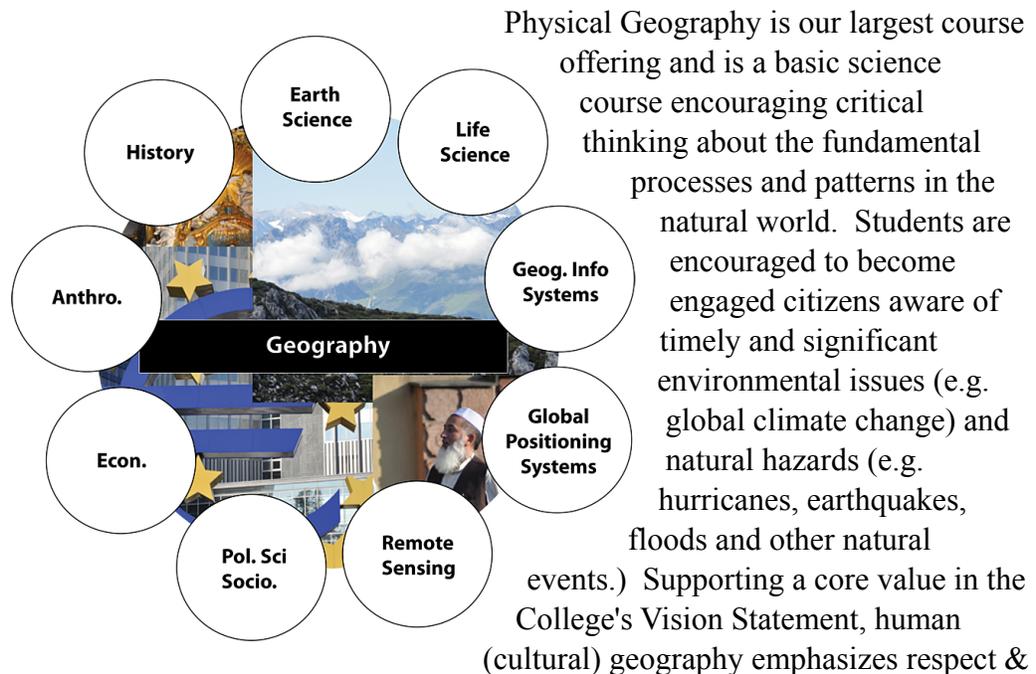


1) **Relevancy:** This section assesses the program's significance to its students, the college, and the community.

1a) To provide context for the information that follows, describe the **basic functions of your program.**

With a purpose to advance geographic literacy, **Geography** educates students how natural and cultural systems operate in a particular place. Similarly, Geography is the science of location: where phenomenon occur and why they occur.

Geography is split into four (4) general areas: physical, human, regional and technical geography. The Geography Department provides applied geography courses, particularly in Geographic Information Systems (GIS) and "GeoSpatial" technologies for those who seek a technical career path into related to mapping and geographic analysis.



understanding of other cultures through a discussion of what diversity means. Similarly, students investigate timely population and migrations issues, current ethnic conflicts throughout the world, and synthesis of the global economy. Outside of the classroom, Geography students participate in *People & Culture Days* and field study classes. Overall, the Geography program supports the institutions goals to adapt to the complexity of an ever-changing world, foster citizenship in our community, and educate students on sustainable use of all resources.

1b) How does your **program support the district mission**, as quoted below. Please include an analysis of how your program supports ISLOs (Institutional Student Learning Outcomes)?

“Sierra College provides a challenging and supportive learning environment for students having diverse goals, abilities, and needs interested in transfer, career and technical training, and lifelong learning. The College’s programs and services encourage students to identify and to expand their potential. Sierra College students will develop the knowledge, skills and abilities to become engaged and contributing members of the community.”

Geography supports the district mission primarily through its educational framework directly inline with the districts goals in the area of citizenship - ethics, diversity, sustainability, global awareness, and personal responsibility - which are all themes is geography courses. In regard to technology and information competency, the mapping component of geography teaches students technical skills to master many scientific challenges of the day related to location and spatial relationships.

1c) Program offerings align with which of the following mission categories (check all that apply):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Transfer | <input checked="" type="checkbox"/> Career Technical Education |
| <input checked="" type="checkbox"/> Basic Skills | <input checked="" type="checkbox"/> Personal Development/Enrichment |
| | <input checked="" type="checkbox"/> Lifelong Learning |

1d) Please analyze your department’s role and its success in supporting the mission categories marked in 1c above. Please provide evidence in support of this analysis. If any of the following apply to your program, please address them in your analysis.

- Degrees, certificates, and/or licenses your department has generated:
 - The alignment of these awards with the district’s mission and/or strategic goals. (See the district “Awards Data File, available from Research and Planning, for your numbers).
- Job placement or labor market information for your program’s awards and licenses.
- The contribution your program makes to student transfer.
- Participation in basic skills programs.

