

# BA IN GEOGRAPHY (GEOGRAPHIC INFORMATION SCIENCE)

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**SACRAMENTO STATE**  
Redefine the Possible

## In Workflow

1. GEOG Chair (jwanket@csus.edu)
2. NSM College Committee Chair (mikkel.jensen@csus.edu)
3. NSM Dean (datwyler@csus.edu)
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5. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
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7. Dean of Graduate (cnewsome@skymail.csus.edu)
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9. Registrar's Office (wlindsey@csus.edu)

## Approval Path

1. Wed, 08 Dec 2021 19:40:24 GMT  
James Wanket (jwanket): Approved for GEOG Chair
2. Thu, 03 Feb 2022 01:41:03 GMT  
Mikkel Jensen (mikkel.jensen): Rollback to Initiator
3. Thu, 17 Feb 2022 17:10:08 GMT  
James Wanket (jwanket): Approved for GEOG Chair
4. Fri, 04 Mar 2022 01:19:51 GMT  
Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
5. Fri, 04 Mar 2022 16:55:57 GMT  
Shannon Datwyler (datwyler): Approved for NSM Dean

## History

1. May 1, 2018 by clmig-jwehrheim
2. Aug 13, 2018 by 212408496
3. Oct 2, 2018 by 212408496
4. Jan 17, 2020 by Thomas Krabacher (tsk)
5. Apr 28, 2020 by Celena Showers (celena.showers)
6. Apr 20, 2021 by Celena Showers (celena.showers)

Date Submitted: Thu, 03 Feb 2022 18:36:06 GMT

**Viewing: BA in Geography (Geographic Information Science)**

**Last approved: Tue, 20 Apr 2021 21:04:17 GMT**

**Last edit: Thu, 03 Feb 2022 18:36:05 GMT**

Changes proposed by: Matt Schmidlein (211414750)

**Academic Group: (College)**

Natural Sciences & Mathematics

**Academic Organization: (Department)**

Geography

**Catalog Year Effective:**

2022-2023 Catalog

**Individual(s) primarily responsible for drafting the proposed degree major program:**

Name (First Last)	Email	Phone 999-999-9999
Matt Schmidtlein	schmidtlein@csus.edu	916-278-781

**Type of Program Proposal:**

Major

**Program Change Type:**

Non-Substantive

**Title of the Program:**

BA in Geography (Geographic Information Science)

**Designation: (degree terminology)**

Bachelor of Arts

**Briefly describe the program proposal (new or change) and provide a justification:**

This proposal is to change the existing BA in Geography (Geographic Information Systems and Analysis) so as to better assure that graduates are prepared to meet workforce expectations. The proposed changes to the concentration will not impact total required units. While we hope that these changes will strengthen our students' post-graduation prospects and make the concentration more attractive, we do not anticipate any meaningful budgetary impacts, as it proposes no new courses. Rather, it restructures the way in which existing courses are used to meet learning outcomes. These changes are summarized as follows:

- 1) The current concentration name does not reflect modern usage in the field. We propose the concentration name be changed to "Geographic Information Science (GIScience)." This name better matches current descriptions within the field, and emphasizes that the concentration equips students with critical domain-specific and spatial thinking skills to inform their application of spatial technologies.
- 2) The current concentration includes 3 required units (Geog 109) and 15 elective units of geographic techniques (including both the current Geographic Techniques breadth requirement as well as the concentration electives). We propose to use these same courses, but alter the requirement pattern to ensure that all students master core GIScience concepts and skills. This will be done by eliminating the Geographic Techniques breadth requirement for this concentration, creating a set of concentration core required classes (12 units), and then allowing students to select an additional 6 units from the remaining concentration elective courses.
- 3) Current minimum grade requirements for satisfying concentration requirements (D-) mean that a student could earn a degree without having demonstrated competency in core GIScience concepts. To address this issue, we propose specifying a minimum grade of C- be required to satisfy the concentration core course requirements (Geog 109, Geog 110, Geog 150, Geog 155).

**Objectives of the degree program:**

The Bachelor of Arts in Geography with a concentration in Geographic Information Science (GIScience) emphasizes student development of geospatial skills. Geographic Information Science, cartography, remote sensing, and qualitative and quantitative methods prepare students to tackle any problem with a spatial dimension—from advising an individual firm on good locations for a new branch or supplier to modeling the spread of wildfires across a region to analyzing the global spread of diseases or new technologies.

