

Academic Program Review (Earth Science) Latest Version

Academic Program Review: (1) Overview of the program First Submission: Version by Clark, Leonard on 12/21/2022 00:10

Provide a brief narrative description of the current program, including the program's mission statement and the students it serves.

The Earth Sciences program offers courses in geology and geography. It is a small department with one professor teaching geology and geography, and any other course offerings taught by adjunct faculty. The mission statement of the Compton College Earth Science program reads as follows:

"The Earth Sciences Department provides an opportunity for all undergraduates to learn about Earth, its resources, and the processes that change it. By emphasizing the importance of the scientific method for problem solving, courses in Geography, Geology, Meteorology, and Oceanography train students to think critically about the relationship humans have with the environment. We seek to prepare students to be future community members, educators, and leaders who apply their knowledge about Earth Science in a way that ensures a sustainable future."

In Geography 101, students serve the community by completing Service Learning. It is a teaching method where students complete four to six hours of service which compliments the Student Learning Outcome "How the Earth Affects humans & how humans affect the Earth." This is an outstanding teaching strategy because students make a final presentation detailing their experience. Students are proud and enthusiastic about sharing experiences, and demonstrating that they can individually alter negative environmental and climatic trends.

Earth Sciences program serves a student body that is predominantly female, Latino and 22 – 29 years in age. Most students attend part time having already obtained a high school diploma. Many students taking Earth Science courses intend to transfer, and are able to complete their general education requirements in physical sciences with our course offerings.

Earth Sciences is relevant to many students facing imminent environmental issues. Geographic mapping and global positioning utilization may be taken for granted, but courses in the Earth Sciences explain how data is gathered and utilized. Human activities, overconsumption of resources and climate change are topics presented in class which make students keenly aware of the Earth's condition. Along with lectures, students' opinions and conclusions are valued. Global environmental issues are covered and courses in the Earth Sciences may provide a career path of which students may be unaware. Associate of Science degrees are offered at Compton College in physical science and general science. The course offerings in the Earth Sciences provide the foundation for these degrees.

Describe the degrees and/or certificates offered by the program.

General study courses emphasize the physical universe, its life forms, and its natural phenomena. Courses in the sciences will help students develop an understanding of the scientific method and the relationship between science and other human activities. Students transferring to a four-year university will have a basic foundation for further studies in areas such as biology (biochemistry, biophysics, molecular and cell biology, marine biology, microbiology), chemistry, physical and earth sciences (astronomy, geology, physical geography, oceanography), or physics. This emphasis may be useful for students interested in possible career paths in life sciences, physiology, exercise science, physical sciences, or earth sciences. Select 18 units with at least one course in Biological Sciences and one course in Physical Sciences.

An Associate of Arts degree is available in Science. In addition to units necessary for general education, 18 units are required in biological and physical science.

Explain how the program fulfills the College's mission and aligns with the strategic initiatives.

Our department is proud to provide a welcoming, inclusive learning environment. Our diverse students are recognized to have a variety of learning styles, as a result many teaching styles are used to facilitate student success.

Regarding Strategic initiatives, the department supports students success by utilizing technology, equity and remaining student centered.

Discuss the status of recommendations from your previous program review.

Two recommendations of the five given in the previous review have been completed:

- Wi Fi accessibility in the Math/Science has been installed.
- Transportation for students to a remote field trip location has consistently been available.

The following is a list needed teaching supplies:

- Museum quality mineral & rock samples that clearly display their characteristics and properties
- Inexpensive field microscopes
- Overhead projector with Vis-a-Vis pens
- graphite for specimen cabinet

Academic Program Review: (2) Analysis of Research Data First Submission: Version by Clark, Leonard on 12/21/2022 00:11

Head Count: Identify and explain trends in enrollment. Analyze enrollment demographic variables, including gender, ethnicity, age, educational goal and full-time/part-time status.

Trends in enrollment are reported for fall years 2019 - 2022.

Gender	Fall '19	Fall '20	Fall '21
Female	64% (3776)	68% (3172)	64% (2793)
Male	35% (2065)	31% (1450)	34% (1485)
Non-binary	0% (<5)	0% (<5)	
Unknown/non-respondent	1% (58)	1% (48)	2% (89)
Grand Total	100% (5900)	100% (4671)	100% (4367)

Ethnicity	Fall '19	Fall '20	Fall '21
American Indian ..	0% (9)	0% (8)	0% (9)
Asian	5% (305)	6% (261)	5% (238)
Black or African ..	19% (1120)	21% (995)	22% (962)
Latinx	66% (3870)	65% (3041)	65% (2831)
Native Hawaiian..	0% (27)	1% (28)	1% (27)
Two or More Rac..	2% (104)	2% (112)	2% (101)
Unknown/Non-R..	6% (379)	3% (150)	3% (120)
White	1% (86)	2% (76)	2% (79)
Grand Total	100% (5900)	100% (4671)	100% (4367)

Class Load	Fall '19	Fall '20	Fall '21
Full-time	45% (93)	51% (74)	50% (48)
Part-time	55% (115)	49% (72)	50% (48)
Grand Total	100% (208)	100% (146)	100% (96)

Education Goal	Fall '19	Fall '20	Fall '21
Basic Skills	1% (<5)		
Degree/Cert Only	2% (5)	3% (<5)	1% (<5)
Enrichment	55% (115)	84% (122)	82% (79)
Intend to Transfer	31% (64)	10% (14)	14% (13)
Undecided/Unstated	11% (22)	4% (6)	3% (<5)
Grand Total	100% (208)	100% (146)	100% (96)

Enrollments	Fall '19	Fall '20	Fall '21
Day	66% (136)	55% (87)	47% (46)
Evening	19% (44)	27% (45)	24% (24)
Unknown	15% (35)	18% (29)	29% (30)

For Fall 2019 - 2021 the percentage of male and female students remained equal. Higher numbers of female student has been a trend for many years. Enrollment has decreased. The ethnicity of students is mostly Latin then Black, ages 20- 24. Part and full-time student are equal in number. Most students are enrolled during the day for enrichment.

