0.5	0.5	0.8	0.9	0.7	49%
Overload %	28.9%	30.3%	45.8%	45.1%	34.4%	19%
Part Time Load	0.0	0.0	0.0	0.1	0.1	∞%
Part Time %	0.0%	0.0%	0.0%	4.4%	4.2%	∞%
Total FTEF	1.7	1.7	1.8	2.0	2.1	26%

What trends do you see in the last five years in regard to the Full Time %? (i.e., percentage of classes being taught by full time faculty, not including overload or summer)

- the data trend shows an increase in Full Time %
- the data trend shows a decrease in Full Time %
- the data trend shows no change in Full Time %

Staffing Needs

Provide a brief overview of your department's staffing needs. Personnel requests are to be submitted on a separate form.

1. What are full time faculty needs to ensure the program's health, growth or vitality?
2. What are classified staffing needs to ensure the program's health, growth or vitality?
3. What strategies does your program have in place to ensure students are being successful when faced with the current staffing ratios?
4. What strategies does your program have in place to retain new faculty, if applicable?

The overall FTEF% is up for the department. This reflects an increase in enrollments in our online sections during and post pandemic. We have two full-time geologists in the department, but Marek Chicanski picks up a significant amount of his load in the Astronomy department. He holds a Ph.D. in Geological Science but also a Master's degree in Astronomy. His participation is somewhat fluid between the departments and DiLeonardo is 100% in Geology and teaching overload in addition to regular assignments. The bottom line is 2.1 FTEF in Geology and the potential for the two full-time faculty to cover it all. We see no need for increasing faculty in the department at this time.

Assessment Cycle

Student Learning Outcomes Assessment Cycle

Navigate to <https://www.deanza.edu/slo/#post> which will take you to an accordion listing of SLO assessments under "Student Learning Outcomes and Assessments Summaries by Division"

1. Summarize the dialogue that has resulted from SLO and/ or PLO assessments.
2. What specific strategies has your department implemented, or plan to implement, based on the results of the SLO/PLO assessments conducted?
3. How do these strategies align with the program's mission and goals.

The department over the years has conducted multiple assessments of the SLOs for both our GEOL 10 and GEOL 20 classes. The assessments are purposefully matched with SLOs and individual Course Objectives. The emphasis is on understanding the earth system and the principles of geology and therefore supports the departmental mission of: fostering an awareness, understanding, and appreciation of the complexity of our home world.

Dean/Manager Comments

Geology has been holding strong enrollment. The online sections do well and students seem to pick Geo for their GE courses. Both fulltime faculty in the department are very equity minded and student centered. I do encourage the creation of AS-T.

STOP. Do not submit form. Please inform your dean/manager when the form is complete. They will submit the form when they have added their comments above.

This form is completed and ready for acceptance.