- Geography has completed the Associates Degrees for Transfer (AA-T) through curriculum review in 2014. The number of transfer degrees is unavailable and the most recent count equals 3 for 2014-2015, according to the research office statistics. Because this offering is new, this number will likely increase.
- The GIS program offers a *Skills Certificate* for students who complete the core sequence of basic to advanced courses. Most students can complete this certificate in 1 year. Students can customize the certificate to focus on certain themes, such as AutoCAD or computer programming. The number of GIS skills certificate awards over the past 6 years equals

2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	9	4	7	5	3

- Geography has increased geographic literacy through teaching modern technology, such as GeoSpatial tools (GPS, GIS, Remote Sensing) and other means (e.g. Google Earth) in labs.
- Recently (Spring 2012), numerous GIS internships opportunities have arisen due to our close collaboration with industry. While placement / employment data is difficult to track, the Geography Department can track anecdotal evidence of placement and opportunities based on email correspondence (both employers and former students) and social media. This data suggests students that complete our advanced GIS classes are likely to have an opportunity for at least an internship. Most (perhaps as many as 1/2) of our high achieving student who stay in touch have found jobs.
- For Personal & Lifelong Learning, a focus on advancing geographic literacy is discussed in part or whole in all geography classes (global climate change, landscape appreciations, awareness of the global economy, cultural appreciation of diversity, and sustainability.)
- To augment lectures and encourage review of lectures, Geography Professor Sean Booth over the past 2 years has created nearly 30 class lectures in a studio and in the field. They are produced for students to improve success by providing them an opportunity to watch lectures again. They are found on YouTube searching "Sierra Explorer".

Bureau of Labor Statistics - Occupational Outlook

SOC Code	Job Title	2012 Employment	Project 2012	Change from 2012 to 2022
19-3092	Geographers	1,700	2200	29%
19-3051	Urban & Regional Planners	38,700	42,700	10%
17-1021	Cartographers & Photogrammetrist	12,100	14,500	20%
19-2021	Atmospheric & Space Scientist	11,100	12,200	10%
19-1030	Conservation Scientist & Forester	34,200	35,000	3%
19-2041	Environmental Scientist	90,000	103,200	15%
53-2011	Airline & Commercial Pilots	104,100	103,300	-1%
25-1064	Geography Teacher	5,500	6,100	11%
13-2021	Appraisers & Assessors	83,700	88,400	6%
41-9020	Real Estate Broker & Agents	422,000	468,600	11%
17-1022	Surveyors	42,400	46,800	10%
17-3031	Surveying & Mapping Technician	54,000	61,300	14%
13-1161	Marketing Research Analysts	415,700	547,200	32%

The data table illustrates the breadth and number of related to jobs in Geography and GIS. "Geographers" will likely find the most success in the technical mapping side of the discipline known as GeoSpatial Scientists. For those individuals interested in related fields like "Marketing Research" - global markets provide sizable opportunities and growth. While jobs related to geography are broad, the key denominator is the science and study of location. Students interested in many related job titles will need additional training in other areas as well, such as earth science, biology, business, planning, etc. Along with career details, these job titles are listed on the Geography Department's website

1e) Optional Additional Data: Comment on any other relevance to district goals, mission, values, strategies, etc., that your program provides that are not incorporated in the answers above. Consider, for example, contributions to student equity and success, diversity, campus climate, cultural enrichment, community ties, partnerships and service, etc. Include specific data and examples.

Other department goals, include:

- Maintain relationships with GIS professional community and other institutional programs (e.g. ARC GIS program, etc.) via our annual Professional GIS Advisory Committee meetings held each February. Members provide a current employment picture and necessary skills for employment. Each year we have incorporated suggestions into the curriculum, including adding new courses (some of which are not even offered yet due to budget constraints). Likewise, via the CTE / STEM grants staff has been able to directly interface with the GIS community via "externships," paid opportunities for staff to work for industry for a day or two. Also, student need to know about significant job opportunities, such as the information provided below and on the Dept. website.
- Coordinate and promote the two (2) day long "People & Culture" Days -- in conjunction with the Geography Department, ESL, social sciences, international programs, and student government -- to provide a sense of inclusiveness and pride about one's culture and heritage. Hundreds of students from all cultural backgrounds participate in this event by showcasing posters, setting up booths, and completing a passport exercise. Usually we hand out around 700 passports to numerous different departments who choose to allow their students to participate.

2) Currency: This category assesses the currency of program curricula as dictated by Title 5 and the currency of efforts in meeting accreditation standards as well as improving pedagogy and engaging in professional development.