Trends in enrollment for Spring 2019 -2022

Gender	Spring '19	Spring '20	Spring '21	Spring '22
Female	69% (139)	66% (133)	70% (101)	56% (61)
Male	31% (63)	33% (66)	29% (42)	44% (47)
Unknown/non-respondent		1% (<5)	1% (<5)	
Grand Total	100% (202)	100% (201)	100% (144)	100% (108)

Ethnicity	Spring '19	Spring '20	Spring '21	Spring '22
American Indian ..		1% (<5)		
Asian	3% (6)	0% (<5)	1% (<5)	
Black or African ..	23% (46)	27% (55)	22% (32)	23% (25)
Latinx	68% (137)	64% (128)	66% (95)	71% (77)
Native Hawaiian..		1% (<5)	2% (<5)	
Two or More Rac..	3% (6)	1% (<5)	3% (<5)	1% (<5)
Unknown/Non-R..	0% (<5)	4% (9)	4% (6)	3% (<5)
White	3% (6)	0% (<5)	1% (<5)	2% (<5)
Grand Total	100% (202)	100% (201)	100% (144)	100% (108)

Education Goal	Fall '19	Fall '20	Summer '21	Spring '22
Basic Skills	1% (<5)			
Degree/Cert Only	2% (5)	3% (<5)	7% (6)	2% (<5)
Enrichment	55% (115)	84% (122)	32% (29)	83% (90)
Intend to Transfer	31% (64)	10% (14)	23% (21)	11% (12)
Retrain/Recertify			1% (<5)	
Undecided/Unstated	11% (22)	4% (6)	37% (33)	4% (<5)
Grand Total	100% (208)	100% (146)	100% (90)	100% (108)

Enrollments	Fall '19	Fall '20	Summer '21	Spring '22
Day	66% (136)	55% (87)	77% (63)	54% (57)
Evening	19% (44)	27% (45)		22% (26)
Unknown	15% (35)	18% (29)	23% (27)	24% (28)

Class Load	Spring '18	Spring '19	Spring '20	Spring '21
Full-time	46% (96)	37% (75)	50% (101)	56% (80)
Part-time	54% (111)	63% (127)	50% (100)	44% (64)
Grand Total	100% (207)	100% (202)	100% (201)	100% (144)

An large percentage of students are female students with an overall decrease during this period is observed. Latin then Black students are the predominant ethnicity. Data shows that part versus full-time students vary. Spring 2020 mostly full time, and Spring 2022 part time mostly. Most student's take classes during the day with educational goals that are primarily for enrichment.

Students don't have a full-time job which would limit their access daytime courses. Besides affecting enrollment Covid-19 has not had a great effect on this department. The characteristics of Earth Science students hasn't varied much in the last four years.

Course Grade Distribution: Identify and explain trends in course grades. Make sure to address gaps in grade distribution if applicable.

The majority of students in Geology 101, 103, 106 and Geography 101, 106 complete the course with passing grades for 2019 - 2022. This trend is due to teaching strategies that allow success for most students.

Academic Y..	Course ID	A	B	C	D	F	IC	MW	RD	W	Grand T
2019-20	GEOG-101	<5 (6%)	9 (19%)	12 (25%)	<5 (6%)	11 (23%)			<5 (4%)	8 (17%)	48 (100%)
	GEOG-105	10 (50%)	<5 (15%)	<5 (5%)		5 (25%)				<5 (5%)	20 (100%)
	GEOG-101	20 (17%)	37 (32%)	23 (20%)	5 (4%)	19 (16%)				12 (10%)	116 (100%)
	GEOG-103	11 (35%)	11 (35%)	<5 (13%)		<5 (10%)			<5 (3%)	<5 (3%)	31 (100%)
	GEOG-106	12 (63%)	<5 (21%)	<5 (5%)		<5 (5%)				<5 (5%)	19 (100%)
2020-21	GEOG-101	6 (15%)	17 (41%)	6 (15%)		<5 (2%)				11 (27%)	41 (100%)
	GEOG-105	10 (71%)	<5 (7%)	<5 (7%)		<5 (14%)					14 (100%)
	GEOG-101	23 (30%)	14 (18%)	12 (16%)	<5 (3%)	<5 (1%)			<5 (3%)	23 (30%)	77 (100%)
	GEOG-103	<5 (11%)		<5 (11%)						7 (78%)	9 (100%)
	GEOG-106	16 (67%)	<5 (8%)	<5 (4%)	<5 (4%)					<5 (17%)	24 (100%)
2021-22	GEOG-101	<5 (9%)	<5 (5%)	<5 (18%)	<5 (5%)	5 (23%)	<5 (5%)			8 (36%)	22 (100%)
	GEOG-105	<5 (17%)	<5 (50%)			<5 (33%)					6 (100%)
	GEOG-101	11 (20%)	19 (35%)	6 (11%)	<5 (5%)	<5 (5%)		<5 (2%)		12 (22%)	55 (100%)
	GEOG-103	<5 (33%)	<5 (11%)	<5 (22%)						<5 (33%)	9 (100%)
	GEOG-106	7 (70%)	<5 (20%)							<5 (10%)	10 (100%)

