



Fullerton College

Self-study for Geography and the Environment Program

2025

Section 1: Introduction

1. Briefly describe your program, make sure to include how your program helps the College achieve its mission.

Geography is the holistic study of the Earth's human and physical systems and their relationships. Its broad disciplinary scope bridges the social and natural sciences focusing on understanding the relationships of human societies with the environment and each other, often focusing on the disparities these relationships produce. As a discipline, Geography is paramount in understanding a world that is increasingly globalized— a phenomenon that compels us to better understand the complex global relationships and interdependence between peoples, places, and environments. Geographers study many of the world's most pressing issues, utilizing a holistic and relational framework to study topics like climate change, population, natural resources, environmental justice, deforestation, pandemics, wildlife trade, economic development, sustainability, natural disasters, social inequality, conflict, agriculture, migration, economic and cultural globalization, among other relevant topics. Students who take geography often report to feel more globally aware and thus more confident in facing the pressing issues of the contemporary world.

The Department of Geography & the Environment advances student learning and achievement by developing flexible pathways for students from our diverse communities who seek educational and career growth, certificates, associate degrees, and transfer by offering...

- enriching General Education courses in the social and physical sciences, academically preparing Fullerton College students of all majors to transfer to CSUs and UCs;
- courses that develop students' transferrable skills, such as critical thinking, data analysis, research, and writing;
- diverse pathways of study in social, environmental, and technical fields with specialized study tracks -- an AA or AAT in Geography, an AA in Environmental Sustainability, an AA and AAT in Global Studies, and an occupational technical certificate in Geospatial Technologies; and
- courses with relevant subject matter that equips students with a better understanding of the physical and human processes that shape the contemporary world, its inequities, and many of its environmental and social challenges.

The Department of Geography & the Environment fosters a supportive learning environment for students to be successful learners, responsible leaders and engaged community members by...

- offering courses that equip students
 - with knowledge and critical thinking skills to make informed decisions.
 - to analyze the prospects, challenges, and applicability of existing solutions to pressing social and environmental issues.
 - to utilize an analytical and empirical framework to seek, interpret, and gauge sources of information in order to understand the world.
- supporting and engaging students beyond the classroom by
 - adopting embedded tutoring.
 - adopting free Open Educational Resources.
 - connecting students to campus support services.
 - providing extracurricular learning opportunities such as guest lectures, film screenings, symposiums, and webinars.

Section 2: Students

2.1 Student Demographics and Enrollment Trends

1. Using the data provided by the OIE, describe the student population your department serves. Which demographic groups have the most enrollments in your program? Which student groups are underrepresented in your program? Has the demographic profile of your program changed over the last four years?

The Department of Geography & the Environment offers courses that fulfill both the Social and Physical Science requirements for CSU/UC transfer, which help a myriad of students achieve their goals, regardless of their major. The ethnoracial makeup of our student population closely resembles that of the college, serving a majority of Hispanic/Latinx (56-59%), White (16%), Asian (11-14%), multi-racial (6-9%), and Black (2-3%) students along with other groups. No ethnoracial groups seem to be underrepresented since our student profiles closely resemble those of the college. Our program leans slight a bit more male (46-51%) but not by much.

This demographic is consistent with the patterns of enrollment explored in the 2021 Program Review. Although the current data dashboard limits demographic analysis to race/ethnicity and gender, prior data sources allowed us to monitor additional student groups (foster youth, veterans, DSS students, and economically disadvantaged students). We encourage restoration of these data points for future program reviews to better understand and support our student population.

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2. Briefly describe course-level enrollment trends in your program over the past five years. Have the enrollment trends in your program changed over the last five years? To what do you attribute any changes or lack of changes?

Our enrollment trends mirror those of the college, showing a strong post-pandemic recovery in both enrollment and headcount. Over the past five years, the Department of Geography & the Environment has served more than 7,285 unique students and recorded about 9,076 course enrollments. While this represents a modest share of Fullerton College totals, demand for Geography courses has remained steady. Despite systemwide declines during the pandemic, the department saw a 2.7% increase in enrollments while the college declined by 3.7%. By 2025, Geography has returned to pre-pandemic levels, demonstrating resilience and consistent student interest.

- **GEOG 102 F – Physical Geography**

GEOG 102F is the most enrolled Physical Science GE course at Fullerton College and among the top ten courses in the Social Science Division. Between 2019 and 2025, it enrolled an average of 916 students per year, reaching 1,041 in AY 24/25—a 12% increase from the five-year baseline and 16% higher than in AY 19/20. Over 75% of these students take the course online across regular and short-term sessions. This course consistently doubles the enrollment of the most popular chemistry courses, but the Geography department only has two full-time faculty compared to Chemistry’s ten full-time faculty. Students have clearly shown that they prefer to take their Physical Science requirement with us, but demand for this course far exceeds departmental capacity, highlighting the need for additional full-time faculty.

- **GEOG 102 LF – Physical Geography Lab**

GEOG 102LF is the second most enrolled General Education Physical/Life Science lab at Fullerton College and one of the fastest-growing labs on campus, with a 27% enrollment increase over the past five years. The Social Science Division hosts two of the most enrolled science lab courses—Anthropology and Geography & the Environment—both sharing one lab space. However, Anthropology benefits from a full-time faculty member dedicated to lab coordination. Geography’s lab, however, is staffed entirely by adjuncts, creating an urgent need for a full-time lab coordinator to ensure quality and consistency.

- **GEOG 100 – World Geography**

Our third most enrolled course, GEOG 100 fulfills the GE Social Science requirement for CSU/UC transfer and is CID-approved as equivalent to Global Issues in the Global Studies ADT. It directly supports institutional learning outcomes on global systems and stewardship and serves as an entry point for students who often continue with additional Geography courses. While overall departmental enrollment exceeds student headcount by about 400 annually—showing strong course retention within Geography—GEOG 100 enrollment has declined by 35% (about 200 students) since AY 19/20, likely due to broader online offerings in the Social Science GE area.

Overall, despite operating with only two full-time faculty, our department continues to serve large numbers of students across multiple modalities. Expanding online offerings has helped overcome space constraints and sustain growth. Course sections have increased from 47 in 2019 to 68 in 2025—a 31% rise since pre-pandemic years. These figures reflect a strong reliance on adjunct faculty to help us respond to sustained demand. Even though full-time faculty teach maximum overload each semester, we are only able to teach slightly less than half of course sections offered in our department.

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3. How do you monitor and modify course offerings, including time and modality, to ensure that

students' needs are being met?

We continuously adjust course scheduling, modalities, and timing to align with student demand. Enrollment data show persistent student preference for asynchronous online and short-term (8-week) courses. While we aim to maintain in-person offerings, especially for labs, many face cancellation due to low enrollment. We ensure student needs are met by consistently monitoring our enrollment, emailing waitlisted students, and working closely with our Dean to open new sections if the demand arises. We have also worked closely with our dean to return more of our labs to in-person instruction, as a tactile learning experience is important for lab courses. Student demand for short-term asynchronous online courses is pushing us to innovate at a faster pace than ever, placing unprecedented demands on faculty creating new challenges around workload, pacing, and academic integrity. Faculty have adapted by refining instructional design and assessment to uphold learning quality across all modalities. This is all work in progress.

2.2 Student Achievement

1. Using data provided by the OIE, describe overall student achievement counts, rates, and trends in your program over the past five years, these include: course success rates, degrees/certificates completion counts, transfer counts, licensing, job placement, wage improvements (not all of these measures apply to every program).

Departmental success rates consistently exceed or meet college standards, averaging 68–74% over the past five years, on par or above other social science programs.