2a) Curriculum: Considering the information provided on your Department Statistics Report (DSR), comment on the currency of your program's curricula. Please describe your process for evaluating and revising curriculum, including the use of SLOs.

All or 100% of GEOG course curricula are current. Our last curriculum review was for the following courses: GEOG 95, GEOG 91A, GEOG 91B, GEOG 86, GEOG 85, GEOG 16, GEOG 15, GEOG 14, GEOG 12, GEOG 11 were approved at the end of 2013 and were effective in August of 2014. During the curriculum review process, the department seeks input from all faculty members. Additionally, the department often seeks input from industry advisory committee members - especially in regards to the GIS courses.

2b) Student Learning Outcomes Assessment: Analyze your program's assessment of course outcomes, analysis of results, and improvements/changes made to the program as a result of this assessment. Please provide specific data and analysis in the space provided.

Department faculty meet regularly to discuss key components in their classes, such as weekly map & chapter quizzes, exams and presentations. To assure objective assessment, each instructor is encouraged to create and share their general rubric. To assure these grading rubrics are congruent with SLO's -- all numbered CSLOs are available on our department website for easy access to incorporate into instructor's syllabi. Students are told about CSLOs on the first day of class and, if possible, reviewed via a study guide or in-class review before significant assessments. For exams, study guides tie into course materials and CSLOs as best as possible.

Each instructor tracks Course Student Learning Outcomes in three (3) ways: individually (as shown below), via the District's SLAS form tracking systems, and finally through the Department's Google Docs form, which tabulates all cumulative CSLOs data.

Individual Assessment of CSLOs

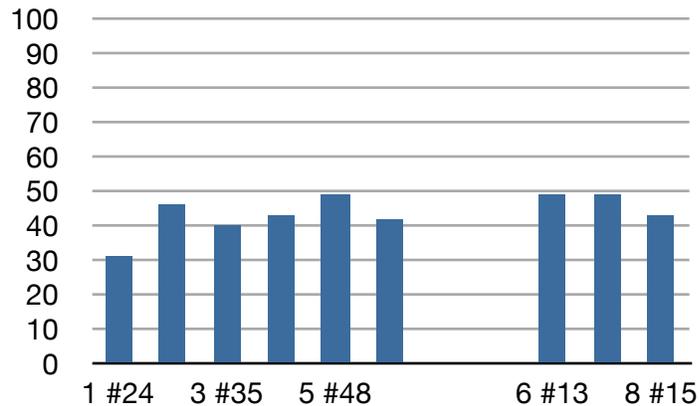
A preferred method for individual instructors is to monitor several assessment topics related to a CSLO. So for example, an instructor might administer an exam with several test questions related to CSLO #3 on "Cause of the Seasons" or CSLO #4 - "Global Climate Controls" in Physical Geography. After inputting assessment data into a spreadsheet, the tabular data is often converted to a chart to reveal success patterns and areas needed for improvement. In the example below, three (3) questions were related to seasons (CSLO #3) and five (5) questions were related to climate controls (CSLO #4). For both CSLOs, over 1/2 the class got the topic questions correct. According to the department's success rubric, these averaged scores are "proficient." Mastery = 2/3rds get it.

Example of Tabular Data shown below for GEOG 1 class

Item	Question	Topic	CSLO#	MW11:00 scantron	Average got wrong
1	#24	Climate	4	31	31
2	#34	Climate	4	46	46
3	#35	Climate	4	40	40
4	#36	Climate	4	43	43
5	#48	Climate	4	49	49
					41.80
					Proficient
6	#13	Seasons	3	49	49
7	#14	Seasons	3	49	49
8	#15	Seasons	3	43	43
					43.53
					Proficient
				stat sheets	

Example of Tabular Data shown with Charts

CSLO - #3 (Seasons), #4 (Climate Controls)



Group Assessment of CSLOs

In addition to each instructor keeping track of their own CSLOs, they also complete the SLAS form. Using that form, they input their collected data into a comprehensive repository via *Google Docs*. The "cycle" process is explained in more detail below. But first, here are the cumulative results from that repository.

Faculty have collected CSLOs for 9 classes thus far, and most classes have achieved either proficiency or mastery in measured CSLOs - GEOG 1 being the most difficult.

- GEOG 1 is 57% successful on average
- GEOG 2 is 62% successful on average
- GEOG 3 is 62% successful on average
- GEOG 5 is 63% successful on average
- GEOG 11 is 80% successful on average
- GEOG 12 is 80% successful on average
- GEOG 85 is 80% successful on average
- GEOG 90 is 75% successful on average
- GEOG 93 is 60% successful on average

In the space below, please describe or attach the cycle you have developed for outcomes assessment.