Academic Y..	Course ID	A	B	C	D	F	IC	IF	MW	RD	Grand T
2018-19	GEOG-101	5 (11%)	6 (13%)	14 (30%)	<5 (2%)	6 (13%)					15 (33%)
	GEOG-105	12 (52%)	5 (22%)	<5 (9%)		<5 (9%)					<5 (9%)
	GEOG-101	38 (30%)	35 (27%)	26 (20%)	<5 (2%)	10 (8%)		<5 (1%)			16 (11%)
	GEOG-103	8 (28%)	8 (28%)	5 (17%)	<5 (3%)	5 (17%)					<5 (7%)
	GEOG-106	19 (61%)	10 (32%)	<5 (3%)							<5 (3%)
2019-20	GEOG-101	<5 (6%)	9 (19%)	12 (25%)	<5 (6%)	11 (23%)				<5 (4%)	48 (100%)
	GEOG-105	10 (50%)	<5 (15%)	<5 (5%)		5 (25%)					20 (100%)
	GEOG-101	20 (17%)	37 (32%)	23 (20%)	5 (4%)	19 (16%)					116 (100%)
	GEOG-103	11 (35%)	11 (35%)	<5 (13%)		<5 (10%)				<5 (3%)	31 (100%)
	GEOG-106	12 (63%)	<5 (21%)	<5 (5%)		<5 (5%)				<5 (5%)	19 (100%)
2020-21	GEOG-101	6 (15%)	17 (41%)	6 (15%)		<5 (2%)				11 (27%)	41 (100%)

Success Rates: Identify and explain trends in success rates. Make sure to address equity gaps in success rates if applicable.

There is a slight spike in Earth Science success rates in 2018 to 2019. Seventy-one percent of all students enrolled in Earth Science courses completed the courses successfully.

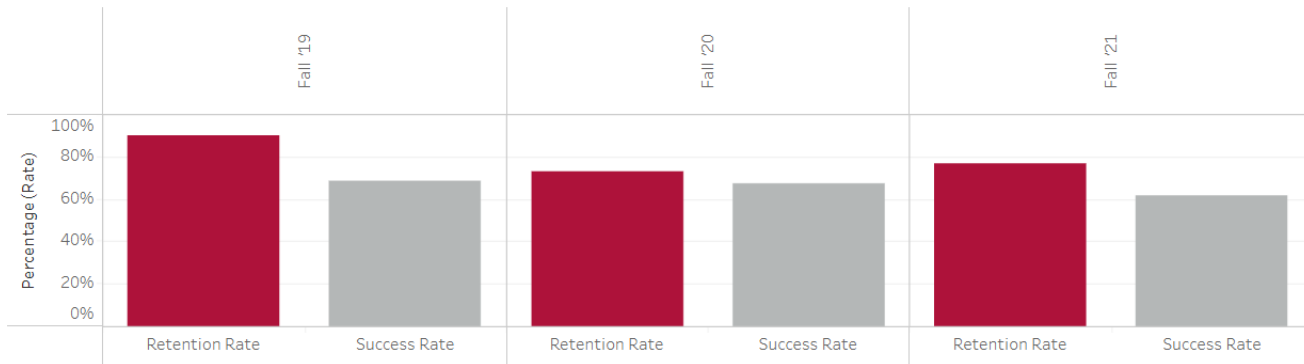
Success Rate by Course

Course ID	2018-19	2019-20	2020-21	2021-22
GEOG-101	60%(118)	58%(113)	68%(75)	61%(74)
GEOG-105	87%(46)	70%(20)	80%(30)	62%(13)
GEOG-106				97%(29)
GEOL-101	79%(292)	62%(305)	68%(224)	70%(184)
GEOL-103	85%(72)	81%(93)	58%(31)	61%(28)
GEOL-106	97%(31)	77%(43)	80%(41)	75%(24)
Grand Total	77%(559)	65%(574)	70%(401)	70%(352)

Retention Rates: Identify and explain trends in retention rates. Make sure to address equity gaps in retention rates if applicable.

The retention rates vary from 70 - 90% during Fall 2019 to 2021. Success rate were consistently around 70%. The most successful students are enrolled for a degree/certification, undecided/unstated, then students with the intent to transfer.

Education Goal	Fall '19	Fall '20	Fall '21
Basic Skills	100%(<5)		
Degree/Cert Only	100%(5)	20%(5)	100%(<5)
Enrichment	62%(125)	69%(137)	63%(82)
Intend to Transfer	72%(75)	73%(15)	47%(15)
Undecided/Unstated	81%(27)	63%(8)	75%(<5)



For Spring 2019 to 2022, success rate rates decrease from 80 to 65%.

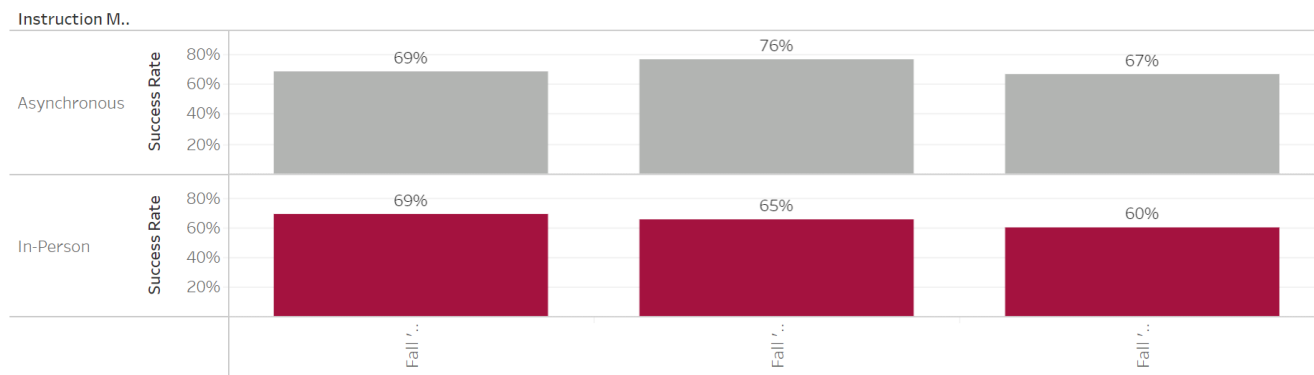
Education Goal	Spring '19	Spring '20	Spring '21	Spring '22
Basic Skills	0%(<5)	100%(<5)		
Degree/Cert Only	75%(8)	0%(<5)	25%(<5)	100%(<5)
Enrichment	67%(6)	51%(150)	73%(126)	60%(95)
Intend to Transfer	79%(139)	60%(52)	67%(27)	69%(16)
Undecided/Unstated	79%(61)	57%(14)	100%(<5)	50%(<5)



