

# GEOSPATIAL AND ENVIRONMENTAL ANALYSIS OPTION

(For students graduating in calendar year 2012)

## Bachelor of Arts in Geography - College of Natural Resources

Student \_\_\_\_\_  
Advisor \_\_\_\_\_

Required hours in Geography: Minimum of 36 plus 3 hours of approved electives (or 39 hours with no electives) plus STAT 3604 (42 hours). Minimum number of hours for the degree is 120.

### Major Requirements

#### Fundamentals: 12 credit hours

1. GEOG 1004: Human Geography (3) \_\_\_\_\_
2. GEOG 1014: World Regions (3) \_\_\_\_\_
3. GEOG 1104: Physical Geography (3) \_\_\_\_\_
4. GEOG 2314: Maps and Mapping (3) \_\_\_\_\_

#### Culture, Regions, and International Development: 6 credit hours from following; at least 3 credits at the 3000-4000 level

1. \_\_\_\_\_
2. \_\_\_\_\_

- GEOG 2034: Geography of Global Conflict (3) (Area 7)  
GEOG 2054: Introduction to World Politics (3) (Areas 3, 7)  
GEOG 2064: The Global Economy and World Politics (3) (Areas 3, 7)  
GEOG 2134: Geography of the Global Economy (3) (Area 7)  
GEOG 2984: SS: Geography of North America (3)  
GEOG 3104: Environmental Problems, Population, and Development (3) (Area 7)  
GEOG 3204: Geography of Middle America (3)  
GEOG 3244: The U.S. City (3)  
GEOG 3254: The Geography of East Asia (3) (Area 7)  
GEOG 3464: Appalachian Communities (3)  
GEOG 4054: Geography of Wine (3)  
GEOG 4074: Medical Geography (3) (Area 7)  
GEOG 4204: Geography of Resources (3) (Area 7)  
GEOG 4764: International Development Policy and Planning (3) (Area 7)

#### Field Experience: at least 3 credit hours from

- 3954: Study Abroad \_\_\_\_\_  
2964 or 4964: Field Study (Internship) \_\_\_\_\_  
2994 or 4994: Undergraduate Research \_\_\_\_\_  
Approved Service Learning Course\* \_\_\_\_\_

#### Statistics: 3 credit hours

STAT 3604: Statistics for the Social Sciences \_\_\_\_\_

NOTE: The overall and in-major GPA required for graduation is 2.0. To make satisfactory progress towards the Geography degree, upon completion of 60 hours, students must have completed 15 hours in Geography. Courses for in-major GPA computation include all GEOG courses, and approved cognate electives.

\* Approved by the Service Learning Center and Dept. of Geography. Courses offered vary by semester and year. For current opportunities see: <http://www.vtserves.vt.edu/>

### Geospatial and Environmental Analysis: 15 credit hours

Select at least 2 courses from each of the following two groups ("Mapping and GIS" and "Environmental Analysis").

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

#### Mapping and GIS

- GEOG 3314: Cartography (3)  
GEOG 4084: Introduction to GIS (3)  
GEOG 4314: Spatial Analysis in GIS (3)  
GEOG 4354: Introduction to Remote Sensing (3)  
GEOG 4844: Soil Interpretation Using GIS (3)

#### Environmental Analysis

- GEOG 3114: Introduction to Meteorology (3)  
GEOG 3304: Geomorphology (3)  
GEOG 3324: Introduction to Applied Meteorology (3)  
GEOG 3404: Mountain Geography (3)  
GEOG 4044: Biogeography (3)  
GEOG 4374: Remote Sensing and Phenology (3)  
GEOG 4994: UR: Meteorology Field Course\*\* (3)

