BACHELOR OF ARTS IN GEOGRAPHY ROADMAP

120 Total Units Required
Minimum Number of Units in the Major: 39

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
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<tr>
<td>GE Area A: Oral Communication (A1) or Critical Thinking (A3)</td>
<td>3</td>
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<tr>
<td>GE Area A: Written English Communication (A2)</td>
<td>3</td>
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<tr>
<td>GE Area B: Quantitative Reasoning (B4)</td>
<td>3</td>
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<td>GE Area C: Arts (C1)</td>
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<tr>
<td>GE Area D: U.S. History (D2) or U.S. and California Government (D3)</td>
<td>3</td>
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<tr>
<td><strong>Units</strong></td>
<td></td>
<td>15</td>
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<tr>
<td><strong>Second Semester</strong></td>
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<tr>
<td>GEOG 101</td>
<td>Our Physical Environment</td>
<td>3</td>
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<tr>
<td>GE Area A: Oral Communication (A1) or Critical Thinking (A3)</td>
<td>3</td>
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<tr>
<td>GE Area A: Written English Communication II (A4)</td>
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<tr>
<td>or Written English Communication (A2) Stretch II</td>
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<tr>
<td>Complementary Studies or SF State Studies or University Elective – Take Two</td>
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<td><strong>Units</strong></td>
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<td>15</td>
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<td><strong>Third Semester</strong></td>
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<tr>
<td>GEOG 102 or GEOG 107</td>
<td>The Human Environment or World Regions and Interrelations</td>
<td>3</td>
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<tr>
<td>GE Area A: Written English Communication II (A4) if not already satisfied</td>
<td>3</td>
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<tr>
<td>or Complementary Studies or SF State Studies or University Elective</td>
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<tr>
<td>GE Area B: Life Science (B2) and Laboratory Science (B3)</td>
<td>3-4</td>
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<tr>
<td>GE Area D: U.S. History (D2) or U.S. and California Government (D3)</td>
<td>3</td>
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<td>Complementary Studies or SF State Studies or University Elective – Take Two</td>
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<td><strong>Units</strong></td>
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<td>15-16</td>
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<tr>
<td><strong>Fourth Semester</strong></td>
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<td>GEOG 205</td>
<td>Geographic Techniques</td>
<td>3</td>
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<td>GE Area C: Arts (C1) or Humanities (C2)</td>
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<tr>
<td>GE Area C: Humanities: Literature (C3)</td>
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<td>Complementary Studies or SF State Studies or University Elective – Take Two</td>
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<td><strong>Units</strong></td>
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<td>15</td>
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<td><strong>Fifth Semester</strong></td>
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<td>GEOG 500GW</td>
<td>Physical and Human Dimensions of Climate Change - GWAR</td>
<td>3</td>
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<tr>
<td>Distribution Requirement (12-15 units)</td>
<td>3</td>
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Focus of Interest (12 units) | 7 |
GE Area UD-B: Upper Division Physical and/or Life Sciences (Consider SF State Studies Course) | 3 |
Complementary Studies or SF State Studies or University Elective | 4 |

1. To avoid taking additional units, it is recommended that you meet LLD and SF State Studies requirements (AERM, GP, ES, SJ) within your GE or major.

2. ENG 114 can only be taken if you complete Directed Self-Placement (DSP) and select ENG 114; if you choose ENG 104/ENG 105 through DSP you will satisfy A2 upon successful completion of ENG 105 in the second semester; multilingual students may be advised into alternative English courses.

3. Depending on courses completed through Early Start, students in Pathway/Category 3 or 4 may be required to enroll in a support course to complement their Quantitative Reasoning/B4 requirement. There are multiple course options for this pathway. Before enrolling in a B4 course, students should verify their MATH Pathway/Category in their Student Center (http://cms.sfsu.edu/content/student-center). Information regarding the courses that correspond with your MATH Pathway/Category can be found on the Developmental Studies Office Website (http://developmentalstudies.sfsu.edu).
Complementary Studies
All Bachelor of Arts students must complete 12 units of complementary studies in courses outside the primary prefix for the major, and not cross-listed with the primary prefix for the major. Students who complete two majors or a major and a minor automatically complete the complementary studies requirement. An additional way to satisfy the complementary studies requirement for students in the geography major is to meet with an advisor to identify courses other than GEOG, and not cross-listed with GEOG, that would serve to complement each student’s area of interest. Four units from complementary studies will also double-count toward units in the major.

Students who have earned AA-T or AS-T degrees and are pursuing a similar B.A. degree at SF State are required to fulfill the Complementary Studies requirement as defined by the major department. Students should consult with a major advisor about how transfer units and/or SF State units can best be applied to this requirement in order to ensure degree completion within 60 units. Students are advised that the CR grade is acceptable in any two courses to be counted for the geography major. No more than one course counted toward major requirements may be completed with a grade less than a C-.

Consider taking a class combined with a laboratory or a separate lab to fulfill B3 if not already satisfied.

