

**DEPARTMENT OF GEOGRAPHY  
REQUIREMENTS FOR THE COMBINED BS / MSGIS DEGREE**

Students must complete a minimum of seven (7) courses of required major coursework (see list below) plus a minimum of five (5) GIS emphasis required courses for a minimum total of twelve (12) required Geography courses. Students should always check for pre-requisites. All courses for the major must be taken for a letter grade and completed with a C- or better. Students must complete the undergraduate junior year with a 3.0 GPA to be accepted into the BS/MSGIS combined degree program.

**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)

**UNDERGRADUATE PROGRAM OF STUDY**

Code	Course Number and Title	Credit Hrs	Sem/Year Taken	Grade
<b>Required Courses</b>				
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		
QI	GEOG 3100 – Intro to GIS & Cartography ( <i>Fall / +online Spring or Summer</i> )	5		
<b>Select one of the Upper Division Physical Geography choices from list:</b>				
	GEOG 3200 – Geomorphology: Mtns, Rivers, Deserts <b>OR</b>	4		
	GEOG 3/5205 – Regional and Global Climates <b>OR</b>	3		
SF	GEOG 3/5210 – Global Climate Change <b>OR</b>	3		
	GEOG 3/5215 – Climate Change and Its Impacts <b>OR</b>	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>Select one of the Upper Division Human Geography choices from list:</b>				
	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>Select one of the CW Geography choices from list:</b>				
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 combined program required courses:</b>				
	GEOG 1180 – Introduction to Geo-Programming ( <i>F/S</i> )	3		
SF	GEOG 3110 – The Earth from Space: Remote Sensing of the Environment ( <i>F</i> )	3		
	GEOG 5110 – Environmental Analysis Through Remote Sensing ( <i>Spring</i> )	3		
	GEOG 5140 – Methods in GIS ( <i>Spring/+online summer</i> )	4		
	GEOG 5170 – GeoData Field Methods ( <i>Fall</i> )	3		
<b>TOTAL COURSES (min. 12)</b>				
<b>TOTAL RESIDENCY HRS. (18 cr. hrs. at U of U Geog. Dept.)</b>				

**ALLIED COURSES**

	Course Number and Title	Credit Hrs	Sem/Year Taken	Grade
	<b>TOTAL CREDIT HOURS (min. 12 credit hours)</b>			

Students who have questions should book an appointment with the undergraduate advisor at [geog.utah.edu](http://geog.utah.edu).

# Undergraduate General Education Requirements:

U of U GPA:

Credit Hours completed out of 122:

Upper Division completed out of 40:

Residency: 30 credits at U of U; 20 of last 30 at U of U.

## Additional Notes:

### DEPARTMENT OF GEOGRAPHY

### REQUIREMENTS FOR THE MASTER'S OF SCIENCE IN GIS (PROFESSIONAL) PORTION OF BS-MSGIS COMBINED DEGREE

A Master's Degree will require a minimum of **30** credit hours of courses from the required core course list and selected from the technical electives lists, or from research seminars offered (GEOG 6400-6599 or 6960), plus a final oral exam taken at the completion of the last semester of study. Professional Master's students must complete the required courses (listed below) plus a minimum of 6 credit hours of elective course work. A grade point average of 3.0 or higher in course work is required. No graded work below a "B-" is acceptable toward the degree.

All MSGIS students are required to assemble a portfolio as courses are completed which includes examples of work demonstrating mastery of the selected skills. Students will present this portfolio project and answer questions from the Supervisory Committee during the final oral exam at the end of the program.

#### PROGRAM OF STUDY CHECKLIST

COURSE NUMBER/TITLE	Credit Hrs.	Sem/Yr Taken	Grade
GEOG 6000 – Spatial Statistics (Fall)	4		
GEOG 6150 – Spatial Data Design (Fall)	4		
GEOG 6160 – Spatial Modeling with GIS (Spring)	4		
GEOG 6161 – Capstone in GIS (Spring of last year)	3		
GEOG 6162 – Project Management (fall)	3		
GEOG 6165 – Web GIS	3		
GEOG 6180 – Geo-processing with Python (Fall)	3		
<b>TOTAL</b>	<b>24</b>		
<b>*TECHNICAL ELECTIVE COURSES (min. 6 credit hrs.)</b>			
1.	3 or 4		
2.	3		
<b>TOTAL</b>	<b>6 or 7</b>		
Final project and oral defense date:			

\* Elective courses are selected by the student with the assistance of the student's Supervisory Committee/Faculty Advisor.

### MSGIS Technical Elective Coursework

A total of 6-7 credit hours of technical elective coursework are required to graduate (two courses) from the list below.

Program requirements may change depending on available course offerings.

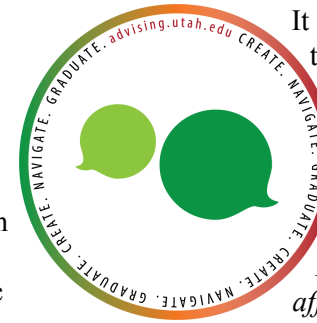
GEOG 6010	Geocomputation	4
GEOG 6020	Advanced Spatial Data Analysis	3
GEOG 6120	Environmental Optics	3

GEOG 6130	Advanced Remote Sensing	3
GEOG 6190	GIS & Environ'l Health	3



Fall	Spring	Summer
15	15	0
12	12	6
10	10	10

**Tips for successful scheduling:** Advisors recommend that students plan on taking at least 30 credit hours in 3 semesters to finish your degree in a timely manner. Talk to your Academic Advisor to make a unique academic plan specific to your individual needs!



*This is an unofficial document.*  
 It is the student's responsibility to ensure that their Degree Audit is accurate and that they have fulfilled all of their graduation requirements, including: University requirements, Bachelor's Degree requirements, General Education requirements and Major requirements.  
*Dropping or failing courses may adversely affect graduation, and students should consult with their advisor.*

Semester \_\_\_\_\_

Course	Credit Hours
<b>Total Hours:</b>	

Semester \_\_\_\_\_

Course	Credit Hours
<b>Total Hours:</b>	

Semester \_\_\_\_\_

Course	Credit Hours
<b>Total Hours:</b>	

Semester \_\_\_\_\_

Course	Credit Hours
<b>Total Hours:</b>	

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Course	Credit Hours
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Course	Credit Hours
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Course	Credit Hours
<b>Total Hours:</b>	

Semester \_\_\_\_\_

Course	Credit Hours
<b>Total Hours:</b>	