## BA IN GEOGRAPHY (GEOGRAPHIC INFORMATION SCIENCE)

## SACRAMENTO STATE

Redefine the Possible

## In Workflow

1. GEOG Chair (schmidmc@csus.edu)
2. NSM College Committee Chair (mikkel.jensen@csus.edu)
3. NSM Dean (datwyler@csus.edu)
4. Academic Services (catalog@csus.edu)
5. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
6. Dean of Undergraduate (gardner@csus.edu)
7. Dean of Graduate (cnewsome@skymail.csus.edu)
8. Catalog Editor (catalog@csus.edu)
9. Registrar's Office (k.mcfarland@csus.edu)

## Approval Path

1. Wed, 15 Nov 2023 18:14:41 GMT

Matt Schmidtlein (schmidmc): Approved for GEOG Chair
2. Wed, 06 Dec 2023 23:27:11 GMT Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
3. Thu, 22 Feb 2024 00:08:20 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 220267334
6. Apr 20, 2021 by 220267334
7. Mar 7, 2023 by Matt Schmidtlein (schmidmc)

Date Submitted: Tue, 14 Nov 2023 23:54:44 GMT
Viewing: BA in Geography (Geographic Information Science)
Last approved: Tue, 07 Mar 2023 19:12:23 GMT
Last edit: Wed, 06 Dec 2023 23:26:46 GMT
Changes proposed by: Matt Schmidtlein (211414750)
Academic Group: (College)
Natural Sciences \& Mathematics
Academic Organization: (Department)
Geography
Catalog Year Effective:
2024-2025 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 | 916-278-7581 |

## Type of Program Proposal:

Major

## Program Change Type:

Non-Substantive

## Delivery Format:

Fully Face to Face
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 part of an overall rehaul of all major concentrations. The purpose of these proposals are to: 1) Realign the way core and concentration requirements are expressed in alignment with E01071 requirements; 2) Restructure the concentration requirements to simplify the structure of requirements and to simplify advising and graduation applications; 3) to incorporate changes in curriculum associated with recent faculty hires; and 4) include updated program learning outcomes.

## University Learning Goals

## Undergraduate Learning Goals:

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

## Program Learning Outcomes

## Program Learning Outcomes

## Learning Outcome

Describe foundational concepts and patterns in physical and human geography.
Describe the history of Geography as an academic discipline, and give examples of its contemporary models, approaches, and theories.
Communicate geographic concepts in written documents, including the results of one's own analyses, to professional and lay audiences.
Communicate geographic concepts using a variety of oral modes, including in discussions and presentations, to professional and lay audiences.
Analyze and evaluate scholarly writing within Geography.
Apply geographic data collection, display, and analytical techniques in the evaluation of spatial information.
Analyze spatial datasets using maps and graphs.
Act with professional integrity and employ the ethical standards within Geography in interactions with other professionals.
Synthesize geographic models, data, and methodologies in research design.
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:

20231106_GEOG_Geographic Information Science BA.docx

## Briefly describe the change:

The road map was slightly modified to reflect changes in the number of courses needed to satisfy concentration vs. core requirements and to create consistency between all concentration roadmaps.

## 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:

- 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/umanual/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 $T$ | Title | Units |
| :---: | :---: | :---: |
| Lower Division Core (10 Units) |  |  |
| GEOG 1 | Physical Geography: The Distribution of Natural Phenomena ${ }^{1}$ | 3 |
| GEOG 2 Cut | Cultural Geography ${ }^{1}$ | 3 |
| GEOG 3 I | Introduction to Maps and Geographic Technologies | 3 |
| GEOG 11 L | Laboratory in Physical Geography ${ }^{1}$ | 1 |
| Upper Division Core (12 Units) |  |  |
| GEOG 102 I | Ideas and Skills in Geography | 3 |
| GEOG 109 G | Geographic Information Systems | 3 |
| GEOG 118 E | Earth Transformed | 3 |
| GEOG 190 S | Senior Research Seminar in Geography ${ }^{1}$ | 3 |
| Regional Geography Core Elective |  | 3 |
| Complete one of the following |  |  |
| GEOG 121 U | United States and Canada |  |
| GEOG 127 G | Geography Of Africa |  |
| GEOG 128 G | Geography Of Europe |  |
| GEOG 129A Sp | Special Topics in Regional Geography A |  |
| GEOG 129B Sp | Special Topics in Regional Geography B |  |
| GEOG 129C Sp | Special Topics in Regional Geography C |  |
| GEOG 131 | California |  |
| GEOG 133 G | Geography of the Middle East |  |
| Concentration (21 Units) ${ }^{2}$ |  |  |
| Required Courses |  |  |
| GEOG 110 | Advanced Geographic Information Systems | 3 |
| GEOG 150 P | Programming for GIS | 3 |
| GEOG 155 | GIS Data Acquisition and Management | 3 |
| Techniques Electives |  | 6 |
| Complete two of the following |  |  |
| GEOG 105 | Cartography |  |
| GEOG 107 R | Remote Sensing |  |
| GEOG 151 | Programming for GIS II |  |
| GEOG 163 A | Applied GIS |  |
| GEOG 181 | Quantitative Methods in Geography |  |
| GEOG 182 Q | Qualitative Methods in Geography |  |
| One of GEOG 193A, GEOG 193B, or GEOG 193C |  |  |
| Human Geography Elective |  | 3 |
| Complete one of the following |  |  |
| GEOG 141 | Geography of Economic Activity |  |
| GEOG 142 F | Feminist Geography |  |


