

**DEPARTMENT OF GEOGRAPHY**  
**REQUIREMENTS FOR THE MAJOR – GEOGRAPHIC INFORMATION SCIENCE (GIS) EMPHASIS**

Students must complete a minimum of eight (8) courses of Geography required coursework (see list below) plus five (5) required GIS courses and one (1) elective GIS course for a minimum total of fourteen (14) required Geography courses. All courses for the major must be taken for a letter grade and completed with a C- or better.

RESIDENCY REQUIREMENT: Students must complete at least 18 credit hours in the Department of Geography at the University of Utah.

ALLIED CREDIT REQUIREMENT: 12 credit hours of allied coursework are also required. These courses will generally be in the student's interest/specialization area and can be done in any of the following departments: Atmospheric Sciences; Biology; Chemistry; City and Metropolitan Planning; Civil Engineering; Computer Science; Geology; Math; Parks, Recreation and Tourism; Philosophy; Physics; or any department\*\* in the College of Social and Behavioral Science. \*(Aerospace Studies, Anthropology, Economics, Environmental and Sustainability Studies, Ethnic Studies, Family and Consumer Studies, Gender Studies, Health Society and Policy, Military Science, Naval Science, Political Science, Psychology, Sociology)

**PROGRAM OF STUDY**

Code	Course Number and Title	Credit Hrs	Sem/Year Taken	Grade
	<b>Required Courses</b> ( <i>Geography Core Requirements</i> )			
SF	GEOG 1000 – Earth Environments and Global Change	3		
BF	GEOG 1400 – Human Geography	3		
QB/QI	GEOG 3020 – Geographical Analysis ( <i>Spring</i> )	4		
	GEOG 3040 – Principles of Cartography ( <i>Fall</i> )**	4		
QI	GEOG 3140 – Introduction to GIS ( <i>Fall / +online Spring or Summer</i> )**	4		
	<b>One of the following:</b> ( <i>Upper Division Physical Geography Choice List</i> )			
	GEOG 3200 – Geomorphology: Mtns, Rivers, Deserts <b>OR</b> ( <i>Fall</i> )	4		
	GEOG 3/5205 – Regional and Global Climates <b>OR</b> ( <i>Fall</i> )	3		
SF	GEOG 3/5210 – Global Climate Change <b>OR</b> ( <i>Spring</i> )	3		
	GEOG 3/5215 – Climate Change and Its Impacts <b>OR</b> ( <i>Fall</i> )	3		
AS	GEOG 3/5290 – Water in Utah <b>OR</b>	3		
	GEOG 3/5292 – Snow and Ice <b>OR</b>	3		
SF	GEOG 3310 – Introduction to Natural Hazards	3		
	<b>One of the following:</b> ( <i>Upper Division Human Geography Choice List</i> )			
	GEOG 3/5090 – Introduction to Medical Geography <b>OR</b>	3		
	GEOG 3350 – Resource Conservation & Environ. Mgt. <b>OR</b>	3		
	GEOG 3/5375 – Sustainable Transportation <b>OR</b>	3		
	GEOG 3420 – Political Geography <b>OR</b>	3		
IR	GEOG 3/5440 – Global Economic Geography <b>OR</b>	3		
	GEOG 3/5480 – Urban Geography <b>OR</b>	3		
DV	GEOG 3620 – Geography of North America	3		
	<b>One of the following:</b> ( <i>Geography CW Choice List</i> )			
CW	GEOG 3/5270 – Biogeography: Global Patterns of Life <b>OR</b> ( <i>Spring</i> )	4		
CW	GEOG 3/5400 – Population Geography ( <i>Fall</i> )	4		
	<b>GIS Emphasis Core:</b> ( <i>required core courses for emphasis</i> )			
	GEOG 1180 – Introduction to Geo-Programming ( <i>hybrid – Fall or Spring</i> )	3		
	GEOG 3170 – GeoData Field Methods ( <i>Fall</i> )	3		
	GEOG 5140 – Methods in GIS ( <i>Spring / +online Summer or Fall</i> )	4		
	GEOG 5150 – Spatial Data Design for GIS ( <i>Fall</i> )	4		
	GEOG 5161 – Capstone in Geographic Information Science ( <i>Spring</i> )	3		
	<b>GIS Emphasis Electives:</b> ( <i>select one elective course from list</i> )			
	GEOG 5160 – Spatial Modeling with GIS ( <i>Spring</i> )	4		
	GEOG 5165 – Web GIS	3		
	GEOG 5180 – Geo-processing with Python ( <i>Fall</i> )	3		
	GEOG 5190 – GIS for Environmental and Public Health	3		
	<b>TOTAL COURSES (min. 14)</b>			
	<b>TOTAL RESIDENCY HRS. (18 cr. hrs. at U of U Geog. Dept.)</b>			

\*\* GEOG 3040 & 3140 are soon to be discontinued. If you have already taken GEOG 3140: Intro to GIS or plan on taking GEOG 3140 in Summer 2017, you **MUST** take GEOG 3040: Principles of Cartography this Fall 2017 semester and vice-versa! Otherwise, you must take the new consolidated GIS & Cartography course effective in 2018!

