

# GEOGRAPHY - 5-YEAR BACHELOR OF SCIENCE AND MASTER OF GEOSCIENCE IN GEOSCIENCE

This 5-year program combines our bachelor of science in Geography 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 Geographic Information Science and Technology track of our professional MGsc degree, the graduate portion of this 5-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 5-year program will earn their bachelor of science degree in Geography after successfully completing 120 hours of coursework.

## Program Requirements

### First Year

Fall		Semester Credit Hours
GEOG 201	Introduction to Human Geography	3
GEOG 215	Geospatial Cornerstone	1
Life and physical sciences	<sup>1</sup>	4
Select one of the following:		
OCNG 251 & OCNG 252	The Blue Planet - Our Oceans and The Blue Planet - Our Oceans Laboratory	
GEOL 101 & GEOL 102	Principles of Geology and Principles of Geology Laboratory	
BIOL 111	Introductory Biology I	
CHEM 119	Fundamentals of Chemistry I	
PHYS 201	College Physics	
American history ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a> )		3

Communication (<http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication>) 3

Human geography elective <sup>2</sup> 3

**Semester Credit Hours 17**

### 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 <sup>1</sup> 4

Select one of the following:

ATMO 201 & ATMO 202 Weather and Climate and Weather and Climate Laboratory

GEOL 106 Historical Geology

BIOL 112 Introductory Biology II

CHEM 120 Fundamentals of Chemistry II

PHYS 202 College Physics

Human geography elective <sup>2</sup> 3

General elective <sup>4</sup> 3

**Semester Credit Hours 17**

### Second Year

#### 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 <sup>4</sup> 4

**Semester Credit Hours 16**

#### Spring

GEOG 390 Principles of Geographic Information Systems 4

POLS 207 State and Local Government 3

Creative arts (<http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts>) 3

Physical geography elective <sup>3</sup> 6

**Semester Credit Hours 16**

### Third Year

#### Fall

American history (<http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history>) 3

Language, philosophy and culture (<http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture>) 3

Geography elective <sup>5</sup> 9

**Semester Credit Hours 15**

#### Spring

Communication (<http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication>) 3

General elective <sup>4</sup> 13

**Semester Credit Hours 16**

**Fourth Year****Fall**

GEOG 450	Field Geography	3
GEOG 651	Remote Sensing for Geographical Analysis	3
GEOG 659	Geodatabases	3
GEOS 669 or OCNG 669	Introduction to Processing Geoscience Data with R or Python for Geosciences	3
General elective <sup>4</sup>		4
<b>Semester Credit Hours</b>		<b>16</b>

**Spring**

GEOG 440	History and Nature of Geography	3
Graduate theme elective <sup>6</sup>		6
General elective <sup>4</sup>		7
<b>Semester Credit Hours</b>		<b>16</b>

**Fifth Year****Fall**

GEOG 665	GIS-Based Spatial Analysis and Modeling	3
GEOG 676	GIS Programming	3
Graduate theme elective <sup>6</sup>		6
<b>Semester Credit Hours</b>		<b>12</b>

**Spring**

GEOG 678	WebGIS	3
GEOS 676	Capstone Experience	6
<b>Semester Credit Hours</b>		<b>9</b>
<b>Total Semester Credit Hours</b>		<b>150</b>

A maximum of 15 hours of graduate courses can be taken online, which is less than 50% of the required graduate degree hours.

The program includes a total of 156 hours, which up to 6 hours may be applied toward both the Bachelor of Science in Geography and the Master of Geoscience in Geoscience face-to-face program.

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

<sup>2</sup> 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.

<sup>3</sup> Select from GEOG 324, GEOG 331, GEOG 335, GEOG 360, GEOG 370/MARS 370, GEOG 400, GEOG 434, GEOG 435, GEOG 442/GEOL 442.

<sup>4</sup> Courses to be selected in consultation with advisor. Select any courses from 100-499 not used elsewhere. (Except AERS 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/aers/>); ASCC 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/ascc/>); ENGL 103; KINE 198, KINE 199; MATH 102-104, 131, 141-142, 150-151, 166, 171 (<http://catalog.tamu.edu/undergraduate/course-descriptions/math/>); MLSC 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/mlsc/>); NVSC 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/nvsc/>); SOMS 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/soms/>); STAT 211, STAT 302, STAT 303).

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

<sup>6</sup> 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.