Distance Education: Compare and contrast success and retention rates between in-person and distance education courses.

For Fall 2019 to 2022, students are most successful in asynchronous online and in-person courses and asynchronous online courses, yet they are less successful in asynchronous and in-person classes. students do not perform better on either modality as displayed by data.

Instruction Method	Fall '19	Fall '20	Fall '21
Asynchronous	69%(35)	76%(29)	67%(30)
In-Person	69%(199)	65%(136)	60%(72)

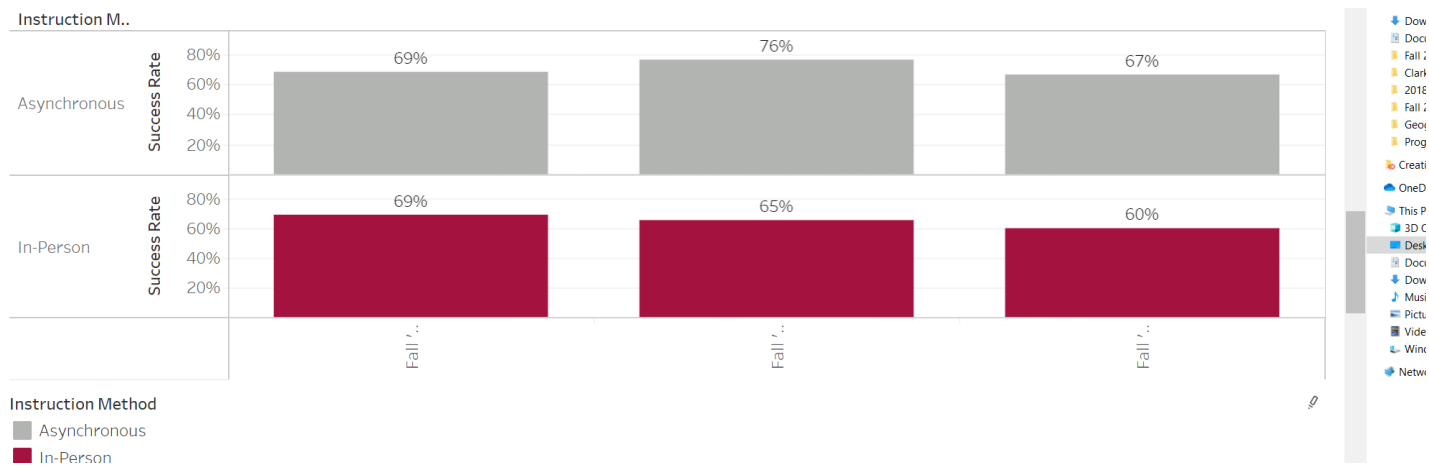


Instruction Method
 ■ Asynchronous
 ■ In-Person

For Spring 2019 to 2022, 69% of all students in Earth Science asynchronous courses completed them with a passing grade. Sixty-five percent passed synchronous courses. Sixty-six percent of student passed Earth Science courses.



Instruction Method	Spring '19	Spring '20	Spring '21	Spring '22
Asynchronous	74%(34)	57%(35)	74%(35)	71%(28)
Synchronous			71%(126)	59%(90)
In-Person	79%(181)	53%(183)		



Fill Rates: Discuss course sections offered and fill rates. Analyze any applicable trends.

The following courses are being offered in Earth Science:

- Geology 101 Physical Geology
- Geology 103 Physical Geology Laboratory
- Geology 106 Earth Science in Education
- Geography 101 Physical Geography
- Geography 105 World Regional Geography

Course Id	Fall '19	Fall '20	Fall '21
GEOG-101	67% (40)	50% (30)	20% (14)
GEOG-105	63% (19)	47% (14)	17% (6)
GEOL-101	85% (104)	43% (52)	42% (42)
GEOL-103	100% (30)	7% (<5)	50% (6)
GEOL-106	51% (18)	71% (20)	26% (9)

Enrollment has decreased in Geography 101, 105 and Geology 101, and 103 from 2019 to 2022. In Geology 101 enrollment for Geology 106 has decrease from '19 to '22, yet here was an abrupt increase in Fall 2020.

For Spring 2021 to 2022 (missing data '19 - '20, enrollment decreased from 2021 to 2022.

Course Id	Spring '21	Spring '22
GEOG-101	55% (71)	22% (14)
GEOG-105	40% (14)	17% (5)
GEOL-101	54% (108)	46% (44)
GEOL-103	46% (30)	53% (16)
GEOL-106	49% (34)	31% (11)

Course Scheduling: Discuss the days and times offered for courses. Why were these choices made? Should changes be made for future scheduling?

The schedule for course offerings has been modified constantly for many years in order to accommodate student schedules. Earth Science courses are offered during the week in mornings, evenings, weekends and online. Every effort has been made to offer courses at times convenient to students.

