### B.S. Geographic Information Systems

**Geography Careers Website:** [http://www.geog.byu.edu/](http://www.geog.byu.edu/)

**Course#** | **Course Title** | **Credit Hrs.** | **Sem/Yr**
---|---|---|---
100 | The Geographic Approach (prereq.: Major Status) | 1.0 |  
101 | Global Environment: Understanding Physical Geography | 3.0 |  
120 | Geography and World Affairs | 3.0 |  
130 | Introduction to Human Geography | 3.0 |  
211 | Map Use and Interpretation | 3.0 |  
212 | Introduction to Geographic Information Systems | 3.0 |  
222 | Quantitative Research and Reasoning (Prereq.: Stat 221) | 3.0 |  
STAT 221 | Principles of Statistics (prereq.: Math 110) | 3.0 |  

**II. Complete One Physical Geography Course from the Following: Geog 303, 304, 305.**

  

**III. Complete One Regional Course from the Following: Geog 245, 250, 255, 260, 265, 271, 272, 273, 285.**

  

**IV. Complete One Human Geography Course from the Following: Geog 306, 331, 336, 341, 346, 347.**

  

**V. Complete the Following Major Courses:***

  

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<tr>
<th>Course#</th>
<th>Course Title</th>
<th>Credit Hrs.</th>
<th>Grade</th>
<th>Sem/Yr</th>
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213 | Earth Observation and Image Interpretation | 3.0 |  
217 | Programming for Geographers I (prereq: CS 142 or equivalent) Fall | 4.0 |  
219 | Global Positioning Syst. & Geodesy (prereq: Geog 211 or instr. consent) Fall | 2.0 |  
311 | Geographic Data Management (prereq: Geog 212 or equivalent) Winter | 3.0 |  
312 | Cartographic Design (prereq: Geog 211) Fall | 4.0 |  
313 | Remote Sensing I (prereq: Geog 211, 212) | 3.0 |  

**VI. Complete One Course from the Following: Chum 287-Programming I, CS 142-Intro to Computer Programming**

  

**VII. Complete Two Courses from the Following: Geog 317, 411, 412, 413, 414.**

  


  

**Total Major Hours:** 61.0 – 62.0

*Courses used in a major CANNOT also be used toward a minor or second major.

**Students who plan no formal education beyond the bachelor’s degree should take other courses that will enhance their employment opportunities. Consult a faculty advisor for suggested minors, majors, & skills. Students are encouraged to take Student Development 317: Managing Career Transitions, in their junior or senior year.*
COURSE TITLES
GEOGRAPHIC INFORMATION SYSTEMS EMPHASIS

II. Complete ONE Physical Geography course from the following (Prereq: GEOG 101):

GEOG  303  Biogeography
       304  Geography of Climates (W)
       305  Geography of Landforms

III. Complete ONE regional course from the following:

GEOG  245  Geography of Utah (W)
       255  Middle and South America (W)
       260  Europe (F)
       265  Russia and the Former Soviet Union (W)
       271  Middle East (F even yrs)
       272  East Asia (W odd yrs)
       273  Southeast Asia (W alt yr)
       285  South of the Sahara (F)

IV. Complete ONE course from the following:

GEOG  306  Public Land Conservation (F) (Prereq: GEOG 101)
       310  Principles of Land Use Planning (F)
       331  Economic Geography (F alt. term)
       336  Geography of Urban Environment (F)
       341  Political Geography (F,W)
       346  Population Geography
       347  Tourism: A Conceptual Framework (F,Sp)

VI. Complete ONE courses from the following:

CHUM  287  Programming 1 (F,W) (Prereq: CHum 200 or C S 100)
C S    142  Intro to Computer Programming (F,W,Sp,Su)

VII. Complete TWO courses from the following:

GEOG  317  Analytical Cartography (W) (Prereq: Geog 217)
       411  Issues in Computer Cartography (W) (Prereq: Geog 312)
       412  Problem Solving with GIS (F) (Prereq: Geog 311)
       413  Remote Sensing 2 (Prereq: Geog 313)
       414  Applied Urban Environmental Modeling (W) (Prereq: Geog 212, 213, 313)

VIII. Complete ONE capstone course from the following:

GEOG  399R  Academic Internship (F,W,Sp,Su)
       415R  Geographic Field Methods
       495R  Mentored Research (F,W,Sp,Su)
       501R  Seminar in Geography (W,Sp,Su)
       510  Advanced Urban Dynamics and Planning (W even yrs) (Prereq: Geog 310, 410)
       521R  Geographic Information Practicum (F,W,Sp)
              (Prereq: GIS major status; Geog 311, 312, 313, 317; Geog 222 or 223; one 400-level GIS course)