

CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

ACADEMIC SENATE

ACADEMIC PROGRAMS COMMITTEE

REPORT TO

THE ACADEMIC SENATE

AP-008-167

BS IN GEOGRAPHY – GEOGRAPHIC STUDIES OPTION

Academic Programs Committee

Date: 11/02/2016

Executive Committee
Received and Forwarded

Date: 11/16/2016

Academic Senate

Date: 11/30/2016
First Reading

BACKGROUND: The Department of Geography and Anthropology has proposed to change an option name from “BS in Geography– Geography Option” to “BS in Geography – Geographic Studies Option” for the semesters. This is a converted option; the referral is for name change only.

The department proposed this name change to better reflect the nature of the curriculum in the option.

RESOURCES CONSULTED:

Deans
Associate Deans
Department Chairs
All Faculty

DISCUSSION:

Before reaching the Academic Programs Committee, this program was reviewed by the College Curriculum Committee in the College of Letters Arts and Social Sciences as well as the Dean of CLASS and the Office of Academic Programs. All concerns raised at those levels were addressed. The Academic Programs Committee then conducted campus-wide consultation, as well as its own review of the program. No concerns were raised.

RECOMMENDATION:

The Academic Programs Committee recommends approval the option name from “BS in Geography – Geography Option” to “BS in Geography – Geographic Studies Option” for the semesters.

Geography, B.S. - Geographic Studies Option: 120 units

I. Program - Q2S Existing Program/Option/Minor

General Catalog Information

Department	Geography and Anthropology
Conversion Category:*	<input type="radio"/> Revisoned <input checked="" type="radio"/> Directly Converted
Proposal Type:*	<input checked="" type="radio"/> Program <input type="radio"/> Option <input type="radio"/> Minor
Describe or list changes*	Adjusted to conform with semester curriculum.
Semester Program Name (e.g. Biology, B.S., Art History, B.A.)	Geography, B.S. - Geographic Studies Option: 120 units
Program Description	Mission Statement For The Department Of Geography and Anthropology

The mission of the Department of Geography and Anthropology is to advance knowledge, learning, and individual skills in the related disciplines of anthropology and geography. The Department and constituent programs fully support the emphases of the university on:

- applied, technical preparation along with broad, theoretical education;
- inter-disciplinary approaches,
- hands-on, learn-by-doing pedagogy in keeping with curriculum,
- internationalization of the curriculum,
- multiculturalism in and out of the classroom, and
- student- and learning-oriented teaching.

Vision for the Geography Program

The Geography program is designed to provide students with an understanding of humanity's cultural and physical environments by examining the dynamic systems (both natural and human) through which these diverse settings are changed or sustained. Students majoring or minoring in Geography analyze social and environmental change as they affect local areas and regions and compare solutions which have been attempted in various parts of the world. Attention is given to the relationships between population use of resources and environmental and social impacts in rural and urban settings.

Meaning, Integrity, and Quality of the Geography Program (Work in progress)

Meaning

Geography degree

The Geography degree program helps students develop a critical understanding of humankind's cultural and physical environments by examining the dynamic systems (both natural and human) through which these diverse settings are changed or sustained. Students majoring in Geography obtain a broad foundation in the physical and cultural world at various scales; they develop spatial analytical skills, both quantitative and qualitative; they learn to compare solutions which have been attempted in various parts of the world; and they are trained to use the latest available geospatial technologies in the field.

Our graduates move up to advanced studies in Geography, GIS, Environmental Programs, Urban Planning, etc. Geography majors find rewarding career opportunities as Geographers, Demographers, Climatologists, Environmental Analysts, Geographic Information Science Specialists, Environmental Scientists, K-12 Teachers, College Professors, Cartographers, Nature Photographers, Emergency Response Personnels, Sustainability Coordinators, Environmental Law Professions, etc.

Examples of agencies/organizations that hire geographers include: state and local governments,

federal government agencies: (EPA, FEMA, National Geospatial-Intelligence Agency, USGS, NASA, CIA, Departments of Agriculture, Energy, Defense, Forest and National Park Services, National Laboratories, etc.), none profit organizations, private sectors (geospatial technology companies, real estate developers, waste management, water resources management, forestry, mining, environmental law firms, etc.)