Degree and Transfer: What number of students earn degrees or certificates? What number of students transfer?

From years Fall 2019 - 2021 the number of students who have earned degrees/certificates or transferred has decreased.

Education Goal	Fall '19	Fall '20	Fall '21
Basic Skills	1% (<5)		
Degree/Cert Only	2% (5)	3% (<5)	1% (<5)
Enrichment	55% (115)	84% (122)	82% (79)
Intend to Transfer	31% (64)	10% (14)	14% (13)
Undecided/Unstated	11% (22)	4% (6)	3% (<5)
Grand Total	100% (208)	100% (146)	100% (96)

During the Spring 2019 to 2022, the number of students who earned degrees or transferred decreased.

Education Goal	Spring '19	Spring '20	Spring '21	Spring '22
Basic Skills	0% (<5)	0% (<5)		
Degree/Cert Only	3% (7)	0% (<5)	3% (<5)	2% (<5)
Enrichment	3% (6)	69% (138)	79% (114)	83% (90)
Intend to Transfer	65% (131)	23% (47)	16% (23)	11% (12)
Undecided/Unstated	28% (57)	7% (14)	2% (<5)	4% (<5)
Grand Total	100% (202)	100% (201)	100% (144)	100% (108)

List any related recommendations

The department has made every effort to adjust course offerings to allow student success during dubious times.

Academic Program Review: (3) Curriculum First Submission: Version by **Clark, Leonard** on **12/21/2022 00:11**

Provide the curriculum course review timeline to ensure all courses are reviewed at least once every 6 years.

Not available

Explain any course additions to current course offerings.

Specifically, Geologic Hazards and other courses have been cancelled. Due to low enrollment, there is no need for additional general education courses in Earth Science.

Explain any course deletions and inactivations from current course offerings.

To anticipate future increases in enrollment, no courses have been deleted or inactivated.

Describe the courses and number of sections offered in distance education. (Distance education includes hybrid classes.)

These courses are offered online in Earth Science: Geology 101 Physical Geology, Geology 103 Physical geology Laboratory, Geology 106 Earth Science in Education and Geography 101 Physical Geography, Geography 105. World Regional Geography. Five courses are offered on line in Earth Science. Non of these courses are hybrid.

Discuss how well the courses, degrees, or certificates meet students' transfer or career training needs.

The majority of students enrolled in Earth Science classes are there for either enrichment or transfer to another educational institution. All courses offered in Earth Science are suitable for all students' educational goals.

Education Goal	Fall '19	Fall '20	Fall '21
Basic Skills	1% (<5)		
Degree/Cert Only	2% (5)	3% (<5)	1% (<5)
Enrichment	55% (115)	84% (122)	82% (79)
Intend to Transfer	31% (64)	10% (14)	14% (13)
Undecided/Unstated	11% (22)	4% (6)	3% (<5)
Grand Total	100% (208)	100% (146)	100% (96)

Education Goal	Spring '19	Spring '20	Spring '21	Spring '22
Basic Skills	0% (<5)	0% (<5)		
Degree/Cert Only	3% (7)	0% (<5)	3% (<5)	2% (<5)
Enrichment	3% (6)	69% (138)	79% (114)	83% (90)
Intend to Transfer	65% (131)	23% (47)	16% (23)	11% (12)
Undecided/Unstated	28% (57)	7% (14)	2% (<5)	4% (<5)
Grand Total	100% (202)	100% (201)	100% (144)	100% (108)

How many students earn degrees and/or certificates in your program? Set an attainable, measurable goal related to student completion of the program's degrees/certificates.
For Fall 2019 five students earned a degree/certificate, Fall 2020 < 5 and Fall 2021 <5.

Education Goal	Fall '19	Fall '20	Fall '21
Basic Skills	1% (<5)		
Degree/Cert Only	2% (5)	3% (<5)	1% (<5)
Enrichment	55% (115)	84% (122)	82% (79)
Intend to Transfer	31% (64)	10% (14)	14% (13)
Undecided/Unstated	11% (22)	4% (6)	3% (<5)
Grand Total	100% (208)	100% (146)	100% (96)

For Spring 2019 six students earned degrees/certificate., Spring 2020 < five, < five, Spring 2021, and Spring 2022 < 5.

Education Goal	Spring '19	Spring '20	Spring '21	Spring '22
Basic Skills	0% (<5)	0% (<5)		
Degree/Cert Only	3% (7)	0% (<5)	3% (<5)	2% (<5)
Enrichment	3% (6)	69% (138)	79% (114)	83% (90)
Intend to Transfer	65% (131)	23% (47)	16% (23)	11% (12)
Undecided/Unstated	28% (57)	7% (14)	2% (<5)	4% (<5)
Grand Total	100% (202)	100% (201)	100% (144)	100% (108)

Increasing the number of degree/certificate will be accomplished by making students aware they are available.

Are any licensure/certification exams required for program completion or career entry? If so, what is the pass rate among graduates? Set an attainable, measurable goal for pass rates and identify any applicable performance benchmarks set by regulatory agencies.
 No licensure/certification exams are required.

List any related recommendations.
 The Earth Science department must continue offering a variety courses at times convenient to students.

Academic Program Review: (4) Assessment of Student Learning Outcomes (SLO's) First Submission: Version by **Clark, Leonard** on 12/21/2022 00:11

Provide a copy of your alignment grid, which shows how course, program, and institutional learning outcomes are aligned.