A cycle or framework has been developed by the department to help guide instructors to complete the Course Student Learning Outcomes in a timely manner. The Department Chair has recently created a stream-lined "portal" (website) specific to collecting CSLOs. The idea is that if the collection process is made easier, then faculty should participate fully. Better participation will result in more data. And with more data, the Department should be able to provide better analysis.

In general, faculty look up the schedule, determine which learning outcomes to evaluate, collect data during the semester, and then report on the data. If students achieve "mastery" during the 3 year cycle, then that CSLO will not be further evaluated.

2c) Professional development: Describe how your department's planned activities and professional development efforts serve to improve teaching, learning and scholarship. Please be sure to include flex activities, departmental meetings and activities, conferences, and the like.

- Geography & GIS Instructors meet with the GIS Advisory Committee to discuss instruction, job trends, job opportunities, and other meaningful input related to ISLOs - such as "Technology and Information Competency." Likewise, the committee has input to our Program Outcomes, such as "Assemble and analyze spatial information (maps, data, surveys, qualitative observations, etc), using traditional and modern mapping technology methods."

- Geography & GIS instructors often participate in the California Geographical Society conference held each year in California. Other conference and associations such as American Association of Geographers (AAG), Association of Pacific Geographers (APCG), ESRI User Conference (GIS software company), and other local seminars, conferences and gatherings are attended.

- During department meetings, instructors are working on areas of common challenges teaching Physical Geography and seeking ways to enhance classes by adding newer material and deleting dated material.

- Geography & GIS instructors are creating outside activities to help student success, such as video lectures, *Canvas* practice quizzes, etc. Much of this work requires additional research beyond normal class preparation to maintain accuracy, depth and interest in the subject matter.

This author, Sean Booth, has now produced 30 or more videos on *YouTube* as an extra study guide. Professionals or students around the world can watch these videos. Students who watch the videos comment they are very helpful. Those videos are referenced by searching "Sierra Explorer" at *YouTube*.

2d) Optional Additional Data: Enter additional data here that you believe to be an indicator of your program's effectiveness and explain why.

Specific instructions on how to collect CSLOs are on the Geography portal website:

How to Collect, Process & Report CSLOs:

http://geography.sierracollege.edu/geog_classes.html

Cumulative Repository - Google Docs form can be found at:

<https://docs.google.com/forms/d/1LBqFYIKrd9b1M6oQ4xrweaaSvrlc5FWzLhgCb8jfXck/viewform>

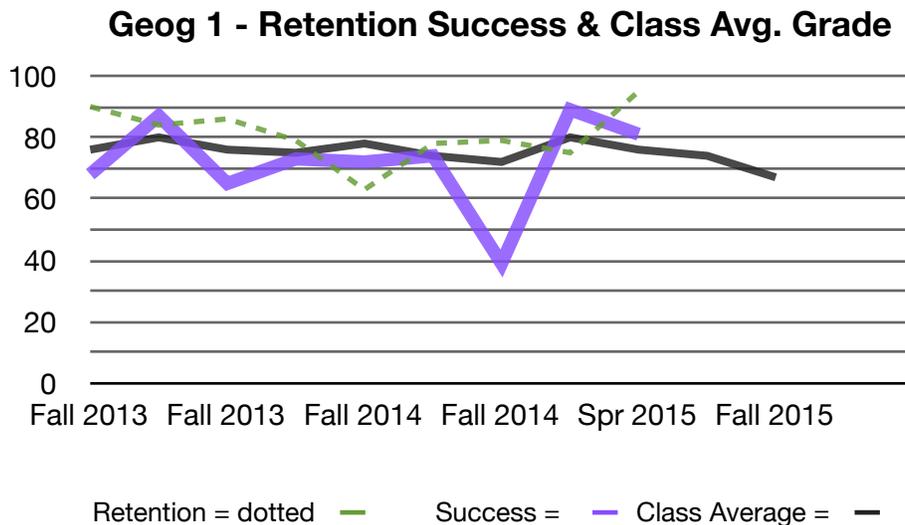
- See the complete Department CSLO - **cumulative tabular data** at end

3) Effectiveness: This section assesses the effectiveness of the program in light of traditional measurements.

3a) Retention and Success: Identify and explain the three year trends in your program’s data contained in the DSR. Address separately the data for on ground and on-line course. Evaluate the significance of the trends, including any challenges experienced by the program and any relevant data/analysis from your course and program outcomes assessments. If applicable, please analyze any significant trends related to student equity and success. If you determine that you need to improve the program’s performance, please describe how you plan to achieve this goal. Please include the results of your outcomes assessments, as appropriate.

Looking at the DSR data, the Geography Department's retention & success is on par with District average in the mid 80s as a percent. For most current data (Spr 2015), the department was above district average at 87%. Success is on par with District average in the low 70s as a percent, with slightly lower success rates -- most likely attributable to GEOG 1, a science class. To compare, Astronomy also had a 69% success rates. The department's own data shows this as well. Compared to the previous program review (2013) retention & success are the same.

