GEOSTATISTICAL METHODS AND APPLICATIONS - 2-YEAR BACHELOR OF SCIENCE IN GEOSTATISTICS

This 2-year program combines our bachelor of science in Geostatistics with our non-thesis master of geoscience, providing a fast track to an advanced, professional degree. Intended for the highly motivated, exceptional individuals, this accelerated program prepares students in human geography, physical geography, and human-environment interactions, while also providing specialized geospatial skills. Designed to emulate the Geostatistical Methods and Applications track of our professional MGsc degree, the graduate portion of this 2-year program also includes some online (distance education) courses and prepares graduates to drive innovation and apply modern technologies to careers in nonprofit, government, or business sectors.

Application and Eligibility

• Applications to the combined program will be submitted by June 15, after the completion of the student’s junior year, after 90 hours of coursework are completed. Applications submitted after that time will be evaluated on a case-by-case basis.
• A faculty advisor will be assigned to each student. Students may seek additional mentors, but a formal committee is not required.
• The bachelor’s and master’s degrees will be conferred concurrently after completion of 150 hours, and successful completion of the final project and final exam.
• Students not admitted to or wishing to discontinue the graduate portion of the 2-year program will earn their bachelor of science degree in Geostatistics after successfully completing 120 hours of coursework.

Program Requirements

First Year

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td>17</td>
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</table>

Fall

GEOG 201 Introduction to Human Geography 3
GEOG 215 Geospatial Cornerstone 1
Life and physical sciences 1 4
Select one of the following:
OCNG 251 The Blue Planet - Our Oceans 2
OCNG 252 The Blue Planet - Our Oceans Laboratory 2
GEOL 101 Principles of Geology 2
& GEOL 102 Principles of Geology Laboratory 2
BIOL 111 Introductory Biology I 2
CHEM 119 Fundamentals of Chemistry I 2
PHYS 201 College Physics 2
American history 2 3
Communication 2 3

Spring

GEOG 203 Planet Earth 3
GEOG 213 Planet Earth Lab 1
MATH 140 Mathematics for Business and Social Sciences 3
Life and physical sciences 1 4
Select one of the following:
ATMO 201 Weather and Climate 3
& ATMO 202 Weather and Climate Laboratory 3
GEOL 106 Historical Geology 3
BIOL 112 Introductory Biology II 3
CHEM 120 Fundamentals of Chemistry II 3
PHYS 202 College Physics 3
Human geography elective 2 3
General elective 4 3

Second Year

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
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<tbody>
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</table>

Fall

GEOG 232 Cartography and Visualization 3
MATH 142 Business Calculus 3
POLS 206 American National Government 3
STAT 303 Statistical Methods 3
General elective 4 4

Spring

Communication 3 3

Third Year

<table>
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<th>Semester Credit Hours</th>
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<tbody>
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Fall

American history 3 3
Language, philosophy and culture 3 3
Geography elective 5 9

Spring

Communication 3 3

General elective 4 13
### Fourth Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
<td>GEOG 450</td>
<td>Field Geography</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEOG 651</td>
<td>Remote Sensing for Geographical Analysis</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEOG 659</td>
<td>Geodatabases</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEOS 669 or OCNG 669</td>
<td>Introduction to Processing Geoscience Data with R or Python for Geosciences</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>General elective</td>
<td></td>
<td>4</td>
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</table>

**Semester Credit Hours**  
16

<table>
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<tr>
<th>Semester</th>
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<th>Credits</th>
</tr>
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<tbody>
<tr>
<td><strong>Spring</strong></td>
<td>GEOG 440</td>
<td>History and Nature of Geography</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Graduate theme elective</td>
<td></td>
<td>6</td>
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<tr>
<td></td>
<td>General elective</td>
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**Semester Credit Hours**  
16

### Fifth Year

<table>
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<tr>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td>GEOG 665</td>
<td>GIS-Based Spatial Analysis and Modeling</td>
<td>3</td>
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<tr>
<td></td>
<td>GEOG 676</td>
<td>GIS Programming</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Graduate theme elective</td>
<td></td>
<td>6</td>
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**Semester Credit Hours**  
12

<table>
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<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tr>
<td><strong>Spring</strong></td>
<td>GEOG 678</td>
<td>WebGIS</td>
<td>3</td>
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<tr>
<td></td>
<td>GEOS 676</td>
<td>Capstone Experience</td>
<td>6</td>
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</table>

**Semester Credit Hours**  
9

**Total Semester Credit Hours**  
150

1. 8 hours required. Department requires that you take two in the same discipline to meet this requirement.

2. Select from GEOG 301, GEOG 304, GEOG 305, GEOG 306, GEOG 309, GEOG 311, GEOG 320, GEOG 323, GEOG 325, GEOG 327, GEOG 330, GEOG 401, GEOG 406, GEOG 420, GEOG 430.

3. Select from GEOG 324, GEOG 331, GEOG 335, GEOG 360, GEOG 370/ MARS 370, GEOG 400, GEOG 434, GEOG 435, GEOG 442/GEOS 442.


5. Choose from any 300 or 400-level geography course except GEOG 361, GEOG 391, GEOG 392, GEOG 461, GEOG 477, GEOG 478.

6. Select from GEOG 661, GEOG 662, GEOG 663, GEOG 677, GEOG 695; GEOL 617, GEOP 635. Up to 6 hours of graduate electives may be used towards the undergraduate degree's general elective.

Two courses in the bachelor of science degree plan must be Writing Intensive courses designated by the department in the schedule of classes. Also, International and Cultural Diversity (3 hours) and Cultural Discourse (3 hours) must be incorporated into the degree.