As the urgency of needing solutions to problems associated with climate change increases we expect that the demand for our graduates in the job market will increase in the coming years.

Geography Degree at CPP

In addition to meeting the National Geographic Education Standards and career preparation requirements outlined above, the Geography degree at Cal Poly Pomona distinguishes itself from most geography programs by its Bachelor of Science degree (most of the Geography programs are BA degrees), its geospatial technology and environmental focused curricula, its project based pedagogy and hand-on learning approach (high impact practices), and its faculty who are recognized excellent teacher-scholars.

Geography Degree Alignment with the University Visions, Values, and Outcomes

The mission and goals of the Geography program fit well within those of both the university and CLASS. As a polytechnic university the overarching mission of Cal Poly Pomona is to advance learning and knowledge by linking theory and practice in all disciplines, as well as prepare students for lifelong learning, leadership, and careers in a changing multicultural world. In addition to the university mission, the College of Letters, Arts and Social Sciences functions to equip students with creative and critical thinking processes enabling both qualitative and quantitative reasoning, the application of theory to practice, and written and oral communication skills. The faculty also strives to ensure that all graduates have knowledge about, a critical understanding of, and a desire to engage themselves in the political, economic, social, and cultural problems, issues and opportunities of the local communities, the nation, and the world. The Department and the Geography program fully support these missions and goals and focus on: 1) hands-on, learn-by-doing pedagogy in keeping with curriculum, 2) applied, technical preparation, along with broad, theoretical education, 3) inter-disciplinary approaches, 4) internationalization of the curriculum, 5) multiculturalism in and out of the classroom, and 6) high impact practices in learning-oriented teaching.

Co-Curriculum Components

Our faculty members are recognized teacher-scholars, and they engage our students in various research and field study activities beyond classroom boundaries. Each year, our students attend and present their projects to professional and academic conferences. Their works have won many awards and acceptance for publications. We also invite local, national, and international scholars and professionals working in the field visiting our campus to give talks to our students and the campus community. We have a faculty presentation program – each quarter, one or two faculty members present their research to our students and engage in discussions with students on their professional journeys. These are just a few examples of co-curricular activities.

Quality

The Geography program offers a core that balances physical, cultural, and geospatial technology courses. Beyond the core courses required of all majors, students can choose one of the three options that offer advanced courses focusing on three different areas: the GIS option prepares students with careers that require strong geospatial technology skills; the Environmental Geography option prepares students with a more applied focus on environmental related career paths, such as environmental law, resources management, emergency response, etc.; the Geography option prepares students for careers that require a broad knowledge base and strong research and analytical skills.

We expect our students to meet the learning objectives outlined below (more detailed SLOs are listed following).

We make efforts to exercise high impact practices (HIP) when resources permit. Many of our classes have lab or field components. We offer classes in different mode of instructions, include online and hybrid courses. Most of our upper division courses engage students in project based learning.

Students are assigned tasks to explore and develop solutions to real world problems. They learn to identify and articulate problems in the context of the dynamic human and physical environment systems, collect data using various geospatial technology, analyze data with both qualitative and quantitative methods, and learn to communicate findings with written, visual (e.g. maps, 3D geovisualizations), and other multimedia communications. Selected student projects are presented to conferences, organizations, and communities every year.

As part of the semester conversion process, we have been working on revision of our student learning outcomes to better represent where we are now and where we want to go.

Integrity

Geography program has developed student learning outcomes, curriculum maps, and an assessment plan. Although these are still work in progress, they provide us with a framework and foundation to improve upon.

Assessment data collections and activities include senior portfolios organized by SLOs, senior survey, GWT test data, assessment meetings involving faculty and students, alumni survey, and program review.

In addition to the routine assessment activities, the 2013-2014 program review we completed helped to provide valuable feedback on the integrity of the program. The self-study (with data provided by the university) we prepared, the alumni survey results (conducted and compiled by the Alumni Office), and external reviewers' comments indicated that we have a solid program and our students are doing well in their advanced studies or working in the field.