Program: Earth Sciences (Geography, Geology, Oceanography)		Number of Courses: 19	Date Updated: 09.10.2014	Submitted by: T. Jim Noyes, ext. 3356
ILOs	1. Critical Thinking <i>Students apply critical, creative and analytical skills to identify and solve problems, analyze information, synthesize and evaluate ideas, and transform existing ideas into new forms.</i>	2. Communication <i>Students effectively communicate with and respond to varied audiences in written, spoken or signed, and artistic forms.</i>	3. Community and Personal Development <i>Students are productive and engaged members of society, demonstrating personal responsibility, and community and social awareness through their engagement in campus programs and services.</i>	4. Information Literacy <i>Students determine an information need and use various media and formats to develop a research strategy and locate, evaluate, document, and use information to accomplish a specific purpose. Students demonstrate an understanding of the legal, social, and ethical aspects related to information use.</i>
SLO-PLO-ILO ALIGNMENT NOTES:				
<i>Mark boxes with an 'X' if: SLO/PLO is a major focus or an important part of the course/program; direct instruction or some direct instruction is provided; students are evaluated multiple times (and possibly in various ways) throughout the course or are evaluated on the concepts once or twice within the course.</i>				
<i>DO NOT mark with an 'X' if: SLO/PLO is a minor focus of the course/program and some instruction is given in the area but students are not formally evaluated on the concepts; or if the SLO/PLO is minimally or not at all part of the course/program.</i>				

SLOs	SLO to PLO Alignment <i>(Mark with an X)</i>			COURSE to ILO Alignment <i>(Mark with an X)</i>			
	P1	P2	P3	1	2	3	4
	GEOG 9 Weather and Climate: SLO #1 Basic Knowledge Students can identify the salient features of the basic concepts of meteorology and climate science. (This includes the ability to recall the definitions of the specialized vocabulary of meteorology and climate science.)	X					
GEOG 9 Weather and Climate: SLO #2 Relationship with Their Environment Students recognize and can accurately articulate how weather and climate affect humans' lives and how human activities affect weather and climate.		X		X	X		
GEOG 9 Weather and Climate: SLO #3 Nature of Science Students can identify the key elements of the scientific method (hypotheses, tests, observations, conclusions/interpretation of observations) in popular accounts of scientific research in magazines, newspapers, etc.			X				
GEOL 1 Physical Geology: SLO #1 Basic Knowledge Students recognize and can accurately articulate how the Earth affects humans' lives and how human activities affect the Earth.	X						
GEOL 1 Physical Geology: SLO #2 Relationship with Their Environment Students can identify the salient features of the basic concepts of geology. (This includes the ability to recall the definitions of the specialized vocabulary of geology.)		X		X	X		
GEOL 1 Physical Geology: SLO #3 Nature of Science Students can identify the key elements of the scientific method (hypotheses, tests, observations, conclusions/interpretation of observations) in popular accounts of scientific research in magazines, newspapers, etc.			X				
GEOL 15 Natural Disasters: SLO #1 Basic Knowledge							

Provide a timeline for your course and program level SLO assessments.
 SLO's are assessed every year, and ILO's are assessed every two years.

State the percent of course and program SLO statements that have been assessed.
 One hundred percent of all course offerings and SLO's have been assessed.

Summarize the SLO and PLO assessment results over the past four years and describe how an analysis of those results led to improved student learning. Analyze and describe those changes. Provide specific examples.
 No SLO and PLO results are available in eLumiin.

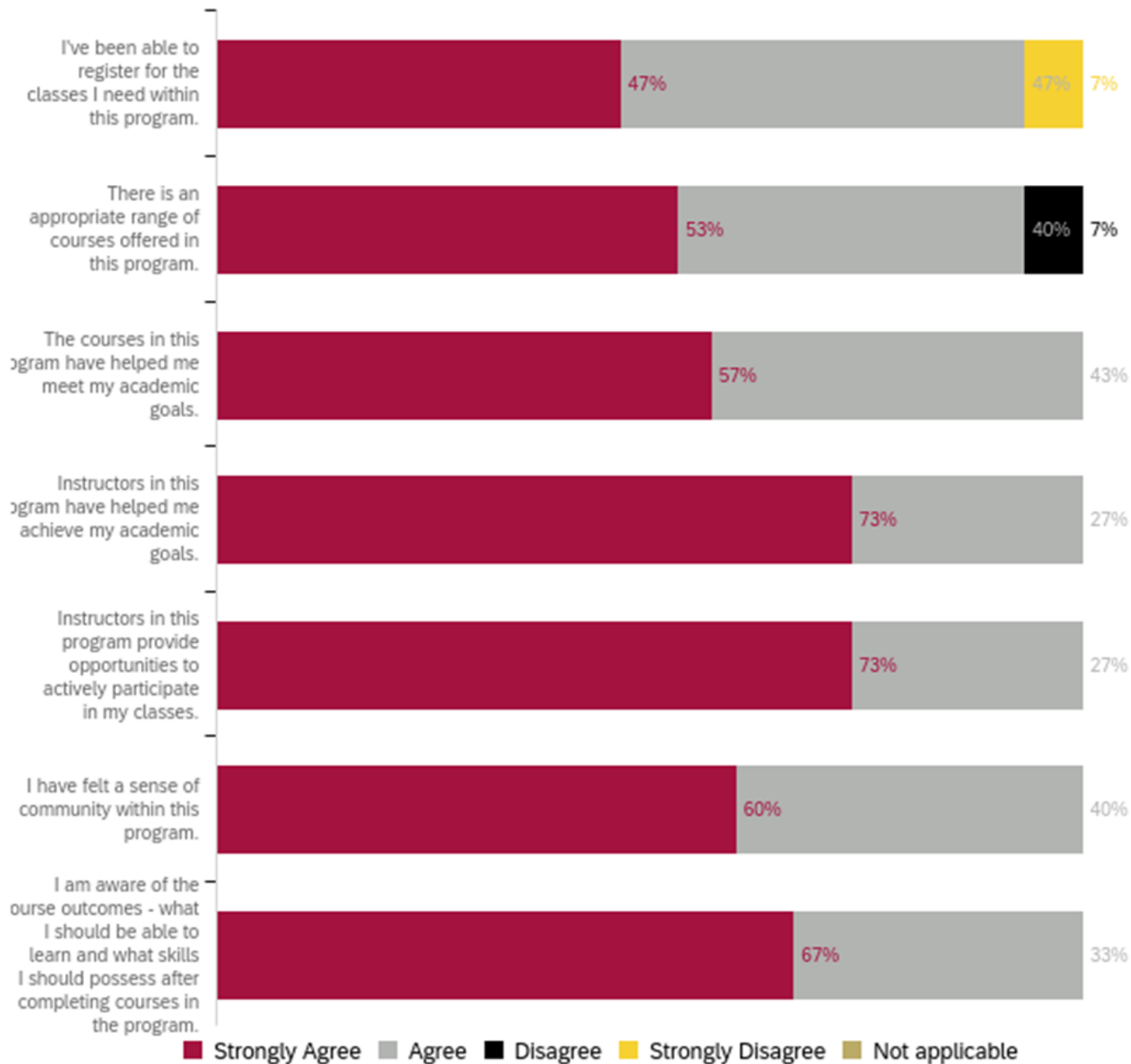
Describe how you have improved your SLO/PLO assessment process and engaged in dialogue about assessment results.
 Dialog with the SLO/PLO coordinator has emphasized how to construct and administer assessments.