Looking at the Department's own data, which further determines success based on those students who complete the class. GEOG 1 success on average = 72% with class average of 75%. Looking at graph (thinner, darker line), you can see class average as steady. Looking at the thick purple line, however, shows class success drop in Fall 2014, variations likely due to student populations, course times (8:00 classes with poor performers), and deficiencies in core competencies. Note the ESCI Department requires English proficiency prerequisites in all courses (Fall 2012), while GEOG Department does not at the moment. Given the demographic characteristics of *non-science* majors, success challenges will persist.



Other classes such as GEOG 2 (Cultural Geography) success rates are much higher on average and equal 82% with a class average of 78%. Comparing GEOG 1 (Physical) with GEOG 2 (Cultural) demonstrates success rates of a science class versus a social science class.

In Geography, most classes are on ground with the exception of 2 classes - GEOG 85 (GeoSpatial Technologies) and GEOG 1. These are lower marks at 72% retention and 57% success as to be expected for online classes.

3b) Enrollment Trends: Identify and explain the three year enrollment trends in your program’s DSR data. Address separately the data for on ground and on-line, as well as the data at the various centers in which your program may operate. Evaluate the significance of the trends including any challenges experienced by the program. If applicable, please analyze any significant trends related to student equity and success. If you determine that you need to improve the program’s performance in any way, please describe how you plan to achieve this goal.

Geography Rocklin enrollment peaked at 442 with the highest enrollment in Spring 2014 and the lowest enrollment in Fall 2012 at 332, which is in line with the district's pattern. Given the district overall enrollment peaked in 2009 then slowly began to decrease, Geography has held steady with an average around 430. Nevada County Campus enrollments have held around 100, with a peak of 160 in the Fall 2012. Online classes are steady and few, with the idea to expand in the future. Below is a summary of class offerings:

All Campuses									
Semester	Geog 1	Geog 1L	Geog 2	Geog 3	Geog 4	Geog 5	Field Studies	GIS	Total
Spring 2016	9	2	5	1	1	1	1	4	24

Trends since 2005 are the following: GEOG 1 remains steady with 8 to 9 courses each semester; GEOG 2 increased to 4 or 5; GEOG 3 equals 2 classes alternating between NCC and RC, and field classes remain steady but difficult to staff. GIS classes have remained steady noting that 3 core classes have been compressed into 2 core classes to boost enrollment and expedite completion of skills certificates. Online classes are not shown but remain at 2 each semester - GEOG 1 and GEOG 85.

3c) Productivity: Comment on how the program contributes to overall district productivity. Evaluate the significance of the trends including any challenges experienced by the program. If you believe the statistical trends need improvement, and can be affected by your actions, if you determine that you need to improve the program's performance in any way, please describe how you plan to achieve this goal.

Geography is on par with the district average when looking at the trend lines in the DSR data. Geography is above average when removing the CTE - GIS program that inherently requires smaller enrollment numbers. Likewise, field study classes also cap at 20 students due to the nature of these classes outside and on-the-go in small vans. NCC lectures have fewer students due to smaller classrooms and smaller enrollment numbers.

As noted in other department program reviews, Sewell Hall facilities are very limited, often pushing class offerings to peripheral times, such as early morning or late afternoon. When classes cannot be offered during central times, enrollment subsequently declines. While facilities restrictions are discussed later, it's worth noting Geography cannot serve more students at concurrent times, such as GEOG 1 and GEOG 4 (Weather & Climate) when we would like to offer these classes for productivity to rise.

3d) Analysis and Planning: Referring to your ePAR Report of Goals, Strategies, Actions, and outcomes assessment cycle and relevant assessments/evaluations, please describe your program's plans to maintain or increase its effectiveness and analyze and evaluate your efforts to achieve these goals.

The Department continues to enhance, modify and monitor trends by adding newer information and deleting older information to keep all programs up-to-date and effective. By meeting during flex week to discuss Program Learning Outcomes and Course Learning Outcomes, faculty reviews past data that may indicate a need for improvement. One example is how an instructor hands out "Things to Know for Geography 1 - Exam 2" or a study guide.

Looking at course offerings, Geography offers a total of 24 sections. Note 14 of the 24 (over 1/2 are GEOG 1 & 2), thus analysis in this cycle is primarily focused on these two classes in regards to success and retention.

GEOG 1 - Physical - the assessment data indicates the course with most room for improvement. The department would like to raise the success rate to 70% over the next 3 years.

GEOG 2 - Cultural - looks good with a success rate around 80% so the goal is to maintain this quality of education.

OTHER - all courses are in line with Department goals and targets.

