

BA IN GEOGRAPHY (GEOGRAPHIC INFORMATION SYSTEMS AND ANALYSIS)

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 Systems and Analysis emphasizes student development of geospatial skills. Geographic Information Science, cartography, remote sensing, 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:

- Every candidate must complete **all** of the Geography Core and **one** Concentration.
- Courses *cannot* double count for the core and the concentration.
- Students must take at least **FOUR** courses, with at least one each from Data Analysis and Data Output categories.

Program Requirements

| Code | Title | Units |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------|
| Required Lower Division Core Courses (10 Units) | | |
| GEOG 1 | Physical Geography: The Distribution of Natural Phenomena ¹ | 3 |
| GEOG 2 | Cultural Geography ¹ | 3 |
| GEOG 3 | Introduction to Maps and Geographic Technologies | 3 |
| GEOG 11 | Laboratory in Physical Geography | 1 |
| Required Upper Division Core Courses (9 Units) | | |
| GEOG 102 | Ideas and Skills in Geography | 3 |
| GEOG 118 | Earth Transformed | 3 |
| GEOG 190 | Senior Research Seminar in Geography  ¹ | 3 |
| Geography Core (12 Units) | | |
| Select one course from each of the following four areas: | | 12 |
| <i>Geographic Techniques</i> | | |
| GEOG 105 | Computer Cartography | |
| GEOG 107 | Remote Sensing | |
| GEOG 109 | Geographic Information Systems | |
| GEOG 110 | Advanced Geographic Information Systems | |
| GEOG 163 | Applied GIS | |
| GEOG 181 | Quantitative Methods in Geography | |
| GEOG 193A | Field Geography: Urban-Metropolitan | |
| GEOG 193B | Field Geography: Suburban-Rural | |
| GEOG 193C | Field Geography: Physical | |
| <i>Human Geography</i> | | |
| GEOG 141 | Geography of Economic Activity | |
| GEOG 145 | Population Geography | |

| | | |
|-----------------------------------------------------------|------------------------------|-----------|
| GEOG 147 | Urban Geography | |
| GEOG 148 | Urban and Regional Planning | |
| GEOG 149 | Transportation Geography | |
| GEOG 163 | Applied GIS | |
| <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 128 | Geography Of Europe | |
| GEOG 131 | California | |
| Concentrations (15 Units) | | |
| Select a concentration from the following: | | 15 |
| Geographic Information Systems and Analysis Concentration | | |
| Human Geography Concentration | | |
| Metropolitan Area Planning Concentration | | |
| Physical Geography Concentration | | |
| Total Units | | 46 |

¹ Course also satisfies General Education (GE)/Graduation Requirement.

Concentration in Geographic Information Systems and Analysis (15 units)

| Code | Title | Units |
|------------------------------------------------------------------------|-----------------------------------------|-----------|
| GEOG 109 | Geographic Information Systems | 3 |
| Select four of the following, with at least one each from both groups: | | 12 |
| <i>Group 1: Data Analysis</i> | | |
| GEOG 107 | Remote Sensing | |
| GEOG 110 | Advanced Geographic Information Systems | |
| GEOG 181 | Quantitative Methods in Geography | |
| <i>Group 2: Data Output</i> | | |
| GEOG 105 | Computer Cartography | |
| GEOG 163 | Applied GIS | |
| GEOG 199 | Special Problems | |
| Total Units | | 15 |

It is recommended that students take the following to satisfy their Geographic Techniques core area requirement:

| Code | Title | Units |
|-----------|-------------------------------------|-------|
| GEOG 193A | Field Geography: Urban-Metropolitan | 3 |
| GEOG 193B | Field Geography: Suburban-Rural | 3 |
| GEOG 193C | Field Geography: Physical | 3 |

General Education Requirements¹

| Code | Title | Units |
|-----------------------------------------|--------------------|-------|
| Area 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 |
| Area C: Arts and Humanities (12 Units) | |
| 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 |
| Area D: The Individual and Society (9 Units) | |
| Area D Course | 3 |
| Area D Course | 3 |
| Area D Course ² | 0 |
| Area D Course - Take upper-division course to complete Area & upper division requirements. | 3 |
| Area E: Understanding Personal Development (3 Units) | |
| Area E 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 GE.

Graduation Requirements¹

| Code | Title | Units |
|--------------------------------------------------------------------------|----------------------------------------------------------|-------|
| Graduation Requirements (required by CSU) (6 Units) | | |
| | American Institutions: U.S. History | 3 |
| | American Institutions: U.S. Constitution & CA Government | 3 |
| | Writing Intensive (WI) ² | 0 |
| Graduation Requirements (required by Sacramento State) (12 Units) | | |
| | English Composition II | 3 |
| | Race and Ethnicity in American Society (RE) | 3 |
| | Foreign Language Proficiency Requirement ³ | 6 |

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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/wll/flgr/>