List any related recommendations.
 Offering extra credit points to students for completing assessments has provided ideal results.

Academic Program Review: (5) Analysis of Student Feedback First Submission: Version by Clark, Leonard on 12/21/2022 00:11

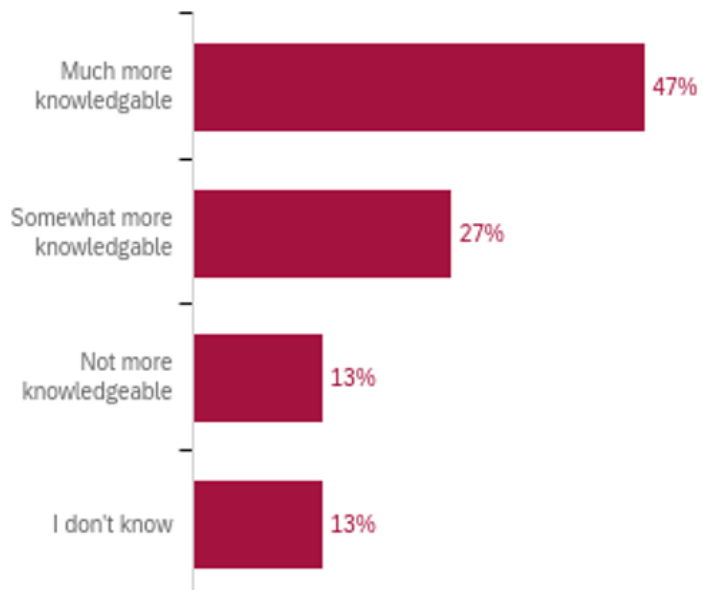
Describe the results of the student survey in the area of student support.

Generally students have adequate student support from Professor Clark. Compton College is not providing sufficient support.



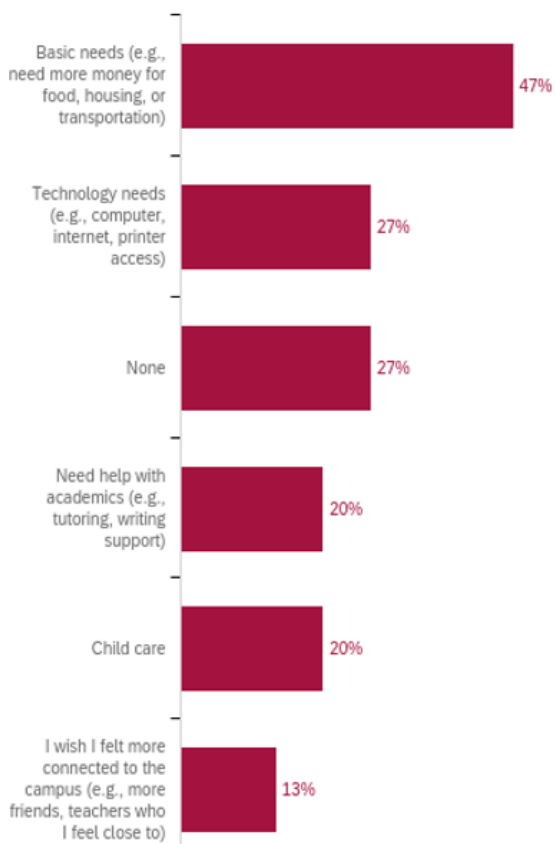
Describe the results of the student survey in the area of curriculum.

Forty-even percent of all students completing a course felt much more knowledgeable about the topic after completing a course.



