# Degree Program Structure

120 total units / Minimum 42 UD units (UD = 300-499)

<table>
<thead>
<tr>
<th>B.S. GEOGRAPHY (GEOG)</th>
<th>MINOR</th>
<th>ADDITIONAL ELECTIVES</th>
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<tbody>
<tr>
<td>36 UNITS</td>
<td>MINIMUM 18 UNITS (9+ UD)</td>
<td>0+</td>
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## General Education Program

(Approximately 47 Units)

<table>
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<tr>
<th>Foundations</th>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Diversity Course</th>
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| ☐ Composition  
English 101 / 107 ☐  
English 102 / 108 ☐  
or  
English 109H ☐  
☐ Mathematics\(^\text{\textsuperscript{^a}}\)
(MATH 107 or higher math)  
☐ Second Language\(^*\)
(2\(^{nd}\) Semester proficiency req.) | Individuals & Societies (150)  
Take 2 courses (any letter A, B, C)  
☐ 150: ______  
☐ 150: ______  
Traditions & Cultures (160)  
Take 2 courses (any letter A, B, C, D)  
☐ 160: ______  
☐ 160: ______  
Natural Sciences (170)  
Take 2 courses (any letter A, B, C)  
☐ 170: ______  
☐ 170: ______ | ☐ Arts: (3 Units)  
□ Fulfilled by Major  
☐ Humanities: (1 Course)  
☐ Natural Science: (1 Course) | ☐ Gender, Race, Class, Ethnicity or Non-Western Studies: (1 Course)  
(All 160A Traditions and Cultures Courses & some Tier 2 Courses also fulfill this requirement.)

*Grade of C or higher is required.

*Check Approved Course Listings

Audrey de la Rosa  
Academic Advisor  
School of Geography & Development  
Website: [https://geography.arizona.edu/](https://geography.arizona.edu/)  
Email: adlr@email.arizona.edu
# Bachelor of Science in Geography
## Major Requirements, 2020 to present

### Foundation Courses (4 courses):
- GEOG 220 Our Diverse Biosphere
- GEOG 222 Working with Numeric, Spatial, and Visual Data
- GEOG 230 Our Changing Climate
- GEOG/GIST/RNR 417 Geographic Information Systems

### Introductory Human Geography Course (1 course):
- GEOG 210 Political and Cultural Geography of Globalization
- GEOG/LAS/MENA 251 World Regional Geography
- PLG/GEOG 256 Sustainable Cities

### Methods Courses (2 courses):
- GEOG/ENVS/GEN/GEOS/GIST/WSM 330 Introduction to Remote Sensing
- GEOG 357 Geographical Research Methods
- GEOG/RNR 416A Computer Cartography
- GEOG/GIST/PLG 457 Statistical Techniques in Geography

### Choose ONE concentration: Physical Geography; Geographic Information Science; or Water, Environment, and Society

#### Physical Geography
- **Concentration Method (1 course):**
  - GEOG 303 Field Methods
- **Physical Geography (4 courses):** Cannot duplicate the course taken for introductory physical geography course.
  - GEOG 240 Our Dynamic Landscape
  - GEOG 338 Biogeography
  - ECOL 406R Conservation Biology
  - GEOG 430 The Climate System
  - GEOG 435 Plants Under Stress
  - GEOS/GEOG/ANTH/WSM 439A Dendrochronology
  - GEOG/GEOS 447 Global and Regional Climatology
  - GEOS 450 Geomorphology
  - RNR 455 Introduction to Wildland Fire
    (Pre-requisite: MCB 181R, ECOL 182R)
  - GEOS 478 Global Change
  - GEOG/ENVS/GEOS/GIST/PLG/RNR 483 Geographical Applications of Remote Sensing

#### Geographic Information Science
- **Concentration Method (1 course):**
  - GEOG 330 Introduction to Remote Sensing
    (Cannot double dip with Methods requirement)
- **Advanced Methods (4 courses):** \( P = \text{prerequisite} \)
  - GEOG/RNR 416C Urban Geographic Info. Systems \( P \ 417 \)
  - GEOG/RNR 416D Participatory Approaches in GIS \( P \ 417 \)
  - GEOG/GIST/RNR 416E Geovisualization (GIS) \( P \ 416A, 417 \)
  - GEOG/RNR 416F GIS for Social Sciences
  - GEOG/RNR 419 Cartographic Modeling \( P \ 417 \)
  - GEOG/GIST/RNR 420 Advanced Geographic Info. Systems \( P \ 417 \)
  - RNR/GEOS 422 Resource Mapping
  - RNR 355 Intro Geospatial Concepts
  - GEOG 458 Geography of Transportation
  - RNR/GEOG 473 Spatial Analysis & Modeling
    \( P \ 417 \) and Statistics
  - GEOG/GIST/ENVS/PLG/RNR 483 Geographical Applications of Remote Sensing \( P \ 330 \)
  - ATMO/GEOG/GEN/GEOS/HWSR/OPTI/REM/RNR 490
    Remote Sensing for the Study of Planet Earth \( P \ 330, 417 \)

#### Water, Environment, & Society
- **Concentration Method (1 course):**
  - GEOG 303 Field Methods
- **Water, Land, & Society Courses (4 courses):**
  - GEOG/EVS 304 Water, Environment & Society
  - GEOG/EVS 362 Environment and Development
  - GEOG/SOC 367 Population Geography
  - GEOG/PLG 379 Urban Growth and Development
  - GEOG/EVS 404 Politics of Nature
  - GEOG 430 The Climate System
  - GEOG 435 Plants Under Stress
  - GEOG/EVS/HWRS/LAS/PLG 461 Environmental & Resource Geography
  - GEOG/EVS 468 Water and Sustainability
  - PLG/RNR 472 Environmental Land Use Planning
  - PLG/GEOG 476 The Land Development Process
  - GEOS 478 Global Change
  - GEOG/ANTH/POL 488 Governing Science & Tech.

36 units required. A minimum of 21 units must be upper division. Minimum 2.00 GPA required.
Double dipping, or double use of courses, with a minor is not permitted. Students may double dip up to 6 units with a second major.