By course, we see high success rates, especially for STEM courses such as GEOG 102, Physical Geography and GEOG 102 lab, with GEOG 102's success rate at 75% and the respective lab at 85% in 2025. This is a higher success rate compared to the college overall (69-70%), especially considering that it is a science course taught to non-major students with little background in geography. Physical Geography is our most likely gateway opportunity for students to learn physical geography, pass, and maybe take more geography courses. It is also the course with most equitable outcomes, where all ethnoracial groups are apparently succeeding beyond the institutional set standard.

Some courses showcased decreased success rates in recent years, such as GEOG 100, World Geography, and GEOG 130, California Geography. Given the breadth and complexity of regional geography, these courses are a bit more challenging to teach and learn as they explore both the social and physical sciences simultaneously. These courses were mostly offered in person in the pre-pandemic years, and success rates were a bit higher back then. We have learned from past Program Review data that students in GEOG 100 are also much younger than those in other GEOG courses, a third being under 20 years old

and 13% being first-time college students (the highest share in our department). The success rate among first-time students on this course tends to also be much lower. We understand these patterns of low success as a lack of basic skills, lack of basic familiarity with geography, and a mismatch of course modality enrollment. We have attempted to return GEOG 100 courses to in person instruction, where success rates are significantly higher (67% compared to 53%), but these courses have been getting canceled for low enrollment while online sections, especially late starts, maintain large waiting lists. Unfortunately, students are demanding modalities for learning that they are not prepared to succeed in (mostly due to lack of time/preparation/engagement). Further, unlike courses such as History or Political Science, or even physical sciences, in which students have a basic exposure to in High School, regional geography tends to challenge students as they are going into a college level course about something they have close to zero knowledge about. To make matters more challenging, young first-time students are still navigating how to be college students altogether, and most are struggling with the time commitment necessary to succeed in their chosen modality of instruction.

2. Are there student groups whose success rates are below the institution-set standard or whose success rates are below other student groups? What factors can explain this?

As a department, we have closed the gap for Latine students but remain challenged by the existing success gap of our Black (53%) and Pacific Islander (59%) students (a small population of 17 students in 4 years). Over the years, we have closed the gap for the success rates of our Latine students (70%). Further, first-time students, especially those not seeking to transfer, struggle with all of our courses, with success rates hovering around 52%, with the notable exception of Honors, Labs, and Physical Geography courses.

As an institution, we have had a long-standing struggle to move the needle on the success rates of our Black/African-American students. Our past Program Review study showed that the success rates of Black/African-American students are more impacted at Fullerton College than in the surrounding colleges of the OC region. This remains true in recent years, as Black/African-American students in 2023/2024 have maintained a regional course success rate of 63% in OC colleges but 59% at Fullerton College (CCC Data Vista). This is a slight improvement compared to 10 years ago, but as an institution we still lag behind our regional figures. We have not been offered an institutional explanation exploring factors playing into low success rates of our Black/African-American students at FC in particular. Thus, we can only reasonably speculate on the long-lasting disadvantages from a long legacy of disenfranchisement of Black/African-American populations nationwide/worldwide. As a department, we have made many commitments and changes to student support, curriculum, and pedagogy, but still, our department lags a bit further behind the college success rates of Black/African-American students, a population that highlights how the challenges of a

geography education are exacerbated for marginalized populations.

It is difficult to extract a meaningful analysis of student success across ethnoracial groups, especially as many of our students have intersecting struggles. A good number of our Black/African-American students are recruited away from their home areas to participate in athletic programs on campus. While we do not have data shares of student-athletes across ethnoracial groups, we understand that our scholar athletes are non-scholarship athletes and many work to pay for room and board while also attending school and participating on athletic teams, thus facing the simultaneous stressors of their work/school/athletic commitments. While these stressors are not exclusive to any student group, they may be more pronounced for out-of-state student athletes. As such, these students may suffer from higher instances of absences, tardies, less out-of-class study time, and poor performance/missed assignments and/or exams. An intersectional lens could help us better scrutinize the success rates of students facing a myriad of challenges (marginalized ethnoracial groups, first-time students, first-gen students, ESL, athletes, foster youth, veteran, DSS, economically disadvantaged).

3. In terms of your degree and certificate completers, are there any groups who are underrepresented in your completion data compared to the overall enrollment in your program?

Our Program Degree completion is too low to infer on the representation of special populations – we have had a total of 34 degrees (AAs and AATs) in four years, which is pretty significant considering that only a total of 53 AATs were awarded in the entire Orange County regions in the last 4 years (CCC Data Vista). We currently have 39 students listed as majoring in one of our programs (Geography, Environmental Sustainability, or Global Studies), and this number an increased number of majors the last 4 years. Most of our students find their successes in making geography part of their educational general education journey, not necessarily as majors. Regionally, Latine open admit students in geography courses have recently surpassed white students in earning degree awards, further closing previous gaps of Latine students (CCC Data Vista). Since geography departments across the country have been populated by predominantly white male professors, critical scholars in the field have long pointed out to the need to diversify geography departments and geography curriculum to better respond to the DEIA values of higher education and to better serve students in our classrooms. We hope recent upticks are indicators of improved relatability of our classes to non-white students, while we acknowledge that full equity in student completion/success is yet to be achieved.

4. Are your students completing your degree and certificate program requirements in the expected time frame? Are there certain groups whose rates are below other student groups?

Discuss any efforts to improve time to completion.

Average time to degree in Geography is 5.14 years, compared to 4.64 years collegewide. While longer than ideal, this reflects the realities of our largely working, economically disadvantaged student body. Many balance work and family responsibilities while exploring academic pathways—an important aspect of the community college mission.

To support timely completion, our department accepts our role in maximizing support for our students, reducing confusion, and offering courses consistently and dependably to help students transfer. We have adopted embedded tutoring for GEOG 102 and GEOG 100. We offer a diversity of modalities that include in-person, online, and accelerated courses. We have participated in the collegewide mapping of all our programs to ensure clarity for students attempting our degrees. Further, we have created a scheduling plan to offer courses in a predictable manner that allows students to follow their program maps more seamlessly. That said, we also recognize that exploration is a core part of community college learning. Returning students often outperform first-time students, suggesting that maturity and purpose strongly influence success.

2.3 Student Learning Outcomes

1. Describe your program's processes and practices for defining, assessing, and analyzing student learning outcomes at the course (CSLO) and program (PSLO) level. Include a discussion of how your program uses the results of CSLO/PSLO data to inform course and program improvement efforts.

Geography faculty regularly assess CSLOs on a three-year cycle, with most assessments done by full-time faculty. We feel compelled to note that we are highly skeptical of our CSLO data/process. There are no standardized or agreed methods or best practices for CSLO assessment in our department, and there is great inconsistency in how we assess CSLOs in different course sections. The previous administrative team for the department encouraged a decentralized approach where each class instructor was allowed to assess CSLOs in a manner in which they saw fit. The department continued with this approach, but it is difficult to accurately compare data across class sections, terms, and demographics. One issue is that current practices may also not best capture our student learning outcomes in our courses. For example, in GEOG 102, CSLO data was based on final grades for the course. For GEOG 100, the data was based on scores of three multiple choice tests respective of specific CSLOs. Given that students don't perform as well in exams and that overall course grades do not capture itemized performance on individual CSLOs, we recognize that these are flawed methods for attaining CSLO data. We support institutional efforts to replace eLumen and plan to use that transition to develop a more meaningful, standardized approach. We also recommend recognizing CSLO work as part of institutional research (OIE) or compensating it

through contractual faculty hours, given the time-intensive nature of accurate assessment and analysis.