Examples of our students achievements are: two of our student GIS class projects were published in ESRI Map Book Volume 29, and this year, another project will be published in Volume 30 (entries are selected from nearly thousand submissions, mostly from large organizations and established industries), one student was awarded a highly selective NASA internship last summer, and many were accepted into CSU and UC and out of state/country graduate programs (include one this year with full scholarship to Penn State Geography Ph.D. program). We continue to receive internship and job recruitments from companies and organizations hired our students before. These continue to provide evidence of a solid program. Our assessment program gives us good feedback on student performance, and we have made adjustments accordingly.

Geography- Geographic Studies Option		
Geography Major Required Major Core Courses		
Course Number	Course Title	Units
GEO 1010/1010L	Physical Geography/Lab (B1/B3)	2/1
GEO 1020	Human Geography (D3)	3
GEO 2400/2400L	Introduction to Geographic Information Systems/Lab	2/1
GEO 3090/3090L*	Field Geography/Lab	2/1
GEO 35xx	Regional Geography	3
GEO 4610*	Senior Project/Capstone 1	3
Courses with * indicate High Impact Practice Components		
Total Number of MAJOR CORE units:		18[1]

Geography-Geographic Studies Option		
Option Courses – Required Option Courses		
GEO 3030*	Climatology	3
GEO 3100*	Cultural Geography	3
GEO 3150	Urban Geography	3
GEO 3120/3450	Economic Geography/ Tourism in a Globalizing World	3
GEO 4xxx	Upper Division 4xxx level course	3
Courses with * indicate High Impact Practice Components		
Option Courses – Elective Option Courses		
GEO	One elective GEO course	3
Total Number of REQUIRED OPTION units:		18
Unrestricted Electives		36-42

[1] Includes double counted units

4-Year Roadmap

Department: Geography and Anthropology

Geography- Option: Geographic Studies

Curriculum Year: 2018-2019

Your department has developed this road plan, taking into account prerequisites and schedule restrictions.

Students should pay attention to these concerns when deviating from this plan.

	Fall	Units	Spring	Units	Comment
Year 1	General Education A2	3	GEO 1010/1010L (Core)	2/1	<i>Discuss with your advisor at least once a year for elective course choices that support your interest and academic goals.</i>
	General Education B4	3	General Education A1	3	
	FYE or Elective	3	General Education B1	3	
	GEO 1020 (Core)	3	General Education D1	3	
	General Education C1	3	Elective	3	
	Total Units	15	Total Units	15	
Total Units for Year				30	
	Fall	Units	Spring	Units	Comment
Year 2	General Education B2	3	GEO 2400/2400L (Core)	3	<i>General Education: GE B3- Science lab may be included in B1 and/or B2, but may also be taken separately.</i>
	General Education A3	3	General Education C3	3	
	General Education C2	3	General Education D3	3	
	General Education D2	3	Elective	3	
	Elective	3	Elective	3	
	Total Units	15	Total Units	15	
Total Units for Year				30	

	Fall	Units	Spring	Units	Comment	
Year 3	GEO3030 (Core)	3	GEO 3090/3090L (Core)	3	<i>The Graduation Writing Test must be taken before completion of 90 units.</i>	
	GEO 3120 or GEO 3450 (Core)	3	GEO 3010/3100L (Core)	3		
	GEO 35x0 (Core)	3	GE Synthesis or elective	3		
	Elective	3	GE Synthesis or elective	3	<i>One course must be completed in each of the GE areas B5, C4, and D4. All GE Area A and all lower division GE courses in a GE area must be completed before taking the GE Synthesis course in that area</i>	
	Elective	3	Elective	3		
	<i>Take the Graduation Writing Test</i>					
	Total Units	15	Total Units	15		<i>Some required GEO courses may only be offered once every other year. Take them whenever they are offered.</i>
	Total Units for Year				30	
Year 4	Fall	Units	Spring	Units	Comment	
	GEO 4610 (Core)	3	GEO 3150 (Core)	3	<i>Upper Division GEO Elective is any 4xxx GEO courses that are not otherwise used to satisfy degree requirements. GEO Elective is any GEO courses that are not otherwise used to satisfy degree requirements.</i>	
	GEO Elective (Core)	3	GEO Elective (Upper D.) (Core)	3		
	Elective	3	Elective	3		
	GE Synthesis or elective	3	Elective	3		
	GE Synthesis or elective	3	Elective	3		
	<i>File an application to graduate</i>					
	Total Units	15	Total Units	15		
Total Units for Year				30		
Total Units on Plan				120		
Major & Option Core Units				36		
General Education Units				48		
Unrestricted Elective Units				36		

2-Year Transfer Roadmap

Department: Geography and Anthropology

Geography- Option: Geographic Studies

Curriculum Year: 2018-2019 (For transfer students)

Your department has developed this road plan, taking into account prerequisites and schedule restrictions.