Looking at Department Goals, perhaps one of the Departments most important goals is the completion of the transfer degree in Geography. Along those lines of Goal #1 related to geographic literacy, the Geography has continued to discuss relevant issues of the day, such as global warming and the dynamic global economy. Goal #2 & #3 related to modern technology and career paths, the GIS program has continued to attract students from geography classes and the community at large through its website and word-of-mouth. To increase interest in the field of "GeoSpatial Technology," instructors use multi-media presentations, the most useful website still being "GeoSpatial Revolution" at Penn State University. To promote the GIS program, students are told of internships and entry-level job opportunities in other classes. Goals #5 is to increase & maintain student success rates, and in large part the Department has been successful. Yet new & fresh approaches are always needed.

Goal #7 is to develop and provide new multi-media materials to enhance learning. Besides garnering interest, another significant challenge is the ability to take complete notes in difficult classes. For starters, many instructors like this author (Sean Booth), provide a course packet or PowerPoint notes. Also the use of Canvas as a repository for practice tests, study guides, discussions, etc. is useful - even for on-ground courses.

But better yet are online videos. Students can review material, get another perspective, see footage from the field, and simply be exposed to the course material in a repetitive manner. This author has now produced over 30 in-depth and comprehensive videos on *YouTube* as an extra study guide. Professionals or students around the world have watched these videos, already with numerous positive comments. Those videos are referenced by searching "Sierra Explorer" at *YouTube*.

3e) Optional Additional Data: Enter additional data here that you believe to be an indicator of your program's effectiveness and explain why.

4) **Resources:** This category assesses the adequacy of current resources available to the program and describes and justifies the resources required to achieve planning goals by relating program needs to the assessments above. (Refer to bottom row of your DSR in your response to this category.)

4a) Please describe the **future direction and goals of your program** for the next three years in terms of sustaining or improving program effectiveness, relevance, and currency. Please include any analysis of relevant outcomes assessment in your explanation.

Currently reporting CSLOs for all courses is on track with approximately 1/2 completed and the other 1/2 being reported. Regarding the department goal to maintain and attract new students, enrollment trends appear steady for most geography courses in these times of lower enrollments district-wide. While Spring 2016 appears lower, especially GEOG 2, we expect daytime classes to grow overall. Regarding GIS courses, we continue to promote CTE programs to further success with offering a skills certificate. Fortunately, career paths in GeoSpatial technologies are numerous and growing. Instructors often announce these opportunities. For example, several times per semester employers contact the Department to announce job offerings or internships. As of this writing, for example, *Aerotech* called our Department to hire a GIS Technician in the Northern Sacramento area. Another is *Open Spatial* in Rocklin looking for students this Spring 2016 semester. The goal of improving and growing the GIS program stems partly from the Department's struggle to find talented instructors in GIS, thus the need for a full-time faculty member.

To expand the Geography program, the Department would like to offer an associate degree and broaden its course offerings as well. Two major factors limit completion of these goals: limited facilities as discussed and also the lack of full-time staffing to share the work load. We also need full-time staff to teach technical courses such as those in meteorology and GIS. Productivity would likely increase with access to larger classrooms during central hours. Other components of the program will always have caps, such as the field studies classes and GIS class sizes.

Effectiveness and student success, on the more soft side, continue to improve with innovative teaching techniques, such as producing *YouTube* videos (currently about 30 of them to date), use of multi-media films, clickers in the classroom, even increased student participation by allowing students to use their mobile devices as a learning tool in class. Likewise the Department encourages the use of study guides and practice tests perhaps upload to Canvas. More tutors for GEOG 1 and teacher access are top priorities. Finally, we want students to succeed by promoting transfer degrees and highlighting career paths related to emerging geospatial technology.

4b) Equipment and Technology: Comment on the adequacy of the program's equipment and technology funding level for the District as well as specific sites. Include a projection of equipment and technology needs for the next three years as well as a justification for needs. Please include any analysis of relevant outcomes assessment data in your explanation.

The primary classroom (S-103) needs newer class maps, especially the one with "USSR" written across the continent. That map is tearing and very dated. S-103 also has a shortage of chairs, only 35 for a 40 capacity classroom. Lighting is horrible with a yellow pale from 50 year old light coverings. Sewell Hall has new lighting in the halls and many classrooms. It past due to replace those lights in a classroom with no natural lighting. The roof leak has been repaired, and since the last program report, I am proud to say we no longer have ponds in the middle of the room after a storm.

We request continue support for the GIS software from ESRI, the industry standard. While the Division provides the current funding, we believe the Department's budget should be augmented to fold that cost into the GEOG budget. Likewise, we request that the Department receive a CalCard to purchase supplies. At the moment we used Biology, then get reimbursed. For podcast, both video and audio, we need equipment. Currently the Department has purchased video & audio equipment such as recording devices, studio lights and microphones. More will be needed. A laptop computer was recently purchased to help in that endeavor, which helps with recording off-site.

