MAJOR REQUIREMENTS FOR A BS DEGREE IN ENVIRONMENTAL AND SPATIAL SCIENCES

Total credit hours required: 120.0 minimum

A. Policies for Admission to the Major
   1. New students (freshmen and transfers) must be admitted to the Geography major by the Office of Admissions upon admission to the University.
   2. Admission into the Geography major from other departments is upon approval of the chairperson of the Geography Department.
   3. Non-degree and continuing education students must be admitted to the Geography major by the Office of Admissions.

B. Policies for Retention in the Major
   1. University requirements for retention.

C. Policies for Completion of the Major
   1. Completion of all University curricular requirements.

Note to the student: This form is provided as a guide. It is your responsibility to consult regularly with your advisor to be aware of changes and curriculum details which are not incorporated on this form.

FALL 2020
# Major Sequence and Degree Requirements

**Major:** BS Environmental and Spatial Sciences  
**Option:**  
**Major Field Requirements:** 45.0 credits  
**Other Requirements:** 29.0 - 33.0 credits

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Short Title</th>
<th>C.H.</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>GEOG 130</td>
<td>Intro to Environmental Science</td>
<td>3.0</td>
<td></td>
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<tr>
<td>GEOG 120</td>
<td>Human Geography</td>
<td>3.0</td>
<td></td>
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<tr>
<td>GEOG 230</td>
<td>Physical Geography</td>
<td>3.0</td>
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<tr>
<td>ESCI 225</td>
<td>Geomorphology</td>
<td>3.0</td>
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<tr>
<td>GEOG 289</td>
<td>Field &amp; Research Methods</td>
<td>3.0</td>
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<tr>
<td>GEOG 408</td>
<td>Sustainable Development</td>
<td>3.0</td>
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</tbody>
</table>

**REQUIRED CORE GEOGRAPHY (15.0 credits)**
- GEOG 130 Intro to Environmental Science 3.0
- GEOG 120 Human Geography 3.0
- GEOG 230 Physical Geography 3.0
- GEOG 281 Map Interp. & Analysis 3.0
- GEOG 292 Quantitative & Spatial Analysis 3.0
- GEOG 295 GIS I: Vector Data Analysis 3.0
- GEOG 296 GIS II: Raster Data Analysis 3.0

**SPATIAL SCIENCE ELECTIVES (6.0 credits)**  
Choose TWO from:  
- GEOG 395 GIS for the Web 3.0  
- GEOG 384 Cartography 3.0  
- GEOG 396 GIS Modeling 3.0  
- GEOG 397 GIS Data Management 3.0

**ENVIRONMENTAL STUDIES ELECTIVES (9.0 credits)**  
Choose THREE from:  
- GEOG 304 Water Resources Management 3.0  
- GEOG 305 Energy Sustainability 3.0  
- GEOG 306 Environmental Impact Assess. 3.0  
- GEOG 307 US Environmental Policy 3.0  
- GEOG 333 Biogeography 3.0  
- GEOG 336 Climate and Society 3.0  
- GEOG 407 Glo. Env. Policy & Negotiation 3.0

**REQUIRED CAPSTONE (3.0 credits)**  
Choose ONE from:  
- GEOG 300 Cooperative Ed. in Geography 3.0  
- GEOG 488 Senior Thesis 3.0  
- GEOG 489 Honors Thesis 3.0  
- ENVI 495 Environmental Clinic 3.0

**REQUIRED RELATED (29.0-33.0 credits)**  
When applicable, up to six of the REQUIRED RELATED courses may be credited toward the Liberal Arts Core subject to normal distribution rules.

**REQUIRED CORE ENVIRON. SCIENCE (23.0 - 24.0 credits)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Short Title</th>
<th>C.H.</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 100</td>
<td>General Biology*</td>
<td>3.0</td>
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</tr>
<tr>
<td>CHEM 111</td>
<td>Introductory Chemistry I</td>
<td>4.0</td>
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</tr>
<tr>
<td>CHEM 112</td>
<td>Introductory Chemistry II</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>ESCI 221</td>
<td>Physical Geology</td>
<td>4.0</td>
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</tr>
<tr>
<td>MATH 161</td>
<td>Calculus I</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>PHYS 131</td>
<td>Physics I with Algebra</td>
<td>4.0</td>
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<td>---or---</td>
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</tr>
<tr>
<td>PHYS 231</td>
<td>Physics I with Calculus</td>
<td>4.0</td>
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</tr>
</tbody>
</table>

**ENVIRONMENTAL STUDIES ELECTIVES (6.0-9.0 credits)**  
Choose TWO from:  
- BIOL 211 Concepts of Zoology* 4.0  
- BIOL 221 Concepts of Botany* 4.0  
- BIOL 340 Perspectives in Env. Awareness 3.0  
- BIOL 343 Principles of Ecology & Evolution 4.0  
- CHEM 235 Short Course Organic Chemistry 4.0  
- CHEM 265 Quantitative Analysis 4.0  
- CHEM 375 Environmental Chemistry 4.0  
- CHEM 476 Environmental Chemistry II 4.0  
- ESCI 226 Geology of Earth Resources 3.0  
- ESCI 241 Meteorology 4.0  
- ESCI 245 Environmental Meteorology 3.0  
- ESCI 322 Environmental Hydrology 3.0  
- ESCI 326 Sedimentation & Stratigraphy 4.0  
- ESCI 329 Aqueous Geochemistry 3.0  
- ESCI 366 Ocean Resources 3.0  
- ESCI 385 Glo. Climate Change: Sc. & Pol. 3.0  
- ESCI 422 Geological Field Mapping 3.0  
- ESCI 426 Groundwater Geology 3.0  
- ESCI 466 Coastal Environmental Health 3.0  
- OSEH 435 Environmental Health 3.0  
- PHYS 132 Physics II with Algebra 4.0  
- ---or---  
- PHYS 232 Physics II with Calculus 4.0

*A B- or higher in BIOL 100 to take BIOL 211 & BIOL 221

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**A Minor Program of Study is Highly Recommended:**  

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**FALL 2020**