

GEOGRAPHY (GEOGRAPHIC INFORMATION SCIENCE & TECH) - BACHELOR OF SCIENCE

The Geographic Information Science and Technology (GIS&T) Concentration offers a solid foundation in geographic thought and human and physical geography, and provides students with advanced knowledge and skills in spatial analysis and modeling through the use of geographic information systems and remote sensing tools and concepts. Preparation for advanced studies is also provided.

Students must complete all University degree requirements, which include: General Education requirements, Viewing a Wider World requirements, and elective credits to total at least 120 credits with 48 credits in courses numbered 300 or above. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

Prefix	Title	Credits
General Education		
<i>Area I: Communications</i>		
<i>English Composition - Level 1</i>		
ENGL 1110G	Composition I	4
<i>English Composition - Level 2</i>		
ENGL 2210G	Professional and Technical Communication Honors	3
<i>Oral Communication</i>		
Choose one from the following:		
ACOM 1130G	Effective Leadership and Communication in Agriculture	3
COMM 1115G	Introduction to Communication	3
COMM 1130G	Public Speaking	3
<i>Area II: Mathematics</i>		
MATH 1430G	Applications of Calculus I ¹	3-4
or MATH 1250G	Trigonometry & Pre-Calculus	
<i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i>		
GEOG 1110G	Physical Geography (Departmental Requirement)	3
GEOG 1120G	World Regional Geography (Departmental Requirement)	3
or GEOG 1130G	Human Geography	3
Either an Area III/IV: Laboratory Sciences Course or Social/Behavioral Sciences Course (4 or 3 credits) ²		
<i>Area V: Humanities</i> ²		
<i>Area VI: Creative and Fine Arts</i> ²		
<i>General Education Elective</i>		
MATH 1350G	Introduction to Statistics	3
Viewing a Wider World ⁴		
Departmental/College Requirements		
GEOG 2130	Map Use and Analysis	3
GEOG 373	Introduction to Remote Sensing	4
GEOG 381	Cartography and GIS	4
GEOG 481	Fundamentals of GIS	4
GEOG 482	Geodatabase Design	3

GIS & T Area Courses

GEOG 441	GIS Design	3
GEOG 473	Advanced Remote Sensing	4
<i>Human Geography and Physical Geography Courses</i> ⁵		9
<i>Physical Geography (PG)</i>		
GEOG 351	Biogeography	3
GEOG 353	Geomorphology	3
GEOG 357	Climatology	3
GEOG 452	Landscape Ecology	3
<i>Human Geography (HG)</i> ⁶		
GEOG 361V	Challenges of Globalization	3
GEOG 363V	Cultural Geography	3
GEOG 365V	The City	3
<i>Human Environment Geography (HEG)</i> ⁶		3
GEOG 325V	New Mexico and the American West	3
GEOG 326	U.S. National Parks	3
GEOG 328V	Environment and Society of Latin America	3
GEOG 331V	Europe	3
GEOG 483	Field Explorations in Geography	3
Second Language Requirement: (required - see below)		6-8
Electives, to bring the total credits to 120 ⁷		35-39
9 credits must be upper-division		
Total Credits		120

¹ MATH 1430G Applications of Calculus I or MATH 1511G Calculus and Analytic Geometry I is required for the degree but students may need to take any prerequisites needed to enter MATH 1430G or MATH 1511G first.

² See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) section of the catalog for a full list of courses.

³ A ST 311 Statistical Applications is also an acceptable course to meet the departments Statistics course requirement, however it will not satisfy the General Education (GE) Elective requirement. If a student takes A ST 311 Statistical Applications, they will need to take an additional General Education course to complete the GE Elective requirement.

⁴ See the Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) section of the catalog for a full list of courses.

⁵ Select either one Physical Geography (PG) class and two Human Geography (HG) classes, OR two Physical Geography (PG) classes and one Human Geography (HG) class.

⁶ Courses that have the "V" distinction and are a Human Geography or Human-Environment Geography course will not count towards both the Viewing a Wider World and Human Geography or Human-Environment Geography requirements.

⁷ Elective credit may vary based on General Education course selection, second language requirements, prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

Second Language Requirement

For the Bachelor of Science in Geography with a Concentration in GIS&T there is a one year second language requirement, the options to complete

this requirement are listed below. The number of credits that a student needs to take may vary depending on what level they come in with. Please speak with an advisor for more information as to which courses you will need to take to fulfill the second language requirement for this degree.

Option 1:

Prefix	Title	Credits
Complete one of the following sequences:		
FREN 1110 & FREN 1120	French I and French II	8
GRMN 1110 & GRMN 1120	German I and German II	8
JAPN 1110 & JAPN 1120	Japanese I and Japanese II	8
SPAN 1110 & SPAN 1120	Spanish I and Spanish II	8
PORT 1110 & PORT 1120	Portuguese I and Portuguese II	6
<i>For Heritage Speakers:</i>		
SPAN 1210 & SPAN 1220 or SPAN 2210	Elementary Spanish for Heritage Learners I and Spanish for Heritage Learners II Spanish for Heritage Learners III	3-6

Option 2:

Prefix	Title	Credits
Complete 6 additional upper-division Geography courses (beyond major requirements)		6

Option 3:

Prefix	Title	Credits
Complete the following sequence for American Sign Language (with a C- or better):		
SIGN 1110	American Sign Language I	3
SIGN 1120	American Sign Language II	3

Option 4:

Prefix	Title	Credits
Challenge the 1120 level for the following courses:		
FREN 1120 or GRMN 1120 or JAPN 1120 or SPAN 1120	French II German II Japanese II Spanish II	4
<i>OR</i>		
Challenge the 1120/1220/2210 level for the following courses:		
PORT 1120 or SPAN 1220 or SPAN 2210	Portuguese II Spanish for Heritage Learners II Spanish for Heritage Learners III	3

Option 5:

Pass a three-credit, upper-division course (numbered 300 or above) taught in a second language by the department of Languages and Linguistics.

Option 6:

Obtain college certification of completion of three years of a second language at the high school level with a grade of C- or higher in the second-year level.

Option 7:

By obtaining certification of a working knowledge of a Native American language from the American Indian program director.

Option 8:

By obtaining, from the head of the Department of Languages and Linguistics, certification of a working knowledge of a second language if such language is not taught at NMSU.

Option 9:

In the case of a foreign student who is required to take the TOEFL exam admission, the dean will automatically waive the second language requirement.