Students should pay attention to these concerns when deviating from this plan.

	Fall	Units	Spring	Units	Comment	
Year 1	GEO3030/3030L	2/1	GEO 3090/3090L	3	<i>Assume transfer credits for GEO 1010/1010L, GEO 1020, complete Lower Div. GE and at least 60 units. If not, discuss with your advisor for deviation plan.</i>	
	GEO 3120 or GEO 3450	3	GEO 3010/3100L	3		
	GEO 35x0	3	GE Synthesis or elective	3		
	GEO 2400/2400 L	2/1	GE Synthesis or elective	3	<i>If you transferred credits for GEO2400/2400L, take a GE synthesis, Support/ Unrestricted Elective.</i>	
	Elective	3	Elective	3		
						<i>Take the required upper division GEO courses, even if you took lower division courses in similar subject areas. Lower division course credits transfer as GE or Elective credits.</i>
	Total Units	15	Total Units	15	<i>Some required GEO courses may only be offered once every other year. Take them whenever they are offered.</i>	
				<i>One course must be completed in each of the GE areas B5, C4, and D4.</i>		
Total Units for Year				30		
Year 2	Fall	Units	Spring	Units	Comment	
	GEO 4610	3	GEO 3150	3	<i>Upper Division GEO Elective is any 4xxx GEO courses that are not otherwise used to satisfy degree requirements. GEO Elective is any GEO courses that are not otherwise used to satisfy degree requirements.</i>	
	GEO Elective	3	GEO Elective (Upper D)	3		
	Elective	3	Elective	3		
	GE Synthesis or elective	3	Elective	3	<i>Required units of unrestricted electives depend on the units transferred in. Discuss with your advisor for course choices that support your interest and academic goals.</i>	
	GE Synthesis or elective	3	Elective	3		
	Total Units	15	Total Units	15		
Total Units for Year				30		

Please refer to BroncoDirect for the current academic quarter course schedule

Course #	Course Title	Academic Year 2018-19			Academic Year 2019-2020		
		Fall	Spring	Summer	Fall	Spring	Summer
GEO 1000	World Regional Geography	X	X	X	X	X	X
GEO 1010/1010L	Physical Geography/Lab	X	X	X	X	X	X
GEO 1020	Human Geography	X	X	X	X	X	X
GEO 2400/2400L	Geographic Information Systems/Lab	X	X	X	X	X	X
GEO 3030*	Climatology	X			X		
GEO 3050/3050L*	Advanced Physical Geography/Lab	X					
GEO 3070/3070L*	Climate Change/Lab	X			X		
GEO 3080/3080L*	Biogeography/Lab		X			X	
GEO 3090/3090L*	Introduction to Field Geography/Lab		X			X	
GEO 3100*	Cultural Geography		X			X	
GEO 3120	Economic Geography				X		
GEO 3130	Legal and Political Geography		X				
GEO 3150	Urban Geography		X			X	
GEO 3220/3220L	GIS Programming and Application/Lab	X			X		
GEO 3300/3300L	Environmental Geography/Lab	X			X		
GEO 3450	Tourism in a Globalizing World	X					
GEO 3500	Geography of U.S. and Canada				X		
GEO 3510	Geography of California	X	X	X	X	X	X
GEO 3520	Geography of Latin America		X				
GEO 3570	Geography of Asia	X					
GEO 3580	Geography of Africa				X		
GEO 3590	Europe: Land and People					X	
GEO 4050/4050L*	Geodemographics with GIS/Lab		X			X	
GEO 4100/4100L	Remote Sensing of the Environment/Lab	X			X		
GEO 4130	Environmental Law					X	
GEO 4150	Geography and Emergency	X			X		