| GEOG 143 | Environmental Hazards and Society |  |
| :---: | :---: | :---: |
| GEOG 144 | Transforming the City |  |
| GEOG 145 | Population Geography ${ }^{1}$ |  |
| GEOG 147 | Urban Geography |  |
| GEOG 148 | Urban and Regional Planning |  |
| GEOG 149 | Transportation Geography |  |
| Physical Geography Elective |  | 3 |
| Complete one of the following |  |  |
| GEOG 111 | Elements Of Meteorology ${ }^{1}$ |  |
| GEOG 113 | Climate ${ }^{1}$ |  |
| GEOG 115 | Biogeography ${ }^{1}$ |  |
| GEOG 116 | Global Climate Change ${ }^{1}$ |  |
| GEOG 117 | Landforms |  |
| GEOG 161 | California's Water Resources |  |

Total Units
1 Course also satisfies General Education (GE)/Graduation Requirement.
2 Sections of GEOG 195 or GEOG 199 with sufficient units and focused on relevant content may be substituted for a concentration
course requirement with the consent of the major advisor and department chair.

## General Education Requirements ${ }^{1}$

Code Title UnitsArea A: Basic Subjects (9 Units)
A1-Oral Communication ..... 3
A2 - Written Communication ..... 3
A3-Critical Thinking ..... 3
Area B: Physical Universe and Its Life Forms (9 Units)
B1 - Physical Science ${ }^{2}$ ..... 0
B2 - Life Forms ..... 3
B3 - Lab (Note: Lab experience to be taken with one of the following: B1, B2 or B5) ${ }^{2}$ ..... 0
B4 - Math Concepts ..... 3
B5 - Additional Course (Any B to reach 12 units) - Take upper-division course to complete Area \& upper division requirements. ${ }^{3}$ ..... 3
Area C: Arts and Humanities (12 Units) ..... 3
C1-Arts
C1-Arts
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
Area D: The Individual and Society (6 Units) ..... 3
Area D Course ${ }^{2}$ ..... 0
Area D Course - Take upper-division course to complete Area \& upper division requirements. ${ }^{4}$ ..... 3
Area E: Understanding Personal Development (3 Units) ..... 3
Area F: Ethnic Studies (3 Units)
Area F Course ..... 3
Total Units ..... 42

1 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).
2 Required in Major; also satisfies General Education Requirement.
3 Students can complete Area B5 by taking GEOG 111, GEOG 113, GEOG 115, or GEOG 116 in their Physical Geography Elective.
4 Students can complete Area D by taking GEOG 145 in their Human Geography Elective.

## Graduation Requirements ${ }^{1}$

| Code $\quad$ Title | Units |
| :--- | :--- |
| Graduation Requirements (required by CSU) (6 Units) | 3 |
| American Institutions: U.S. History | 3 |
| American Institutions: U.S. Constitution \& CA Government | 0 |
| Writing Intensive (WI) |  |
| Graduation Requirements (required by Sacramento State) (12 Units) | 3 |
| English Composition II | 3 |
| Race and Ethnicity in American Society (RE) | 3 |
| Foreign Language Proficiency Requirement ${ }^{3}$ | 6 |

1 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).
2 Required in Major; also satisfies Graduation Requirement.
3 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.
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
Key: 310