**University Learning Goals****Undergraduate Learning Goals:**

Competence in the disciplines  
 Knowledge of human cultures and the physical and natural world  
 Integrative learning  
 Intellectual and practical skills

**Will this program be required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?**

No

**Do these changes impact the Smart Planner roadmap?**

Yes

**Please attach the Smart Planner roadmap:**

2021\_GEOG\_Geographic Information Science BA.docx

**Briefly describe the change:**

Changes to concentration name, and realignment of existing breadth and concentration course requirements, adjustments of minimum grade required to satisfy requirements.

**Catalog Description:****Units required for Major: 46****Total units required for BA: 120**

## Program Description

The Bachelor of Arts in Geography with a concentration in Geographic Information Science (GIScience) emphasizes student development of geospatial skills. Geographic Information Science, cartography, remote sensing, and qualitative and quantitative methods prepare students to tackle any problem with a spatial dimension—from advising an individual firm on good locations for a new branch or supplier to modeling the spread of wildfires across a region to analyzing the global spread of diseases or new technologies.

**Note:**

- Courses *cannot* double count for the core and the concentration.
- Courses in the concentration core requirements (Geog 109, Geog 110, Geog 150, and Geog 155) must be passed with a minimum grade of C- to satisfy requirements.

As defined by policy <http://www.csus.edu/umannual/acadaff/fsm00010.htm>, a change in units constitutes a substantive change to the program. If your changes constitute a substantive change, please refer back to the "Program Change Type" field above to ensure that "Substantive" is selected.

**Program Requirements: (If new courses are being created as part of a new program, it will be useful to propose courses first.)**

## Program Requirements

Code	Title	Units
<b>Required Lower Division Core Courses (10 Units)</b>		
GEOG 1	Physical Geography: The Distribution of Natural Phenomena <sup>1</sup>	3
GEOG 2	Cultural Geography <sup>1</sup>	3
GEOG 3	Introduction to Maps and Geographic Technologies	3
GEOG 11	Laboratory in Physical Geography	1
<b>Required Upper Division Core Courses (9 Units)</b>		
GEOG 102	Ideas and Skills in Geography	3
GEOG 118	Earth Transformed	3
GEOG 190	Senior Research Seminar in Geography  <sup>1</sup>	3
<b>Geography Core (9 Units)</b>		
Select one course from each of the following three areas:		9
<i>Human Geography</i>		
GEOG 141	Geography of Economic Activity	
GEOG 143	Environmental Hazards and Society	
GEOG 145	Population Geography	
GEOG 147	Urban Geography	
GEOG 148	Urban and Regional Planning	
GEOG 149	Transportation Geography	
<i>Physical Geography</i>		
GEOG 111	Elements Of Meteorology	
GEOG 113	Climate	
GEOG 115	Biogeography	
GEOG 116	Global Climate Change	
GEOG 117	Landforms	
GEOG 161	California's Water Resources	
<i>Regional Geography</i>		
GEOG 121	United States and Canada	
GEOG 125	Geography Of East Asia	
GEOG 127	Geography Of Africa	
GEOG 128	Geography Of Europe	
GEOG 129A	Special Topics in Regional Geography A	
GEOG 129B	Special Topics in Regional Geography B	
GEOG 129C	Special Topics in Regional Geography C	
GEOG 131	California	
<b>Concentration</b>		<b>18</b>

**Concentration Core Requirements**

Complete all of the following:

GEOG 109	Geographic Information Systems
GEOG 110	Advanced Geographic Information Systems
GEOG 150	Programming for GIS
GEOG 155	GIS Data Acquisition and Management

**Concentration Electives**

Select two of the following:

GEOG 105	Computer Cartography
GEOG 107	Remote Sensing
GEOG 151	Programming for GIS II
GEOG 163	Applied GIS
GEOG 181	Quantitative Methods in Geography
GEOG 182	Qualitative Methods in Geography
GEOG 195A	Geography Internship A
GEOG 199	Special Problems
One of GEOG 193A, GEOG 193B, or GEOG 193C	