	Management						
GEO 4350*	Parks and Protected Areas					X	
GEO 4400/4400L	Advanced GIS/Lab		X			X	
GEO 4410*	Internship in Geotechnology and Environmental Applications	*	*	*	*	*	*
GEO 4430/4430L*	Quantitative Spatial Analysis/Lab	X				X	
GEO 4450/4450L*	Environmental Modeling with GIS/Lab		X				X
GEO 4610*	Senior Project/Capstone 1	X				X	
GEO 4620*	Senior Project/Capstone 2		X				X
Total Upper D		12	11			11	12

*Courses with High Impact Practice Components

**GEO 4410, GEO 2000, GEO 2990, GEO 4000, GEO 4990 are scheduled as needed.

Courses/SLOs	PO 1	PO 2			PO 3			PO 4			
	Knowledge	Scientific inquiry & critical thinking			Communication			Career, Ethical & Social Responsibility			
	SLO 1a	SLO 2a	SLO 2b	SLO 2c	SLO 3a	SLO 3b	SLO 3c	SLO 4a	SLO 4b	SLO 4c	SLO 4d
	Knowledge	Identify & Conclude	Data collection	Data Analysis	Writing	Oral Presentation	Mapping	GIS	Field	Teaching, etc.	Ethic, Social
GEO Core											
*GEO 1010/1010L	I	I	I	I	I	I				I	I
*GEO 1020	I	I		I	I	I				I	I
*GEO 2400/2400L	I		I				I	I		I	
*GEO 3090/3090L	D		D	D	D		D	D	D		D
*GEO 3500/3510/3520/3570/3580/3590	D	D	D	D	D	D				D	D
*GEO 4610		M	M	M	M	M	M	M	M	M	M
GS Option Core											
*GEO 3030/3030L	D	D	D	D	D	D				D	D
*GEO 3100	D/M	D/M			D	D	D				D
GEO 3120	D/M	D/M		D/M	D/M	D/M				D	D
GEO 3150	D/M	D/M			D/M	D/M				D	D
GEO 3450	D	D	D	D	D	D				D	D
GA Option Core											
GEO 3220/3220L	D			D			D	D			
*GEO 4100/4100L	D		D	D	D	D	D	D			D
GEO 4400/4400L	D		D	D	D	D	D	D			D
*GEO	D		D	D	D	D	D	D			D

PO 1. Students will demonstrate a proficiency in knowledge of fundamental concepts and principles in geography. (Knowledge)

Corresponding Student Learning Outcomes (SLOs):

SLO 1a: Students will be able to use written text, speech, maps, graphics, equations, and other devices to identify and describe spatial characteristics, patterns and processes at different scales in physical, human, and social economic environment, including themes in atmosphere, biosphere, lithosphere, hydrosphere, population, culture, economics, settlements, and policies.

PO 2. Students will demonstrate capabilities to apply scientific research methods (in both natural and social sciences) to observe, collect, and process geographic data; to perform analysis based on the knowledge, theories and principles in geography; and to draw quantitative and qualitative conclusions. (Scientific inquiry and critical thinking)

Corresponding Student Learning Outcomes (SLOs):

SLO 2a: Demonstrate through written, and other communication means, the ability to identify, define and draw conclusions to research problems in physical and/or human geography fields.

SLO 2b: Demonstrate the ability to observe, collect, and process geographic data with state of the art technology, including GIS, Remote Sensing, GPS, and field data collection instruments, as well as obtaining data from document and literature sources.

SLO 2c: Demonstrate the ability to perform data analysis based on critical thinking skills and use of technical and quantitative methods, including GIS, Remote Sensing, modeling software, and statistical methods.

PO 3. Students will be able to communicate their understanding and analysis results by making maps, writing research papers and technical reports, giving oral presentations, and developing multimedia presentations. (Communication)

Corresponding Student Learning Outcomes (SLOs):

SLO 3a: Demonstrate competency in writing and awareness of the structure and convention of research papers and technical reports in geography and associated fields.

SLO 3b: Demonstrate competency in oral communication skills and awareness of oral presentation conventions and effective use of visual aids for oral presentations.

SLO 3c: Demonstrate competency and awareness of the principles of cartography and the conventions of map making. Students choosing the AS option should be able to design, develop, and present maps using different media, including static and dynamic maps.