Our implementation of PSLOs is relatively new. Assessing PSLOs will entail that differentiated assessments be used to measure the effectiveness of PSLOs, in lieu of linking CSLOs. Higher education still relies heavily on instructor-created multiple-choice/fill-in-the-blank/true or false summative assessments thereby limiting what can be interpreted as “learning”. A student may struggle with this type of assessment, and the limited generated data would show that the student did not “learn”. Utilizing multiple methods of assessment including instructor-created exams, a capstone research paper/presentation, student reflections, and/or discussions would provide more truthful accounting on whether or not students were meeting the PSLOs. Based on these realities, we are currently exploring major courses such as GEOG 130 and Geography of California or GEOG 160 (both with the highest percentage of majors) as possible courses to integrate capstone projects to assess our Program Learning Outcomes. We recognize our need for improvement in this area and are committed to aligning with forthcoming institutional data collection tools and training opportunities.

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2. (OPTIONAL/NOT REQUIRED) Using the data provided by OIE, describe the most salient results of CSLO or PSLO mastery rates. Did you find significant differences by race, ethnicity, gender, and other categories?

NA

Section 3: Other Areas of Program Effectiveness

1. Document any substantial changes to your program curriculum since the last review and discuss what prompted these changes. Looking forward, what changes to the curriculum do you plan based on the emerging needs of your discipline, industry, student population, etc.

Since the last program review, the Department of Geography and the Environment at Fullerton College has made several changes to course and degree offerings in response to student demand, transfer alignment, and workforce trends. The department now oversees the Global Studies AA and has introduced an Associate of Arts in Environmental Sustainability, a Certificate in Geospatial Technologies, expanding pathways for students interested in global, environmental, and technical fields. These new programs were designed to reflect the growing relevance of sustainability and spatial data analysis across academic and professional sectors. In addition, the department revised several existing courses to

incorporate applied geospatial components and to align with contemporary disciplinary practices that emphasize data literacy, global awareness, environmental analysis, and spatial reasoning.

Course offerings have also been diversified in terms of delivery and structure. To improve access and meet the needs of working students and those balancing multiple commitments, the department expanded its online options, particularly in high-demand courses such as Introduction to Physical Geography (GEOG 102) and its accompanying lab. The expansion has mostly happened through the addition of options for 8-week online sections, which are in high demand due to increased flexibility. Alongside these changes, the department has updated course outlines to better reflect CSU and UC transfer expectations, integrating outcomes that emphasize critical thinking, sustainability, and global awareness.

Broader generational trends are influencing program development.

Students are increasingly interested in learning about climate change, environmental justice, and sustainability, reflecting heightened concern over planetary futures. This cultural and generational shift reinforces the value of geography as a discipline uniquely positioned to bridge environmental science and human experience. In response, the department is expanding its curriculum to include new courses—Weather and Climate and Climate and Society—that reflect both physical and social science approaches to climate change. These courses will support transfer, enhance scientific and civic literacy, and prepare students for emerging fields in sustainability and environmental policy.

Simultaneously, Fullerton College's removal of the Multicultural Diversity requirement from its local AA/AS General Education pattern poses implications for our department. Geography courses have historically played an essential role in developing global awareness, which helps students take with them the institutional student learning outcome (ISLO) of "global systems awareness" and "ethical citizenship" and materialize the college's vision to "transform lives and inspire positive change in the world." The absence of a local global learning requirement means that this institutional outcome now lacks a clear curricular anchor. This disconnect underscores a broader misalignment between institutional priorities and the Geography Department's contributions to promoting global and cultural literacy.

Geography remains uniquely positioned to advance this learning outcome through its integrative focus on global systems, spatial interdependence, and cultural diversity—core themes that are increasingly relevant in a world shaped by climate change and social inequality. Discussions about a local GE pattern have been extremely contentious, and our curricular processes have disenfranchised our department from the vital role that we play in the institutional vision and learning outcomes.

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2. Please briefly describe opportunities your students have to apply and deepen knowledge and

skills through projects, apprenticeship, internships, co-ops, clinical placements, group projects outside of class, service learning, study abroad, and other experiential learning activities that you intentionally embed in coursework or elsewhere in your program.

As a small department consisting of two full-time faculty, we are constrained in our capacity to offer hands-on experiential learning such as field courses, internships, or study abroad opportunities. Compared to many geography programs in the region, we have limited opportunities for formal experiential learning such as internships or field-based courses. While nearby institutions—like Santa Ana College, Cerritos College, and CSU Fullerton—offer field studies or applied geography courses with built-in experiential components, Fullerton College’s geography curriculum does not yet include dedicated internship, fieldwork, or study abroad courses. This limits students’ ability to gain hands-on experience applying geographic concepts in professional or community contexts, though the department continues to explore ways to expand these opportunities.

Despite our limitations, the department provides meaningful co-curricular and experiential learning opportunities through campus and community engagement. Each spring, the department participates in the Earth Day Symposium, a student-centered event that brings together students, faculty, and community partners to explore sustainability and environmental justice topics through panels, presentations, and discussions. This event allows students to apply course concepts to real-world environmental challenges, develop communication and critical thinking skills, and connect classroom learning to broader societal issues.

Before the pandemic, we organized student participation in the California Sustainability Conference, a statewide gathering focused on sustainability research, practice, and policy, providing students with exposure to interdisciplinary sustainability work and professional networks. Although these opportunities were suspended during the pandemic, the department plans to reestablish student participation in such conferences and similar public scholarship venues in the future. Additionally, the department has actively connected students to the Environmental Justice Fellowship offered by Fullerton College, giving students an opportunity to engage in applied projects, advocacy, and community-based work that aligns with both the curriculum and emerging workforce trends in environmental equity. These opportunities, while limited, help students translate their academic learning into professional and civic engagement.

We recognize that experiential learning is vital to preparing students for transfer and careers in sustainability, geospatial analysis, and environmental management. Future plans include exploring community-based projects and internships, reestablishing conference participation, and expanding course offerings to include field-based and study abroad offerings. These initiatives aim to deepen student engagement, align departmental offerings with regional peers, and provide meaningful pathways for applying

geographic knowledge in real-world contexts.

3. Describe any laws, regulations, trends, policies, procedures, or other influences that have an impact on your program. These can include things like Vision 2030, CALGETC, Common Course Numbering, etc.

Several forces are shaping the direction of our department. The California Community Colleges Chancellor's Office Vision 2030 establishes climate action, sustainability, and equity as core priorities for the CCC system, calling on colleges to integrate climate education and environmental literacy across the curriculum. This vision aligns directly with geography's interdisciplinary strengths in connecting environmental science, social systems, and spatial analysis and accentuates our important role in the college's educational offerings. In response to this directive, the department is developing two new climate-focused courses—Weather and Climate and Climate and Society—that bridge the physical and social sciences while supporting transfer, workforce preparation, and civic engagement in sustainability.

At the district level, the North Orange County Community College District's Board Policy 3580 (BP 3580) further reinforces these priorities. The policy affirms that “environmental sustainability [is] a foundational principle in shaping the present and its vision of a future.” It commits the District to minimizing its ecological footprint through resource conservation, energy efficiency, and interdisciplinary environmental education. This directive aligns powerfully with the mission of the Geography and the Environment Department, which is uniquely positioned to deliver the kind of integrative, systems-based education that BP 3580 envisions. The department's curriculum directly supports the district's sustainability goals by teaching students to analyze environmental processes, human impacts, and spatial data that inform responsible decision-making—core capacities for sustainability leadership in the 21st century.

Broader statewide initiatives, such as CalGETC and Common Course Numbering (CCN), also influence curriculum planning by ensuring clearer articulation and alignment between community colleges and universities. The department is reviewing and updating its course outlines to meet these standards while maintaining geography's integrative perspective across physical, human, and geospatial domains. Concurrently, guidance from the American Association of Geographers (AAG)—particularly the article “What's in a Name?”—has inspired the department to reexamine course titles to better communicate with the nature of geography courses to undergraduate students. These revisions aim to attract students who are motivated by issues of climate, sustainability, and social equity. Nonetheless, discussions with neighboring departments has paused these efforts, given that we are unsure how Common Course Numbering will impact course titles. We are unsure if the CCN plan includes standardized course titles.