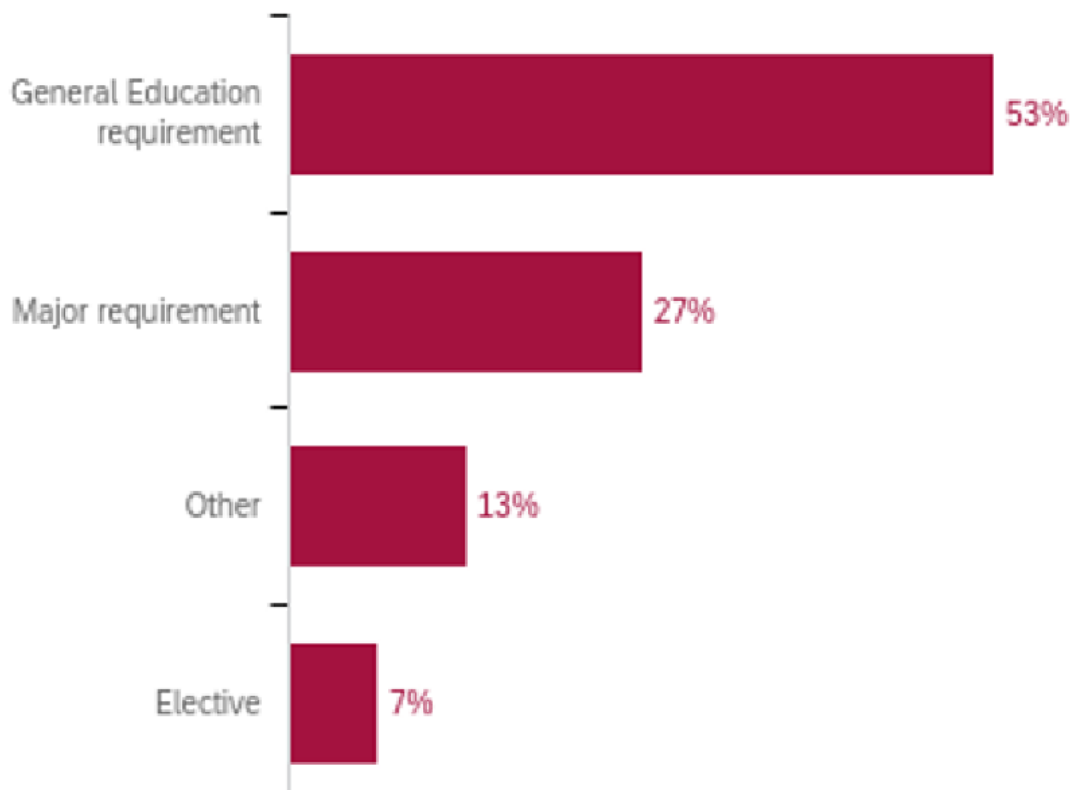
Describe the results of the student survey in the area of facilities, equipment and technology.

Facilities, equipment and technology were a challenge for 27% of students enrolled in Earth Science courses.



Describe the results of the student survey in the area of program objectives.

Students are enrolled in Earth Science courses for General Education requirements.



Discuss the implications of the survey results for the program.

The results of each area surveyed is above expectations, however students need assistance with technology ,tutoring and writing.

Discuss the results of other relevant surveys (if applicable).

No other surveys were conducted.

List any related recommendations

Students in Earth Science courses need tutoring and writing resources.

Academic Program Review: (6) Facilities and Equipment First Submission: Version by Clark, Leonard on 12/21/2022 00:12

Describe and assess the existing program facilities and equipment.

Currently, one classroom is dedicated to Earth Science. An adequate number of desks and counters are available for demonstrations and student work. The classroom has a presentation projector and approximately 30 student seats. Program facilities and equipment are adequate. adequate

Explain the immediate (1-2 years) needs related to facilities and equipment. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

From the 2021 - 2022 Program Plan, rocks, minerals and maps are being purchased now. Current facilities and equipment are sufficient.

Explain the long-range (2-4+ years) needs related to facilities and equipment. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

No facilities / equipment improvements are needed in the four++ year range.

List any related recommendations.

There are no recommendations.

Academic Program Review: (7) Technology and Software First Submission: Version by Clark, Leonard on 12/21/2022 00:12

Describe and assess the adequacy and currency of the technology and software used by the program.

At this time a monitor with internet access , and a presentation projector are in class. The Information Technology Department has been available for maintenance. Recently the monitor has been replace by a newer model. No special software is needed.

Explain the immediate (1-2 years) needs related to technology and software. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

The current technology is adequate; no upgrade is anticipated.

Explain the long-range (2-4+ years) needs related to technology and software. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

Innovative presentation technology and software will be adopted. This new technology will improve Earth Science concept attainment and ultimately student success.

List any related recommendations.

There are no recommendations.

Academic Program Review: (8) Staffing First Submission: Version by **Clark, Leonard** on **12/21/2022 00:12****Describe the program's current staffing, including faculty, administration, and classified staff.**

Earth Science has one full-time faculty member and physical-science technician.

Explain and justify the program's staffing needs in the immediate (1-2 years) and long-term (2-4+ years). Provide cost estimates and explain how the position/s will help the program better meet its goals.

An additional full-time faculty member is needed because World Regional Geography is an additional course offering. Another faculty member is needed assist in maintaining high teaching standards, program plans and programs review.

List any related recommendations.

There are no further recommendations.

Academic Program Review: (9) Direction and Vision First Submission: Version by **Clark, Leonard** on **12/21/2022 00:12****Describe relevant changes within the academic field/industry. How will these changes impact the program in the next four years?**

In Earth Science changes are occurring in facets of Climate Change are being incorporated in Geography 101. Climate change s being incorporated in Geology 101 as well.

Explain the direction and vision of the program and how you plan to achieve it.

An increase in enrollment occurs additional topics will be offered.

List any related recommendations.

There are no recommendations.

Academic Program Review: (10) Prioritized Recommendations First Submission: Version by **Clark, Leonard** on **12/21/2022 00:12****Provide a single, prioritized list of recommendations and needs for your program/department (drawn from your recommendations in sections 2-8). Include cost estimates and list the college strategic initiative that supports each recommendation.**

An additional full-time faculty member, also future improvements in presentations equipment and software are required.