**Total Units****46**<sup>1</sup> Course also satisfies General Education (GE)/Graduation Requirement.**General Education Requirements<sup>1</sup>**

Code	Title	Units
<b>Area A: Basic Subjects (9 Units)</b>		
A1	Oral Communication	3
A2	Written Communication	3
A3	Critical Thinking	3
<b>Area B: Physical Universe and Its Life Forms (9 Units)</b>		
B1	Physical Science <sup>2</sup>	0
B2	Life Forms	3
B3	Lab (Note: Lab experience to be taken with one of the following: B1, B2 or B5) <sup>2</sup>	0
B4	Math Concepts	3
B5	Additional Course (Any B to reach 12 units) - Take upper-division course to complete Area & upper division requirements.	3
<b>Area C: Arts and Humanities (12 Units)</b>		
C1	Arts	3
C2	Humanities	3
C1/C2	Area C Course	3
C1/C2	Area C Course - Take upper-division course to complete Area & upper division requirements.	3
<b>Area D: The Individual and Society (6 Units)</b>		
Area D Course		3
Area D Course <sup>2</sup>		0
Area D Course	- Take upper-division course to complete Area & upper division requirements.	3
<b>Area E: Understanding Personal Development (3 Units)</b>		
Area E Course		3
<b>Area F: Ethnic Studies (3 Units)</b>		
Area F Course		3
<b>Total Units</b>		<b>42</b>

<sup>1</sup> To help you complete your degree in a timely manner and not take more units than absolutely necessary, there are ways to use single courses to meet more than one requirement (overlap). For further information, please visit the General Education page (<http://catalog.csus.edu/colleges/academic-affairs/general-education/>).**Note:** There is no way to list all possible overlaps so please consult with a professional advisor. The Academic Advising Center can be visited online (<http://www.csus.edu/acad/>), by phone (916) 278-1000, or email ([advising@csus.edu](mailto:advising@csus.edu)).<sup>2</sup> Required in Major; also satisfies GE.**Graduation Requirements<sup>1</sup>**

Code	Title	Units
<b>Graduation Requirements (required by CSU) (6 Units)</b>		
American Institutions:	U.S. History	3

American Institutions: U.S. Constitution & CA Government	3
Writing Intensive (WI) <sup>2</sup>	0
<b>Graduation Requirements (required by Sacramento State) (12 Units)</b>	
English Composition II	3
Race and Ethnicity in American Society (RE)	3
Foreign Language Proficiency Requirement <sup>3</sup>	6

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**Note:** There is no way to list all possible overlaps so please consult with a professional advisor. The Academic Advising Center can be visited online (<http://www.csus.edu/acad/>), by phone (916) 278-1000, or email ([advising@csus.edu](mailto:advising@csus.edu)).

<sup>2</sup> Required in Major; also satisfies Graduation Requirement.

<sup>3</sup> If not satisfied before entering Sacramento State, it may be satisfied in General Education Area C2 (Humanities). "C- or better required." The alternative methods for satisfying the Foreign Language Proficiency Requirement are described here: <https://www.csus.edu/college/arts-letters/world-languages-literatures/foreign-language-requirement.html> (<https://www.csus.edu/college/arts-letters/world-languages-literatures/foreign-language-requirement.html>)

## Fiscal Impact to Change an Existing Program

**Indicate programmatic or fiscal impact which this change will have on other academic units' programs, and describe the consultation that has occurred with affected units:**

We do not expect there to be any fiscal impacts on other units caused by this change.

**Provide a fiscal analysis of the proposed changes:**

We do not anticipate any fiscal impact from these changes. Increasing the number of required courses may shift enrollment patterns between existing courses. But changes in enrollment patterns to these existing courses can be addressed by adjusting course schedules as needed.

**How will the above changes be accommodated within the department/College existing fiscal resources?**

We do not anticipate that these changes will alter the total number of courses offered or demand for instructors.

**Will the proposed changes require additional resources?**

No

**What additional space, equipment, operating expenses, library, computer, or media resources, clerical/technical support, or other resources will be needed?**

None.

**Estimate the cost and indicate how these resource needs will be accommodated:**

NA

**Reviewer Comments:**

**Mikkel Jensen (mikkel.jensen) (Thu, 03 Feb 2022 01:41:03 GMT):** Rollback: Please make the following changes:

Key: 310