On a larger national context, our department continues to be impacted by the chronic neglect of geography in all levels of American education. In past Program Review studies, we have pointed to extensive evidence of the lack of basic proficiency in geography among Americans, even college students who never take geography courses as part of their educational journey. As a result, many graduates lack even a basic understanding of how the world around them works. This educational gap limits capacity to interpret climate data, grasp the spatial inequities of prominent global issues such as global warming, or understand the geopolitical and humanitarian dimensions of conflicts like war on Gaza. The issues of territory, resources, and displacement are inherently geographic – these pressing issues necessitate an understanding that a geography education can provide. Research shows that those unable to locate conflict zones on a map are more likely to support military intervention, while those with greater spatial awareness tend to favor diplomacy—suggesting that geographic ignorance carries real political consequences. Without systemic investment in geographic literacy, Americans remain ill-equipped to navigate a world shaped by climate instability and geopolitical complexity, halting progress in democratic governance and global justice. This national context puts immense opportunity and pressing challenges for our classrooms.

Section 4: Faculty and Staff

4.1 Population and Demographics

1. Using the data provided by OIE, describe your program’s staff (full-time/part-time faculty, nonfaculty, classified). How reflective of your program’s student population is your staff?

Our department staff is primarily non-white, with two Latinx full-time faculty and a diverse adjunct group that is predominantly non-white. This reflects our student population well. It also helps us stand as uniquely diverse in comparison to patterns of Geography Departments (and the discipline in general) in higher education that tend to be predominantly white-male. We believe our diverse representation helps students see themselves and be exposed to different perspectives and identities.

2. Describe your program’s staffing changes since fall 2021. How have these changes impacted your program’s ability to achieve its strategic action plans?

Since Fall 2021, the Department of Geography and the Environment has continued to operate with only two full-time faculty members, leaving the department understaffed. Full-time faculty currently teach only 34% of the department’s course sections on a regular load, and 39% when on a full overload. This share is far below the 75% goal for full-time

instruction articulated by Title 5 and referenced in Education Code §87482.6. This 75/25 goal, supported by the Academic Senate for California Community Colleges (ASCCC), is intended to ensure faculty can engage deeply in curriculum design, student advising, departmental leadership, and institutional governance. As the ASCCC notes, relying heavily on part-time faculty, who often teach at multiple institutions to make a living, limits their ability to fully participate in these critical activities, no matter how talented they are.

At Fullerton College, the district has historically relied on the Faculty Obligation Number (FON) as a minimum benchmark for staffing rather than a target for educational excellence. In practice, this means that the majority of courses, collegewide, are taught by adjunct faculty, many of whom do not have consistent access to institutional knowledge, technology, or student support services. Research from the Community College Research Center has shown that these conditions disproportionately affect economically disadvantaged and first-generation students, who make up a large portion of Fullerton College's student body. The lack of consistent faculty engagement with the campus reduces the department's ability to implement strategic initiatives such as new course development, capstone projects, experiential learning, climate-focused curriculum, and program-level assessment.

4.2 Staff Support and Professional Development

1. Describe the regular discussions your program faculty are having about equitable grading, attendance, late work, extra credit policies, and other strategies to support equitable student success.

One of the central strategies in our 2021 Equity Plan was the universal implementation of Open Educational Resources (OER), and the department has made progress in removing barriers to course materials. Research consistently shows that zero-cost textbooks increase student success rates, improve overall grades, and narrow equity gaps, particularly benefiting nonwhite students. In alignment with ASCCC resolutions supporting OER as a tool for equity and completion, most of our courses are now taught with free materials. While it is difficult to isolate the direct impact on success rates, the expansion of open-access courses represents a meaningful step forward in promoting student learning and inclusion.

Much of the content in GEOG 100: World Geography and GEOG 102: Physical Geography—our highest-enrolled courses—is developed or curated by full-time faculty, Professors Lopez and Gregorio, and is also shared with adjunct instructors. Professor Gregorio contributed to a peer-reviewed Physical Geography Lab Manual sponsored by the ASCCC OER Initiative, now used statewide to support lab-based learning and reduce barriers for thousands of students. She also completed a sabbatical project to overhaul GEOG 100 with a zero-cost textbook and

materials grounded in a critical geography framework that incorporates works by Black geographers, Indigenous scholars, and other historically marginalized authors. Ongoing efforts, supported by a recent state grant, aim to expand zero-cost offerings to GIS courses, Geography of California, and enhance World and Cultural Geography curricula, with adjunct faculty and cartographers contributing to the visual and instructional design of these materials. The completion of these projects will assure that the department of Geography & the Environment becomes among the first in the state of California to offer an entire ZTC program.

These OER initiatives are informed by the evolving understanding of geography's societal role. Geographic literacy must include social and environmental justice, anti-discrimination, and ethical awareness. Our OER strategy ensures that students gain not only content knowledge but also critical, ethical, and civic competencies central to geography education. Guided by the ASCCC Inclusion, Diversity, Equity, and Antiracism framework for OER, the department's work demonstrates a research-informed approach to reducing barriers, improving student learning, and preparing students to engage with a complex and inequitable world.

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2. How have these conversations shaped practices or policies in your program? What action has arisen from these discussions? If no action has been taken, why not?

We have provided our action-oriented strategies in the answer above but will take this opportunity to examine a new pedagogical challenge. The widespread use of AI to complete assessments is undermining the integrity of learning in our courses. Some students are earning high grades on quizzes and exams without opening lectures or engaging with readings, meaning they are bypassing the intake process and going straight to AI-generated outputs. "Output oriented" educational approaches geared towards a desired "outcome" (SLOs) leave students without critical knowledge and skills. Education happens during the journey, not at the destination. AI helps student tele transport to their final destination (an exam or essay) without intaking the experience along the way. As a result, students may leave courses without an understanding of the world they inhabit, lacking foundational geographic literacy, analytical thinking, or even the ability to read and write. Traditional metrics like grades and course completion, focused on measuring student "outputs", have become unreliable indicators of actual learning, masking comprehension and engagement. This trend threatens our department's mission to prepare students with the knowledge, skills, and critical thinking necessary to navigate complex social, environmental, and technological issues.

As educators, we have been challenged to rethink curriculum presentation, assessment strategies, and student support. Online

courses especially must emphasize assessing engagement more so than outcomes, like shifting course points to lecture/readings access and in-lecture quizzes rather than reading quizzes. We are exploring ways to hold students accountable to their course activity as a pre-requisite for submitting assessments. Emphasis on applied learning experiences, such as lab exercises, GIS projects, field observations, and data analysis might be suitable for some courses – but not all. The wide adoption of AI has challenged faculty to develop assessment frameworks to prioritize authentic demonstrations of learning over simple completion of online quizzes or written assignments. However, course redesign takes time – and over the last 5 years, the world has been changing rapidly, posing demands for course offerings of various modalities with new assessment needs. Faculty have had to constantly pivot and reinvent, facing tidal changes to education that are hard to keep up with. Without addressing how AI has affected authentic learning, faculty and institutions at large are risking shortchanging student education, especially now that students show such high demand for online courses. The rise of AI has compromised the authenticity of learning and our department’s ability to fulfill its mission of preparing students with both foundational knowledge and real-world skills.

Full-time faculty in our department already maintain standards against unethical AI use, but without a formal policy or detection tools, enforcement is inconsistent. Some faculty encourage AI use, which allows students to complete assessments without learning underlying skills, many times leaving them unable to write, think critically, or recall foundational knowledge about the world. A clear AI policy, paired with detection tools, would help grades better reflect learning, protect academic integrity, and reinforce the development of essential skills. Adopting a divisional policy, modeled on examples like Berkeley Writing College, could provide consistent expectations, support faculty, and prevent students from shortchanging their education. This is a discussion that is ongoing in the Social Science Division, where concerns for the diluting of authentic learning have been central in Division meetings.