Distribution Requirement (12-15 units)
(Cross-listed courses originating in other departments are not accepted in these categories.)
One course from each of the following four areas:
- Physical Environment – 310–399 numbered courses in Geography
- Human Geography – 400 level courses in Geography
- Human-Environment Interaction in a Regional Context:
  - GEOG 550 Geography of the United States and Canada (3 units)
  - GEOG 552 Geography of California (3 units)
  - GEOG 575 Emerging China (3 units)
  - GEOG 646 The Geography of Marine Resources (4 units)
  - GEOG 647 Geography of Water Resources (4 units)
  - GEOG 648 Management of National Parks and Protected Areas (4 units)
  - GEOG 651 San Francisco Bay Area Environmental Issues (4 units)
- Either Geographic Techniques – 601–639 numbered courses in Geography or Applied Geography – 640–668 numbered courses in Geography
Focus of Interest (12 units)
Units of upper division geography electives consisting of a minimum of three courses chosen on advisement. These courses will be organized around coherent themes such as those listed below. In addition, alternative concentrations tailored to individual student interest may be developed in consultation with the Geography undergraduate advisor. On advisement, appropriate upper division courses from other departments and programs may be included.

• Human Geography
• Environmental Studies
• Physical Environment
• Resource Management
• Techniques of Geographic Analysis
• Urban Environment, Transportation, and Land Use
• Focused individual interest pursued in consultation with the undergraduate advisor

Note: A minimum of 40 upper division units must be completed for the degree (including upper division units required for the major, general education, electives, etc.). A student can complete this major yet not attain the necessary number of upper division units required for graduation. In this case, additional upper division courses will be needed to reach the required total.

Foci of Interest

Focus on Human Geography
GEOG 422 Environmental Perception (3 units)
GEOG 423 Geographic Perspectives on Gender, Environment, and Development (3 units)
GEOG 425 Economic Geography (3 units)
GEOG 427 Agriculture and Food Supply (4 units)
GEOG 430 Transforming Food and Agriculture Systems: Local to Global (4 units)
GEOG 432 Urban Geography (4 units)
GEOG 434 Geographies of Health and Health Care (3 units)
GEOG 445 Geopolitics and Globalization (3 units)
GEOG 454 San Francisco on Foot (4 units)
GEOG 455 Geography of Ethnic Communities (3 units)
Select a 500 level course

Focus on Environmental Studies
Required
GEOG 600 Environmental Problems and Solutions (3 units)
Recommended
GEOG 316 Biogeography (4 units)
GEOG 317 Geography of Soils (4 units)
GEOG 422 Environmental Perception (3 units)
GEOG 427 Agriculture and Food Supply (4 units)
GEOG 642 Watershed Assessment and Restoration (4 units)
GEOG 644 Water Quality (3 units)
GEOG 646 The Geography of Marine Resources (4 units)
GEOG 647 Geography of Water Resources (4 units)
GEOG 651 San Francisco Bay Area Environmental Issues (4 units)
GEOG 652 Environmental Impact Analysis (4 units)
GEOG 657 Natural Resource Management: Biotic Resources (4 units)
GEOG 666 Geography of Garbage: Recycling and Waste Reduction (3 units)
GEOG 667 Environmental Justice: Race, Poverty, and the Environment (4 units)
GEOG 668 Politics, Law, and the Urban Environment (4 units)

Focus on the Physical Environment
Courses central to the specialization include:
GEOG 312 Geography of Landforms (4 units)
GEOG 313 Earth’s Climate System (4 units)

GEOG 313 Biogeography (4 units)
GEOG 317 Geography of Soils (4 units)
GEOG 342 Surface Water Hydrology (4 units)
Supporting courses include:
GEOG 602 Field Methods in Physical Geography (4 units)
GEOG 642 Watershed Assessment and Restoration (4 units)
GEOG 647 Geography of Water Resources (4 units)
GEOG 657 Natural Resource Management: Biotic Resources (4 units)

Focus on Techniques of Geographic Analysis
Data Acquisition in the field
GEOG 601 Field Methods in Human Geography (3 units)
GEOG 602 Field Methods in Physical Geography (4 units)
Data Analysis in the lab
GEOG 610 Remote Sensing of the Environment I (4 units)
GEOG 611 Remote Sensing of the Environment II (4 units)
Geographic Information Systems
GEOG 603 Introduction to Geographic Information Systems (3 units)
GEOG 620 Geographical Information Systems (4 units)
GEOG 621 Geographic Information Systems for Environmental Analysis (4 units)
GEOG 625 Programming for Geographic Information Science (4 units)
GEOG 629 Coastal and Marine Applications of GIS (3 units)
Data Display in Cartography
GEOG 606 Cartography (3 units)
Internship (strongly recommended)
GEOG 688 Geographic Internship (2-6 units)

Focus on Urban Environment, Transportation, and Land Use
GEOG 422 Environmental Perception (3 units)
GEOG 423 Geographic Perspectives on Gender, Environment, and Development (3 units)
GEOG 425 Economic Geography (3 units)
GEOG 427 Agriculture and Food Supply (4 units)
GEOG 432 Urban Geography (4 units)
GEOG 433 Urban Transportation (4 units)
GEOG 434 Geographies of Health and Health Care (3 units)
GEOG 435 Geography of Global Transportation (4 units)
GEOG 437 Geography of Global Transportation (4 units)
GEOG 601 Field Methods in Human Geography (3 units)
GEOG 603 Introduction to Geographic Information Systems (3 units)
GEOG 651 San Francisco Bay Area Environmental Issues (4 units)
GEOG 652 Environmental Impact Analysis (4 units)
GEOG 658 Land-Use Planning (4 units)
GEOG 666 Geography of Garbage: Recycling and Waste Reduction (3 units)
GEOG 667 Environmental Justice: Race, Poverty, and the Environment (4 units)

Focus Based on Individual Interests
Highly recommended courses:
GEOG 603 Introduction to Geographic Information Systems (3 units)
GEOG 688 Geographic Internship (2-6 units)