PO 4. Students will demonstrate awareness of various career opportunities in geography and readiness to pursue employment or advanced study in geography or a cognate discipline and demonstrate awareness of the relevance of geographical knowledge to ethical and social responsibility everyday living. (Career, Ethical and Social Responsibility)

Corresponding Student Learning Outcomes (SLOs):

SLO 4a: Students with an option in Geospatial Analysis should demonstrate via internship, course projects, and portfolios their competency in GIS software application, data collection, processing, management, and mapping skills, as marketable skills for entry and intermediate level GIS and related jobs.

SLO 4b: Students with an option in Environmental Studies should demonstrate via course projects, field assignments, internships, and portfolios their competency in collecting and analyzing field data for environmental analysis and presenting field data and analysis results effectively, as marketable skills for entry and intermediate level jobs in environmental studies.

SLO 4c: Students who plan to pursue advanced degrees or for teaching careers should demonstrate via course work, the senior thesis/project and portfolio that they have met the requirements to enter in graduate studies or teacher preparation programs.

SLO 4d: Demonstrating an appreciation and respect for the diversity of perspectives, cultural, and world-views and an awareness and responsibility for environmental sustainability

Courses/SLOs	PO 1	PO 2			PO 3			PO 4			
	Knowledge	Scientific inquiry & critical thinking			Communication			Career, Ethical & Social Responsibility			
	SLO 1a	SLO 2a	SLO 2b	SLO 2c	SLO 3a	SLO 3b	SLO 3c	SLO 4a	SLO 4b	SLO 4c	SLO 4d
	Knowledge	Identify & Conclude	Data collection	Data Analysis	Writing	Oral Presentation	Mapping	GIS	Field	Teaching, etc.	Ethic, Social
GEO Core											
*GEO 1010/1010L	I	I	I	I	I	I				I	I
*GEO 1020	I	I		I	I	I				I	I
*GEO 2400/2400L	I		I				I	I		I	
*GEO 3090/3090L	D		D	D	D		D	D	D		D
*GEO 3500/3510/3520 /3570/3580/3590	D	D	D	D	D	D				D	D
*GEO 4610		M	M	M	M	M	M	M	M	M	M
GS Option Core											
*GEO 3030/3030L	D	D	D	D	D	D				D	D
*GEO 3100	D/M	D/M			D	D	D				D
GEO 3120	D/M	D/M		D/M	D/M	D/M				D	D
GEO 3150	D/M	D/M			D/M	D/M				D	D
GEO 3450	D	D	D	D	D	D				D	D
GA Option Core											
GEO 3220/3220L	D			D			D	D			
*GEO 4100/4100L	D		D	D	D	D	D	D			D

I - Introduction
 D - Development
 M - Mastery
 * - Assessment data
 collected

Program Objectives	Student Learning Outcome	Assessment Method
<p>PO # 1</p> <p>Students will demonstrate a proficiency in knowledge of fundamental concepts and principles in geography. (Knowledge)</p>	<p>SLO 1a: Students will be able to use written text, speech, maps, graphics, equations, and other devices to identify and describe spatial characteristics, patterns and processes at different scales in physical, human, and social economic environment, including themes in atmosphere, biosphere, lithosphere, hydrosphere, population, culture, economics, settlements, and policies.</p>	<p>Course-embedded project and/or Exam, Student Academic Portfolio</p>
<p>PO # 2</p> <p>Students will demonstrate capabilities to apply scientific research methods (in both natural and social sciences) to observe, collect, and process geographic data; to perform analysis based on the knowledge, theories and principles in</p>	<p>SLO 2a: Demonstrate through written, and other communication means, the ability to identify, define and draw conclusions to research problems in physical and/or human geography fields.</p> <p>SLO 2b: Demonstrate the ability to observe, collect, and process geographic data with state of the art technology, including GIS, Remote Sensing, GPS, and field data collection instruments, as well as obtaining data from document and literature sources.</p>	<p>Course-embedded project and/or Exam, Student Academic Portfolio</p> <p>Course-embedded project and/or Exam, Student Academic Portfolio</p>