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3. What additional areas of professional development could help your faculty and staff engage in this work?

NA

Section 5: Program Planning

5.1 Progress on Previous Strategic Action Plans

1. Please discuss the goals (Strategic Action Plans, SAPs) from your last self-study. Assess and explain your progress on each of the SAP.

1. Hire full-time faculty – not funded, no progress.

2. California Sustainability Conference – funds attained, but the conference was cancelled post-pandemic and funds returned to the college.

3. Earth Day Symposium – funded and ongoing.

Funding the Earth Day Symposium represents a landmark investment in student learning, equity, and the broader mission of Fullerton College. The event provides students with high-impact learning opportunities, bringing world-renowned speakers such as Naomi Oreskes, Rhiana Gunn-Wright, and Winona LaDuke to for an Earth Day teach-in. These scholars have offered unique perspectives on climate science, environmental policy, and Indigenous-led sustainability practices, allowing students to engage directly with leading thinkers in the field. By connecting students to experts who analyze the historical, social, and scientific dimensions of environmental issues, the Symposium reinforces the College's goal to "advance student learning and achievement by developing flexible pathways for students from our diverse communities who seek educational and career growth, certificates, associate degrees, and transfer," while also supporting the College's vision to "inspire positive change in the world."

The Symposium promotes student equity by addressing the disproportionate impacts of environmental challenges on BIPOC and economically disadvantaged communities. For example, Earth Day Symposium's 2024 keynote speaker, Rhiana Gunn-Wright, brought great insight into climate policy and environmental justice. Previous speaker, Winona LaDuke, highlighted Indigenous stewardship and activism, demonstrating how historically marginalized communities are leading solutions to ecological crises. These lessons provide students with real-world frameworks for understanding the intersection of race, policy, and sustainability, making STEM and environmental fields more accessible and inclusive. The event complements academic programs such as the Environmental Sustainability AA, Geography degrees, and Earth Science programs by offering opportunities for students to apply classroom knowledge to complex, socially relevant issues, fostering deeper engagement and active learning.

The college's investment in this event also aligns with institutional and district priorities, particularly NOCCCD Board Policy 3580, which emphasizes sustainability and interdisciplinary environmental education. The Earth Day Symposium celebrates the historical role of college students in shaping environmental awareness, echoing the original 1970 Earth Day teach-ins, while positioning Fullerton College as a leader in providing rigorous learning experiences and a learning community.

4. Laptops for GIS courses (latest APRU) - funding secured. Purchasing in progress.

Funding loaner laptops for students in GIS directly promotes student equity by removing a critical barrier to participation in courses that require specialized software and technology. Geographic Information Systems (GIS) courses rely on computers with sufficient processing power and access to licensed GIS software, which many students—especially those from economically disadvantaged or under-resourced backgrounds—may not have at home. By providing loaner laptops, the College ensures that all students, regardless of financial means, can access the tools necessary to complete assignments, participate fully in labs, and develop the technical skills demanded by the field.

This access is particularly important in bridging the digital divide. Without reliable computers, students may be forced to rely on limited campus lab hours, which can conflict with work, family, or transportation constraints, disproportionately impacting first-generation college students, students of color, and adult learners (which makeup a sizable share of our student enrollment in GIS courses). Loaner laptops allow students to work flexibly, increasing their opportunity to engage deeply with GIS coursework, complete projects on time, and gain proficiency with industry-standard tools. We currently have 8 students majoring in Geospatial Technologies, and these computers will assist these students and future students with the technological access they need to be successful in this program.

2. If additional funds were NOT allocated to you in the last review cycle, how did the LACK of funds have an impact on your program?

The Department of Geography & the Environment's ability to materialize its strategic plans is severely constrained by a lack of full-time faculty, particularly in applied geography areas such as Physical Geography, lab instruction, and GIS. Since the retirement of Professor Susie Grabiell in 2018, the department has operated with only two full-time faculty, resulting in approximately 66% of course sections being taught by adjunct instructors. While we value the contributions of our adjunct colleagues, a program dominated by part-time instruction undermines curriculum continuity, departmental engagement and cohesiveness, and the ability to maintain high-quality, immersive learning experiences. Enrollment in geography has expanded in modalities and offerings. Without investment in full-time faculty or dedicated technical support, essential courses such as GEOG 102 (Physical Geography), Physical Geography Labs, and the GIS course sequence in the Geospatial Technology Certificate will remain understaffed, limiting the department's capacity to innovate, maintain rigorous academic standards, and support students effectively. Two particular areas are in dire need of attention

Physical Geography Labs (GEOG 102 L)

Currently, all Physical Geography Lab sections are taught by adjunct instructors, and the department has no full-time faculty member assigned to oversee laboratory operations. This absence of consistent oversight creates challenges for maintaining laboratory safety, ensuring equipment functionality, and providing students with a coherent, hands-on scientific learning experience.

Unlike other science disciplines on campus—such as Anthropology, Biology, and Earth Science—Geography lacks a laboratory technician or designated staff responsible for inventory, equipment maintenance, and lab preparation. As a result, adjunct instructors must independently prepare materials and troubleshoot technical issues each term, a task that is both inefficient and inequitable compared to how other lab-based disciplines are supported. Geography labs require specialized materials such as topographic models, weather instruments, soil samples, rock and mineral collections, and geospatial data tools, all of which demand regular inventory, organization, and replacement. As our department expands its loaner laptop program and integrates GIS, remote sensing, and data visualization tools into lab exercises, technical management and coordination with the college's Academic Computing and Technology (ACT) department will become increasingly critical.

A Geography Lab Technician could help remediate this void by ensuring that all physical geography and GIS lab sections operate safely, efficiently, and consistently. This position would support faculty by preparing lab materials, maintaining and upgrading software and hardware, ensuring compliance with safety standards, and helping develop new, interdisciplinary lab activities aligned with sustainability and climate science goals. Such support would also enhance the department's ability to integrate climate data analysis, environmental monitoring, and field-based learning—key components of workforce readiness and transfer preparation in geography and geoscience fields. Comparable departments at regional community colleges—such as Santa Monica College, Mt. San Antonio College, and Pasadena City College—staff their geography or earth science programs with dedicated laboratory technicians who manage both physical and digital lab environments. This investment has allowed those programs to maintain high safety standards, modernize lab content, and improve student success and retention in STEM pathways.

GIS Courses and Geospatial Tech Certificate Program

GIS has become an integral component of vocational and academic pathways, including Geography, Anthropology, Environmental Science, and the Environmental Sustainability AA and Administrative Justice Certificate. The department has developed collaborative initiatives with the Drone Program for access to a geospatial lab, yet without a full-time faculty member with GIS expertise, these efforts cannot be maximized. GIS courses not only prepare students for transfer and advanced academic study but also provide vocational skills that the LAOCRC identifies as essential for workforce readiness, with measurable outcomes in employment and wages. According to the U.S. Bureau of Labor Statistics (BLS),

employment in geospatial and GIS-related occupations (including geographers, cartographers, and GIS analysts) is projected to grow by 8–10% over the next decade, faster than the average for all occupations. The U.S. Department of Labor has also designated geospatial technology as one of the nation’s high-growth emerging technology fields. This labor demand is particularly strong in environmental management, urban planning, emergency response, and climate adaptation. These sectors align directly with our department’s mission and student interests.

Full-time faculty with GIS expertise would allow for program continuity, better mentoring of students, and integration of hands-on, real-world geospatial applications into the curriculum, ensuring the department’s programs remain competitive and relevant. Our recent Geospatial Technology Certificate program is one of the most promising and forward-looking initiatives within our department, designed to prepare students for high-demand careers in Geographic Information Systems (GIS) and spatial analysis through fully online courses and applied, career-oriented curriculum. Now in its second year, the program has already enrolled more than a hundred students in GIS courses, and we currently already have eight declared majors (this number has the potential to increase exponentially, given that our program stands unique in its online offerings). Despite this success, the program currently operates without a dedicated coordinator or expert overseeing its technical, professional, and outreach components—a gap that limits its potential for growth, student support, and long-term sustainability.