To increase online classes, we request the District increase it's testing center capacity, which is woefully inadequate to deal with the large number of students requiring test proctoring. In fact, many instructors refuse to develop online material until they have the ability to assure student take the test fairly (with a host of issues from identity to sharing answers online). At the moment instructors use Canvas to post practice test online, and evidence does show those students who practice testing perform better on the exams. By posting study guides online, students know what to expect on the exams and those who complete the study often perform better than who do not, according to in-class surveys and tracking test scores. As mentioned below, technology and equipment are not hindering the Departments key indicators, such as retention, success, and CSLO feedback. Rather, increased staffing is key to success, especially hiring a full-time Geographer in the next cycle.

4c) Staffing: Comment on the adequacy of your program's faculty, classified, and student help staffing levels for the overall District as well as specific sites. Include a projection of staffing needs for the next three years and justification for any increases. Please include any analysis of relevant outcomes assessment data in your explanation.

It should be noted that ESCI has 3 full-time faculty at the RC while GEOG has only 1 - with numerous duties in addition to teaching, such as CTE, Department Chair, GIS program, marketing, program review, etc. Regardless of FTES, GEOG needs another full-time faculty member. All other Sewell Hall departments, full-time faculty at RC are shown with ratio (FTES / Faculty = Ratio):

Program	FTES	Faculty	Ratio
Earth Sciences	84	3	28
Bio Sciences	268	8	33.5
<i>Geography</i>	60	1	60
Chemistry	223	6	37.2
Astronomy	80	3	26.7
Physics	57	3	19

Lower ratio is better. Geography, for example, has double the ratio as ESCI when comparing "apples to apple." All departments in Sewell Hall have a ratio around 30 compared to 60 for GEOG. While the District has needs in other departments, GEOG needs a minimum staffing to maintain quality in its programs. FT to PT ratios do not adequately reveal a need for another full-time faculty member.

4d) Facilities: Comment on the program’s fill rate and the adequacy of the facilities for the District as well as specific sites. Include a projection of facility needs for the next three years as well as a justification for any increases. Please include any analysis of relevant outcomes assessment data in your explanation.

Geography's dedicated classroom S-103 has been upgraded to the newest smart classroom as November 2015 with a new computer, Blu-ray player, and powerful projector (without the flicker). Additionally the computer has an additional hard-drive filled with important movies (in MP4 format) to quickly show clips or entire movies directly from the computer.

Yet the Department, like so many others, cannot grow without actual rooms increasing. Facilities are linked to adding another faculty member at the Rocklin Campus.

Using ESCI chart on FTES - to facilities ratio as shown in the table below, GEOG also suffers from access to another classroom. (Note: shared = 0.5 value to achieve total). Lower values are better. Note ESCI then GEOG have poor values, with most at 40 or lower while GEOG is at 60.

Program	FTES	Exclusive	Shared	Total	Ratio
Earth Sciences	84	1	0	1	84
Bio Sciences	268	5	2	6	44.67
<i>Geography</i>	60	1	0	1	60
Chemistry	223	3	3	5.5	40.5
Astronomy	80	2	0	2	40
Physics	57	1	3	2.5	22.8

In fact, S-103 (GEOG dedicated classroom) is not exclusive and is shared with ESCI. One result of this shared-dedicated room is that GEOG cannot offer a lab (GEOG 1L) on either Tuesday or Thursday -- when we have are greatest number of students on campus. That room is taken after 3:30 for ESRI. Consequently, students cannot take a lab on either Tuesday or Thursday. That affects the program in negative ways, such as offering labs during that time (from 2:00 to 5:00 on TH).

4e) Please check the appropriate boxes in the chart below indicating the **general reasons for the resource requests** described above (please check all that apply):

Function/Role	Maintenance	Development	Growth	Safety	Outcomes	Other success measures	No Requests
		X	X				

5) Summary/Closing

5a) Evaluate the **program's strengths, weaknesses**, opportunities, and challenges.

Strengths - The Department continues to remain consistent with the District's core mission teaching key concepts in geography & geographic literacy: citizenship, respect for diverse populations, increase awareness as to the importance of sustainability, elaborate on global connection in the emerging world economy, and to direct students toward technical, high paying jobs related to Geospatial technology. Geographic literacy and critical thinking skills help students succeed in both their academic and career paths. To augment the learning experience, the Department continues to encourage instructors to use meaningful & innovative teaching tools, such as movie clips, graphics & charts, in-class exercises, presentations, hands-ons assignments, and peer-directed activities. To tap into emerging technologies, instructors are encouraged to build online resources, online videos, online study guides and practice tests -- which are already in place with some instructors. Tutors are now available too. In short, numerous resources are readily available for those students willing to put in the effort. Quality instructors and interesting classes help students succeed and also recruit new students into the program.