### Geography or Cognate Electives: 3 credit hours

1. Any GEOG elective, or a cognate elective from the following \_\_\_\_\_

- FIW 2114: Principles of Fisheries and Wildlife Management (3) (Pre: BIOL 1006 or BIOL 1106)  
FIW 4454: Vertebrate Pest Management (3) (PRE: senior standing)  
FIW 4464: Human Dimensions of Fisheries and Wildlife (3) (Pre: FIW 2114)  
FIW 4614: Fish Ecology (3)  
FOR 2214: Introduction to Land and Forest Measurements (3)  
FOR 2314: Forest Biology and Dendrology (2) (Pre: BIOL 1006 or BIOL 1106)  
FOR 2324: Dendrology Laboratory (1)  
FOR 2554 (LAR 2554): Nature & American Values (3)  
FOR 4114: Information Technologies for Natural Resource Management (Pre: GEOG 2314) (3)  
FOR 4214: Forest Photogrammetry and Spatial Data Processing. (3)  
FOR 4374: Forested Wetlands (3) (Pre: CSES 3114 or CSES 3134)  
NR 4984: SS: Global Seminar-Environment and Sustainable Systems (3)  
WOOD 2784: World Forests and Forest Products (3)  
WOOD 3334: Survey of Non-Timber Forest Products (3)

\*Field Research topics may vary: Great Plains Storm Chase, Mountain Weather, Coastal Weather

## Curriculum for Liberal Education Requirements

### Area 1: Writing and Discourse (0 to 6 credit hours depending on placement)

ENGL 1105 \_\_\_\_\_  
 ENGL 1106 \_\_\_\_\_  
 or ENGL H1204 \_\_\_\_\_

or COMM 1015 \_\_\_\_\_  
 COMM 1016 \_\_\_\_\_  
 Or advanced placement

### Area 2: Ideas, Cultural Traditions, and Values (6 credit hours)

Approved CLE courses \_\_\_\_\_

### Area 3: Society and Human Behavior (6 credit hours)

Geography major covers this area

### Area 4: Scientific Reasoning and Discovery (8 credit hours)

6 credit hours of lecture (2 approved courses) \_\_\_\_\_

2 credit hours of related laboratory (2 approved labs) \_\_\_\_\_

### Area 5: Quantitative and Symbolic Reasoning (6 credit hours)

Approved mathematics sequence (Approved mathematics sequence includes Math 1016/Math 2015).

\_\_\_\_\_

### Area 6: Creativity and Aesthetic Experience (1 credit hour)

Approved CLE course \_\_\_\_\_

### Area 7: Critical Issues in a Global Context (3 credit hours)

Geography major covers this area

**Foreign Language:** A sequence of two (2) foreign language courses is required for graduation unless two (2) high school credits of the same foreign language or six (6) transfer credit hours of foreign language have been earned. These credits do not count toward graduation. See catalog section on "Graduation Requirements."

For approved Curriculum for Liberal Education course listings see: <http://www.cle.prov.vt.edu/guides/index.html>

### Visual Expression, Writing and Speaking :ViEWS Requirements in Geography

(A) Writing Communication(select two)	(B) Visual Communication	(C) Oral Communication(select one)
<b>GEOG 2134:</b> Geography of the Global Economy <b>GEOG 3204:</b> Geography of Middle America <b>GEOG 3244:</b> The U.S. City <b>GEOG 3304:</b> Geomorphology <b>GEOG 3404:</b> Mountain Geography <b>GEOG 3464:</b> Appalachian Communities <b>GEOG 4044:</b> Biogeography <b>GEOG 4054:</b> Geography of Wine <b>GEOG 4074:</b> Medical Geography <b>GEOG 4204:</b> Geography of Resources <b>GEOG 4244:</b> Geography of Europe <b>GEOG 4404:</b> Approaches for International Development	<b>GEOG 2314:</b> Maps and Mapping (Required for all majors)	<b>GEOG 3104:</b> Environmental Problems, Population, and Development <b>GEOG 3314:</b> Cartography <b>GEOG 4044:</b> Biogeography <b>GEOG 4074:</b> Medical Geography <b>GEOG 4314:</b> Spatial Analysis in GIS <b>GEOG 4324:</b> Algorithms in GIS <b>GEOG 4354:</b> Intro. to Remote Sensing <b>GEOG 4384:</b> ArcInfo GIS

There are no hidden prerequisites on this checksheet

**For more information about the Geography major and careers contact:**

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