Unlike traditional classroom-based programs, a fully online GIS certificate demands specialized oversight to maintain software licenses, ensure functional hardware, manage partnerships with the Community College Foundation, and coordinate with campus technology services (ACT) for equipment maintenance and updates. We are in the process of purchasing laptops to loan to students, an equity measure that will expand access to geospatial learning but requires regular management by a professional expert who understands the specific technical and licensing requirements of Esri and other GIS platforms. Our GIS courses are taught by one adjunct faculty member who is not compensated for program coordination. The department’s two full-time faculty, who already cover only 38% of total course sections, cannot fulfill these additional responsibilities.

Institutional Planning and Governance

Moreover, the absence of full-time faculty hinders the department’s ability to contribute to institutional planning and participatory governance. Currently, the College lacks internal geospatial analytical capacity, relying on external consultants for mapping projects. This reliance limits student involvement and deprives them of opportunities to apply GIS in real-world decision-making, while also excluding the expertise of faculty from institutional planning. With a full-time hire for geography labs and GIS, the department could better support participatory governance, enhance campus-wide planning efforts, and

provide immersive experiential learning for students. The cumulative effect of understaffing is a significant barrier to fulfilling both the department's academic mission and its broader equity and workforce goals, highlighting the urgent need for additional full-time faculty to sustain and grow these programs.

Lastly, it is important to note that institutional barriers have kept us from submitting faculty hire requests for recent faculty allocation cycles. We are disappointed with the faculty allocation process which remains heavily politicized, inconsistent, and arbitrary. For example, our Divisional process relies on the input of Division faculty who tend to rank requests based on their personal value judgements, friendships and animosities, more so than the rationale and data explored in proposals. We refuse to participate in irrational processes that disregard our value – our colleagues fail to recognize our value and need to better serve students, and relying on their arbitrary rankings has harmed our ability to “compete” for hiring. We believe this process should be conducted independent of Division faculty's input, to free the process from personal interest and judgements that maintain faculty allocation processes obscure, to say the least.

In sum, our deficit of full-time faculty hinders our ability to materialize plans for the future, including developing new climate and sustainability courses, expanding experiential learning, strengthening our GIS program and immersive learning, mentoring students, and advancing antiracist and equity-focused initiatives. Hiring additional full-time faculty and reducing reliance on adjunct labor is critical for achieving both academic excellence and equitable outcomes for the students the Geography Department serves.

SAPs

Remedial Plan: Establish a GIS Coordinator

Short Description:

In the previous narrative, we have provided insights about service gaps resulting from the lack of full-time faculty in our department. We propose that we amend this gap, temporarily until a full-time faculty is hired, through a coordinator role funded through professional expert pay. The proposed professional expert position would provide leadership in outreach, technical coordination, and career guidance—functions that are standard practice at other community colleges offering geospatial programs. For example, Santa Monica College, San Diego Mesa College, and Mt. San Antonio College have dedicated GIS coordinators responsible for license administration, internship coordination, and community partnerships, which have directly contributed to their program visibility and student success outcomes. By funding a professional expert position, our college would ensure the integrity and expansion of the Geospatial Technology Certificate, support equitable

student access to technology, and strengthen connections between students and the regional GIS workforce. This investment would help us sustain the program until we secure full-time faculty and would support an online program that is career relevant. We estimate that 20 hours per semester dedicated to a GIS Coordinator role for our GIS expert teaching our GIS courses would temporarily provide the support needed of our GIS program. In sum, the creation of this role is essential to: Maintain and renew Esri and software licenses; Manage hardware (loaner laptops) and coordinate with ACT and external partners; Conduct community and employer outreach for internships and job placement; Provide mentoring and career guidance for GIS students; Ensure curriculum alignment with workforce and certification standards; and Support program assessment and data collection for institutional review and future funding opportunities. Establishing professional expert hours for our GIS instructor to take on this role is the most efficient and strategic way to ensure the continued success and growth of this high-demand, equity-driven program—particularly given our department’s small size and current staffing limits. This strategy does not aim to substitute the dire need for full-time faculty but to provide a lifeline to an important program with immense potential.

Measurable Outcomes:

As stated previously, the U.S. Bureau of Labor Statistics (BLS) reports that employment in geospatial and GIS-related occupations (including geographers, cartographers, and GIS analysts) is projected to grow by 8–10% over the next decade, faster than the average for all occupations. The U.S. Department of Labor has also designated geospatial technology as one of the nation’s high-growth emerging technology fields. Further, the CCC Data Vista portal has shown that throughout the CCC system, enrollments in GIS Programs have increased dramatically over the last decade. These data points show us that we have every reason to anticipate that a visible and well-managed GIS program has great prospect to attract more students and help these students to completion and career placement.

College Goals:

- 1.3 Night, weekend, online degree program; 1.5 Outreach strategies for prospective students/family;
- 3.2 Reduce equity gaps in degree/certificate completion

SAP Phase:

New

Resource Requests

GIS Professional Expert Coordinator

Enhancement:

Establishing professional 32 professional expert hours per semester for our GIS instructor to coordinate the GIS Program. This is the most efficient and strategic way to ensure the continued success and growth of this high-demand, equity-driven program—particularly given our department’s small size and current staffing limits where our GIS Program needs this lifeline to hold an important program with immense potential. The 2 hours per week, 32 hours per semester

(Fall 2026-Fall2030 = a total of 256 hours over 4 academic years) would allow allocate professional hours for GIS expert to: - Maintain and renew Esri and software licenses; - Manage hardware (loaner laptops) and coordinate with ACT and external partners; - Conduct community and employer outreach for internships and job placement; - Provide mentoring and career guidance for GIS students; - Ensure curriculum alignment with workforce and certification standards; and - Support program assessment and data collection for institutional review and future funding opportunities. As stated previously, the U.S. Bureau of Labor Statistics (BLS) reports that employment in geospatial and GIS-related occupations (including geographers, cartographers, and GIS analysts) is projected to grow by 8–10% over the next decade, faster than the average for all occupations. The U.S. Department of Labor has also designated geospatial technology as one of the nation’s high-growth emerging technology fields. Further, the CCC Data Vista portal has shown that throughout the CCC system, enrollments in GIS Programs have increased dramatically over the last decade. These data points show us that we have every reason to anticipate that a visible and well-managed GIS program has great prospect to attract more students and help these students to completion and career placement.