Weaknesses - Because so many courses are offered under the category of "Social & Behavioral" sciences and "Multicultural Studies", courses such as GEOG 2 (Cultural) and GEOG 3 (California) have more competition for students than ever. The Department may need to scale back some classes as a result to maintain higher fill levels. This move, however, has negative consequences -- it limits the diversity of the Department. We have only 3 main offerings (GEOG 1, 2, 3). Details: GEOG 3 is only offered once per year. GEOG 1 is approximately double GEOG 2 in offerings. So to continue to offer GEOG 1 over GEOG 2 exacerbates this problem. The Department really needs to diversify its class offerings for the transfer degree problems. The Department also needs another full-time faculty member to grow the GIS program and increase the breadth of geography classes in the Department - specifically teaching specialized GIS classes, weather & climate ones, world regional, and perhaps add a new class.

5b) Please provide any other information the Program Review Committee should consider that was **not expressed** in questions above.

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5c) How has the author of this report **integrated the views** and perspectives of those who have interests in the future of this program, e.g. full time and part time faculty, educational administrators, instructional assistants, classified staff, and students at Rocklin, Roseville Gateway, NCC and/or Tahoe Truckee?

During Geography Department meetings the key topics of CSLOs, how to improve success, retention, and equity are discussed. Productivity is also discussed by developing strategies to increase enrollment by scheduling. The Department continues to promote its GIS program, skill certificate and career paths in geography in general. Faculty are encourage to collect data regarding CSLOs and related topics to incorporate into future program review reports.

5d) Supplementary Information - Cumulative CSLOs

Sem	Year	Course	Your CSLO Label	CSLO	Success	Results
Spring	2014	Geog 1	Gradient	CSLO 1	40	Proficient
Spring	2015	Geog 1	Gradient	CSLO 1	60	Proficient
Spring	2014	Geog 1	Tectonics	CSLO 2	50	Proficient
Spring	2014	Geog 1	tectonics	CSLO 2	70	Mastery
Spring	2014	Geog 1	Seasons	CSLO 3	60	Proficient
Spring	2014	Geog 1	Climate	CSLO 4	60	Proficient
Spring	2015	Geog 1	Climate	CSLO 4	60	Proficient
Fall	2015	Geog 1	Tectonics	CSLO 2	80	Mastery
				AVG =	57	
Spring	2014	Geog 2	Demographics	CSLO 1	50	Proficient
Spring	2015	Geog 2	Demographics	CSLO 1	70	Mastery
Spring	2015	Geog 2	demo tools	CSLO 1	80	Mastery
Spring	2014	Geog 2	Folk/Pop	CSLO 2	60	Proficient
Fall	2014	Geog 2	folk	CSLO 2	80	Mastery
Spring	2014	Geog 2	Religion	CSLO 3	40	Proficient
Fall	2014	Geog 2	religion	CSLO 3	70	Mastery
Spring	2015	Geog 2	religion	CSLO 3	70	Mastery
Spring	2014	Geog 2	Ethnic Conflict	CSLO 4	70	Mastery
Spring	2015	Geog 2	conflicts	CSLO 4	90	Mastery
Spring	2014	Geog 2	Agriculture	CSLO 5	60	Proficient
Spring	2015	Geog 2	Ag	CSLO 5	50	Proficient

Sem	Year	Course	Your CSLO Label	CSLO	Success	Results
				AVG =	63	
Spring	2014	Geog 3	Landforms	CSLO 1	40	Proficient
Spring	2014	Geog 3	Climate	CSLO 3	50	Proficient
Spring	2014	Geog 3	Issues	CSLO 3	80	Mastery
Spring	2014	Geog 3	Agriculture	CSLO 4	30	Unsatisfac
Spring	2014	Geog 3	Migration	CSLO 5	60	Proficient
Spring	2014	Geog 3	Urban Growth	CSLO 6	60	Proficient
Spring	2015	Geog 3	climate	CSLO 3	60	Proficient
Spring	2015	Geog 3	agriculture	CSLO 4	70	Mastery
Spring	2015	Geog 3	immigration	CSLO 5	80	Mastery
Spring	2015	Geog 3	urban growth	CSLO 6	90	Mastery
				AVG =	63	
Spring	2014	Geog 5		CSLO 3	60	Proficient
Fall	2014	Geog 5	Map Features	CSLO 3	80	Mastery
Fall	2014	Geog 5	Cultural characteristics	CSLO 2	80	Proficient
Fall	2015	Geog 5	World Regions	CSLO 1	66	Proficient
				AVG =	64	