

BACHELOR OF SCIENCE (B.S.) MAJOR IN GEOGRAPHIC INFORMATION SCIENCE

**Minimum required: 120
semester credit hours**

General Requirements

- The general education core curriculum courses are listed in the degree plan below along with the statewide component code number. See the General Education Core Curriculum (<http://mycatalog.txstate.edu/undergraduate/general-education-core-curriculum/>) section of this catalog for the Texas State requirements and options in the core curriculum, including Honors courses.
- This major requires students to select a minor area from the approved list of Undergraduate Minors (<http://www.mycatalog.txstate.edu/undergraduate/minors/>) offered at Texas State. Various minors may be appropriate depending upon your interests and career goals. Discuss other possible options with your academic advisor.
- This major requires a minimum of 36 semester credit hours of Geography courses.
- To satisfy graduation requirements, students must have at least a 2.50 major GPA for Geography and at least a 2.25 TXST GPA. Students must make a grade of "C" or better in all Geography courses that are to be counted for credit toward their major.
- Required major courses include the following:

Code	Title	Hours
GEO 1309 or GEO 1310	Introduction to Cultural Geography World Geography	3
GEO 2410	Introduction to Physical Geography	4
GEO 2426	Fundamentals of Geographic Information Systems	4
GEO 3301	Research Methods in Geography	3

- Required Geography core courses include the following:

Code	Title	Hours
GEO 3411	Maps and Mapmaking	4
GEO 3416	Remote Sensing and Earth Observation	4
GEO 3426	Advanced GIS	4

- Required 4000-level Geography includes at least three courses from the following:

Code	Title	Hours
GEO 4411	Advanced Cartographic Design	4
GEO 4412	Digital Image Processing and Machine Learning	4
GEO 4420	GeoProgramming	4
GEO 4422	Web Mapping	4
GEO 4424	GPS and GIS	4
GEO 4427	GIS Consulting Practicum	4
GEO 4380 or GEO 4430	Internship in Geography Field Methods	3

Students cannot take both GEO 4380 and GEO 4430 to count towards 4000-level requirement

- Students must complete a minimum of 36 advanced hours (3000 or 4000 level courses).
- The minimum number of hours required for this degree program is 120. The number of free elective hours a student will complete depends on the number of hours a student may need to achieve the required 120 total or 36 advanced hours.
- Nine semester credit hours must be writing intensive (WI).

Course Requirements

		Freshman	
		First Semester Hours	Second Semester Hours
ENG 1310 (Communication Component Code 010 [TCCN ENGL 1301])	3	ENG 1320 (Communication Component Code 010 [TCCN ENGL 1302])	3
US 1100	1	American History Component Code 060	3
POSI 2310 (Government/Political Science Component Code 070 [TCCN GOVT 2306])	3	Life and Physical Sciences Component Code 030	3
Life and Physical Sciences Component Code 030	3	GEO 2410	4
GEO 1309 or 1310 (TCCN GEOG 1302 or 1303)	3		
Mathematics Component Code 020	3		
	16		13

		Sophomore	
		First Semester Hours	Second Semester Hours
COMM 1310 (Component Area Option Code 090/091 [TCCN SPCH 1311])	3	POSI 2320 (Government/Political Science Component Code 070 [TCCN GOVT 2305])	3
ENG Literature (Component Area Option Code 090/094) [TCCN ENGL 2322, 2323, 2332, 2333, 2327 or 2328]	3	ENG Literature Select one of the following:	3
Modern Language 1410 (if required), or elective	4	ENG 2310 (TCCN ENGL 2322)	
American History Component Code 060	3	ENG 2320 (TCCN ENGL2323)	
GEO 3301	3	ENG 2330 (TCCN ENGL2332)	
		ENG 2340 (TCCN ENGL 2333)	
		ENG 2359 (TCCN ENGL 2327)	
		ENG 2360 (TCCN ENGL 2328)	
		Modern Language 1420 (if required, or elective)	4
		PHIL 1305 or 1320 (Language, Philosophy, and Culture Component Code 040 [TCCN PHIL 1301 or 2306])	3

	GEO Advanced Required/ Elective	3
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		16
Junior		
First Semester Hours	Second Semester Hours	
ART 2313, DAN 2313, MU 2313, or TH 2313 (Creative Arts Component Code 050 [TCCN HUMA 1315])	3 Minor	6
Social and Behavioral Sciences Component Code 080	3 Elective (as needed)	3
GEO Advanced Required/ Electives	7 GEO Advanced Required/ Electives	7
Choose one of the following:	3	
CS 1308 (TCCN COSC 1301)		
CIS 1323 (TCCN BCIS 1305)		
MATH 1317 (TCCN MATH 1316)		
MATH 2321 (TCCN MATH MATH 2313)		
MATH 2417 (TCCN MATH MATH 2412)		
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		16
Senior		
First Semester Hours	Second Semester Hours	
Minor	6 Minor	6
Electives (as needed)	3 Elective (as needed)	3
GEO Advanced Required/ Electives	6 GEO Advanced Required/ Elective	3
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		12
Total Hours: 120		