Personnel-Related:

We have stated this in previous narrative, but will copy it here for convenience: GIS is relatively new in our college but has become an integral component of vocational and academic pathways, including Geography, Anthropology, Environmental Science, and the Environmental Sustainability AA and Administrative Justice Certificate. The department has developed collaborative initiatives with the Drone Program for access to a geospatial lab, yet without a full-time faculty member with GIS expertise, these efforts cannot be maximized. GIS courses not only prepare students for transfer and advanced academic study but also provide vocational skills that the LAOCRC identifies as essential for workforce readiness, with measurable outcomes in employment and wages. According to the U.S. Bureau of Labor Statistics (BLS), employment in geospatial and GIS-related occupations (including geographers, cartographers, and GIS analysts) is projected to grow by 8–10% over the next decade, faster than the average for all occupations. The U.S. Department of Labor has also designated geospatial technology as one of the nation’s high-growth emerging technology fields. This labor demand is particularly strong in environmental management, urban planning, emergency response, and climate adaptation. These sectors align directly with our department’s mission and student interests. Full-time faculty with GIS expertise would allow for program continuity, better mentoring of students, and integration of hands-on, real-world geospatial applications into the curriculum, ensuring the department’s programs remain competitive and relevant. Our recent Geospatial Technology Certificate program is one of the most promising and forward-looking initiatives within our department, designed to prepare students for high-demand careers in Geographic Information Systems (GIS) and spatial analysis through fully online courses and applied, career-oriented curriculum. Now in its second year, the program has already enrolled more than a hundred students in GIS courses, and we currently already have eight declared majors (this number has the potential to increase exponentially, given that our program stands unique in its online offerings). Despite this success,

the program currently operates without a dedicated coordinator or expert overseeing its technical, professional, and outreach components—a gap that limits its potential for growth, student support, and long-term sustainability. We can temporarily remediate this by allotting professional hours to the GIS program. Unlike traditional classroom-based programs, a fully online GIS certificate demands specialized oversight to maintain software licenses, ensure functional hardware, manage partnerships with the Community College Foundation, and coordinate with campus technology services (ACT) for equipment maintenance and updates. We are in the process of purchasing laptops to loan to students, an equity measure that will expand access to geospatial learning but requires regular management by a professional expert who understands the specific technical and licensing requirements of Esri and other GIS platforms. Our GIS courses are taught by one adjunct faculty member who is not compensated for program coordination. The department's two full-time faculty, who already cover only 38% of total course sections, cannot fulfill these additional responsibilities.

Resource Category:

Other

Quantity:

256

Unit Cost:

\$55.00

Total Cost:

\$14,080.00

Remedial Plan: Establish a GEOG 102 Lab Technician

Short Description:

The Physical Geography (GEOG 102) and Physical Geography Laboratory (GEOG 102L) sequence is central to our department's curriculum, serving both transfer students and those pursuing careers in environmental and geospatial sciences. Under the California General Education Transfer Curriculum (Cal-GETC), students must complete at least one physical science course with an associated laboratory to satisfy transfer requirements for CSU or UC. Physical Geography meets this standard, positioning GEOG 102/102L as a crucial gateway course for students in Geography, Environmental Sustainability Studies, and other STEM-related pathways. Enrollment data over the past several years indicate strong and consistent demand: the department has offered an average of 6–8 lab sections per semester, serving 150–200 students annually, representing about one third of the department's FTES. Despite this, all lab sections are taught exclusively by adjunct faculty, and there is currently no full-time faculty oversight or dedicated lab technician. This is a critical area unstaffed by our lack of full-time faculty, and this void creates challenges in maintaining laboratory

safety, equipment functionality, and pedagogical consistency, particularly as our labs could increasingly integrate GIS tools, climate data analysis, and hands-on fieldwork exercises. Laboratory science inherently relies on tactile, experiential learning, which research shows improves spatial reasoning, engagement, and STEM persistence, especially among first-generation and underrepresented students. Geography labs require specialized instruments such as weather stations, soil and rock analysis kits, topographic models, microscopes, and GIS-enabled devices. Some of these must be properly calibrated, maintained, and organized to ensure meaningful, hands-on student experiences. Further, faculty can only properly integrate lab instruments with greater access to a point person managing lab equipment. Adjunct faculty, compensated only for instructional time, cannot manage these responsibilities without additional support. Other departments with tactile learning and other peer institutions provide a clear precedent for supporting laboratory disciplines with dedicated technical staff – preferably full-time faculty, such as the one dedicated to Anthropology lab. Other support can be noted from other institutions: Santa Monica College (SMC) has explicitly requested a lab technician for Earth Sciences to maintain equipment, technical applications, and lab safety. Pasadena City College (PCC) employs a Department Laboratory Technician III in Geology, providing infrastructure and technical support for applied sciences. Mt. San Antonio College (Mt. SAC) similarly uses Laboratory Technicians in biology/earth sciences and maintains robust Geography/GIS programming. These examples demonstrate that professional support for lab-based science programs is a recognized and necessary standard in comparable California community colleges. A Physical Geography Laboratory Technician would ensure the department can: - Prepare, maintain, and organize laboratory instruments and materials; - Ensure compliance with safety protocols; - Assist faculty with setup, teardown, and integration of GIS and digital tools; - Enable consistent, equitable lab experiences across sections; and - Support innovative curriculum development, including climate science, fieldwork, and sustainability education. - Support access to lab equipment for the creation of demo videos.

Measurable Outcomes:

Given Cal-GETC mandates, strong and steady enrollment, reliance on adjunct instructors, and the technical demands of modern geography and GIS labs, the addition of a dedicated lab technician is essential to support enrollment trends in this foundational GE experience. A supportive position will align Geography with established practices in other laboratory sciences, support tactile, applied learning, and safeguard the department’s ability to provide high-quality, career-relevant education to its students in the meantime, until a full-time geographer can take on the task of connecting our GIS and lab needs.

College Goals:

2.3 Increase access to affordable course materials; 3.2 Reduce equity gaps in degree/certificate completion; 3.3 Reduce equity gaps in transfer attainment

SAP Phase:

New

Resource Requests

Lab Tech Professional Hours

Enhancement:

This was stated previously in our SAP, but will be reinstated here. The Physical Geography (GEOG 102) and Physical Geography Laboratory (GEOG 102L) sequence is central to our department's curriculum, serving both transfer students and those pursuing careers in environmental and geospatial sciences. Under the California General Education Transfer Curriculum (Cal-GETC), students must complete at least one physical science course with an associated laboratory to satisfy transfer requirements for CSU or UC. Physical Geography meets this standard, positioning GEOG 102/102L as a crucial gateway course for students in Geography, Environmental Sustainability Studies, and other STEM-related pathways. Enrollment data over the past several years indicate strong and consistent demand: the department has offered an average of 6–8 lab sections per semester, serving 150–200 students annually, representing about one third of the department's FTES. Despite this, all lab sections are taught exclusively by adjunct faculty, and there is currently no full-time faculty oversight or dedicated lab technician. This is a critical area unstaffed by our lack of full-time faculty, and this void creates challenges in maintaining laboratory safety, equipment functionality, and pedagogical consistency, particularly as our labs could increasingly integrate GIS tools, climate data analysis, and hands-on fieldwork exercises. Laboratory science inherently relies on tactile, experiential learning, which research shows improves spatial reasoning, engagement, and STEM persistence, especially among first-generation and underrepresented students. Geography labs require specialized instruments such as weather stations, soil and rock analysis kits, topographic models, microscopes, and GIS-enabled devices. Some of these must be properly calibrated, maintained, and organized to ensure meaningful, hands-on student experiences. Further, faculty can only properly integrate lab instruments with greater access to a point person managing lab equipment. Adjunct faculty, compensated only for instructional time, cannot manage these responsibilities without additional support. Other departments with tactile learning and other peer institutions provide a clear precedent for supporting laboratory disciplines with dedicated technical staff – preferably full-time faculty, such as the one dedicated to Anthropology lab. Other support can be noted from other institutions: Santa Monica College (SMC) has explicitly requested a lab technician for Earth Sciences to maintain equipment, technical applications, and lab safety. Pasadena City College (PCC) employs a Department Laboratory Technician III in Geology, providing infrastructure and technical support for applied sciences. Mt. San Antonio College (Mt. SAC) similarly uses Laboratory Technicians in biology/earth sciences and maintains robust Geography/GIS programming. These examples demonstrate that professional support for lab-based science programs is a recognized and necessary standard in comparable California community colleges. This request establishes a maximum of 24 hours of professional expert compensation per semester, 192 hours for 4 academic years (Fall 2026-Fall 2030) for a Physical Geography Laboratory Technician to: - Prepare, maintain, and organize laboratory instruments and materials; -Ensure compliance with

safety protocols; -Assist faculty with setup, teardown, and integration of GIS and digital tools; - Enable consistent, equitable lab experiences across sections; -Support innovative curriculum development, including climate science, fieldwork, and sustainability education; and -Support access to lab equipment for the creation of demo videos.