<p>geography; and to draw quantitative and qualitative conclusions. (Scientific inquiry and critical thinking)</p>	<p>SLO 2c: Demonstrate the ability to perform data analysis based on critical thinking skills and use of technical and quantitative methods, including GIS, Remote Sensing, modeling software, and statistical methods.</p>	<p>Course-embedded project and/or Exam, Student Academic Portfolio</p>
<p>Program Objectives</p>	<p>Student Learning Outcome</p>	<p>Assessment Method</p>
<p>PO # 3</p> <p>Students will be able to communicate their understanding and analysis results by making maps, writing research papers and technical reports, giving oral presentations, and developing multimedia presentations. (Communication)</p>	<p>SLO 3a: Demonstrate competency in writing and awareness of the structure and convention of research papers and technical reports in geography and associated fields.</p>	<p>Course-embedded project and/or Exam, Student Academic Portfolio</p> <p>GWT test statistics</p>
	<p>SLO 3b: Demonstrate competency in oral communication skills and awareness of oral presentation conventions and effective use of visual aids for oral presentations.</p>	<p>Course-embedded oral presentation evaluation</p>
	<p>SLO 3c: Demonstrate competency and awareness of the principles of cartography and the conventions of map making. Students choosing the AS option should be able to design, develop, and present maps using different media, including static and dynamic maps.</p>	<p>Course-embedded project, Intern evaluations, Student Academic Portfolio</p>
<p>PO # 4</p> <p>Students will demonstrate awareness of various career opportunities in geography and readiness</p>	<p>SLO 4a: Students with an option in Geospatial Analysis should demonstrate via internship, course projects, and portfolios their competency in GIS software application, data collection, processing, management, and mapping skills, as marketable skills for entry and intermediate level GIS and related jobs.</p>	<p>Course-embedded project, Intern evaluations, Student Academic Portfolio</p>
	<p>SLO 4b: Students with an option in</p>	<p>Course-embedded project,</p>

<p>to pursue employment or advanced study in geography or a cognate discipline and demonstrate awareness of the relevance of geographical knowledge to ethical and social responsibility everyday living. (Career, Ethical and Social Responsibility)</p>	<p>Environmental Studies should demonstrate via course projects, field assignments, internships, and portfolios their competency in collecting and analyzing field data for environmental analysis and presenting field data and analysis results effectively, as marketable skills for entry and intermediate level jobs in environmental studies.</p>	<p>Intern evaluations, Student Academic Portfolio</p>
	<p>SLO 4c: Students who plan to pursue advanced degrees or for teaching careers should demonstrate via course work, the senior thesis/project and portfolio that they have met the requirements to enter in graduate studies or teacher preparation programs.</p>	<p>Course-embedded project, Intern evaluations, Student Academic Portfolio</p>
	<p>SLO 4d: Demonstrating an appreciation and respect for the diversity of perspectives, cultural, and world-views and an awareness and responsibility for environmental sustainability</p>	<p>Course-embedded project and/or Exam, Student Academic Portfolio</p>

	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022	2022 - 2023
PO 1 Knowledge					
SLO 1a Knowledge			X		
PO 2 Scientific inquiry & critical thinking					
SLO 2a Identify & Conclude		X			
SLO 2b Data collection		X			
SLO 2c Data Analysis		X			
PO 3 Communication					
SLO 3a Writing	X				
SLO 3b Oral Presentation				X	
SLO 3c Mapping	X				
PO 4 Career & Values					
SLO 4a GIS				X	
SLO 4b Field				X	
SLO 4c Teaching, etc.				X	
SLO 4d Ethics					X

High Impact Practices for Geography Program

- First year experience will be provided through introductory courses (GEO 1010/1010L, GEO 1020). New students will be placed in the same sessions to form a leaning community; the course will be taught by a full time faculty. The nature of the geography major and career paths will be introduced in these courses as well as workshops and faculty presentations.
- Common intellectual experiences/learning community will be provided through the geography core courses where students will be taking together to form learning communities.
- Identified upper division core/option core courses (marked on curriculum sheets) will include significant research/writing project that involve data collection, qualitative and quantitative analysis of data, and significant writing components. Some of these courses are service learning and community based courses, field courses, and lab based courses. It is a common practice in the program that students class project are presented to conferences and selected for publications.
- Senior project/theses course (GEO 4610/4620) will provide students with a capstone experience
- Internship course (GEO 4410) provides students with direct job experience.
- Courses provide students with global, diverse cultural, and environmental ethical perspectives are inherent part of the geography program.