Personnel-Related:

Given Cal-GETC mandates, strong and steady enrollment, reliance on adjunct instructors, and the technical demands of modern geography and GIS labs, the addition of a dedicated lab technician is essential. This position will align Geography with established practices in other laboratory sciences, support tactile, applied learning, and safeguard the department’s ability to provide high-quality, career-relevant education to its students. We have fully elaborated how a Faculty retirement has left us severely understaffed, with full-time faculty unable to coordinate the full breadth of our discipline and departmental duties.

Resource Category:

Adjunct Faculty

Quantity:

192

Unit Cost:

\$55.00

TotalCost:

\$10,560.00

Ultimate Plan: Hire a Full-time GIS/Lab Geographer

Short Description:

This was extensively explored in Section 5.1, Question 2. The Department of Geography & the Environment is constrained by a severe shortage of full-time faculty, particularly in applied areas such as Physical Geography, laboratory instruction, and GIS. Since 2018, the department has operated with only two full-time faculty, resulting in roughly 66% of course sections being taught by adjunct instructors. While adjuncts provide essential support, this reliance undermines curriculum continuity, program oversight, and high-quality, hands-on learning experiences. Physical Geography labs (GEOG 102L) are entirely taught by adjuncts without dedicated oversight, creating challenges in maintaining laboratory safety, managing equipment, and delivering consistent, tactile, and experiential learning—key components of STEM education and Cal-GETC science requirements. Similarly, the fully online Geospatial Technology Certificate program relies on a single adjunct faculty member for instruction, leaving no dedicated support for software licensing, hardware management, student mentoring, or career guidance. Without full-time faculty, the department cannot ensure program continuity, integrate real-world GIS applications, or maintain high

standards for applied learning in both physical and geospatial geography. Hiring additional full-time faculty is critical to advancing the department's mission, supporting workforce readiness, and providing equitable opportunities for students. Full-time faculty would oversee laboratory operations, coordinate GIS and geospatial technology programs, mentor students, and develop new courses in climate, sustainability, and experiential learning. This investment would also strengthen the department's role in participatory governance and campus-wide planning, reducing reliance on external consultants while expanding hands-on student engagement in geospatial analysis. Peer institutions, such as Santa Monica College, Mt. San Antonio College, and Pasadena City College, demonstrate that dedicated technical and faculty support for lab and GIS programs improves safety, instructional quality, and student success. Addressing this faculty deficit is essential for maintaining academic rigor, program growth, and equitable outcomes for students pursuing transfer, vocational, and STEM pathways.

Measurable Outcomes:

Expansion of Physical Geography labs, GIS courses, and the Geospatial Technology Certificate program could yield a 20–30% increase in student enrollments over the next three years, as more sections can be offered with consistent oversight and support. With consistent faculty mentorship, lab supervision, and applied instruction, we expect a 5–10 percentage point increase in course completion and success rates (grades C or better) in both GEOG 102/102L and GIS courses. Full-time faculty oversight will allow for the introduction of new courses in climate, sustainability, and geospatial applications, as well as expanded experiential learning opportunities, measurable by the number of new courses developed and active lab sections maintained. A detailed working paper “Early Academic Outcomes for Students of Part-Time Faculty at Community Colleges: How and Why Does Instructors’ Employment Status Influence Student Success” finds that the employment status of instructors (full-time vs part-time) correlates with student outcomes, and that part-time faculty often face structural disadvantages (limited institutional integration, fewer support resources) which may hamper student success. The California State Auditor’s report (“Community Colleges Are Not Meeting the Goal for Instruction by Full-Time Faculty”) highlights the linkage: “full-time faculty are more likely to spend more time with students on activities other than coursework ... and provide more support outside of the classroom ... this time and support has been shown to improve student success.” It is for this reason that the ASCCC maintains the position that colleges should sustain a 75% full-time faculty instruction ratio, noting that that increasing the share of full-time faculty is linked to increased student success and completion.

College Goals:

1.1 Equitable Dual Enrollment access; 1.2. Increase equitable usage of apprenticeship/internship; 1.3 Night, weekend, online degree program; 1.4 Reduce equity gap in Black/AA college enrollment; 1.5 Outreach strategies for prospective students/family; 2.1 Equitable support services in Dual/Online/Night/Weekend; 2.2 Increase access/usage of Basic Needs; 2.3 Increase access to affordable course materials; 2.5 Increase sense of belonging/mattering ; 2.6 Reduce equity gap in persistence for Black/AA students; 3.2 Reduce equity gaps in degree/certificate completion; 3.3

Reduce equity gaps in transfer attainment; 3.4 Increase collaboration with universities; 3.5 Increase participation in DEIAA focused professional development

SAP Phase:

New

Resource Requests

Full-time geographer

Enhancement:

Adding a full-time faculty member will directly strengthen the Department of Geography & the Environment's capacity to deliver high-quality instruction, maintain curriculum continuity, and support student success across all courses. Currently, approximately 66% of course sections—including Physical Geography (GEOG 102), Physical Geography Labs (GEOG 102L), and GIS courses for the Geospatial Technology Certificate—are taught by adjunct instructors without dedicated oversight. Full-time faculty would provide consistent guidance and mentorship, ensure laboratory safety, manage equipment and GIS software, and integrate hands-on, experiential learning opportunities, including climate data analysis, fieldwork, and geospatial applications. This investment will also allow the department to expand offerings and innovate curricula, developing new courses in climate, sustainability, and applied GIS that align with workforce and transfer needs. Full-time faculty oversight will improve student retention, course success, and certificate completion rates by providing reliable support for academic, technical, and career preparation. Moreover, it will ensure equitable access to lab and GIS resources, including loaner laptops and specialized instruments, while enabling the department to participate fully in institutional planning and campus-wide projects. In short, this resource allocation directly enhances program services, instructional quality, and student learning outcomes, while positioning the department for sustainable growth and innovation. We are estimating a mid-range salary of \$124,000 per year.

Personnel-Related:

AS explored in previous sections, enrollment in Physical Geography, Physical Geography Labs, and the GIS course sequence for the Geospatial Technology Certificate has sustained and even expanded steadily. Currently, the department annual enrollment ranges from approximately 450–500 students. We offer 6–8 lab sections per semester, serving 150–200 students annually, and the online GIS program has over 100 students enrolled. Without additional full-time faculty, the department cannot expand course offerings, meet demand, or sustain program growth. Since the retirement of a full-time faculty member in 2018, approximately 66% of all course sections are taught by adjunct instructors, despite maximum full-time overload instruction. While adjuncts provide essential instruction, heavy reliance on part-time faculty undermines curriculum continuity, departmental engagement, student mentoring, and program oversight. Research indicates that higher proportions of full-time faculty correlate with improved student success,

retention, and completion rates (Academic Senate for California Community Colleges, FACCC, California State Auditor). Physical Geography labs and GIS courses require substantial oversight for lab safety, equipment maintenance, GIS software licensing, and integration of hands-on, applied learning experiences. Currently, adjunct faculty must manage these responsibilities independently, which is inefficient and unsustainable. Peer institutions such as Santa Monica College, Mt. San Antonio College, and Pasadena City College employ full-time faculty and dedicated laboratory technicians to provide this critical support, demonstrating an institutional precedent. Further, GIS and geospatial technology skills are high-demand, with projected employment growth of 8–10% over the next decade (BLS). Full-time faculty support is essential for mentoring students, ensuring program continuity, and maintaining the quality and competitiveness of the department’s applied curriculum. Our Physical Geography lab and GIS courses alone constitute enough course sections each semester to fulfill a full-time load.

Resource Category:

Full-time Faculty

Quantity:

1

Unit Cost:

\$124,000.00

TotalCost:

\$124,000.00
