

GEOGRAPHY (GEOGRAPHIC INFORMATION SCIENCE AND TECHNOLOGY) - BACHELOR OF SCIENCE

Course and Credit Requirements

The Department of Geography and Environmental Studies offers a Bachelor of Science in Geography with a concentration in Geographic Information Science and Technology (GIS&T). This major provides students with a strong foundation in geography, the study of how people and the environment interact across space and time, and introduces diverse concepts and methods from the natural sciences, social sciences, and humanities. Unlike the concentration in Environmental Studies, the GIS&T concentration focuses on the collection, analysis, and visualization of geospatial data using various technologies for tackling human and/or environmental challenges. Career opportunities for students pursuing this major span diverse fields, including data and information management, urban and regional planning, cultural and natural resources management, emergency management, and public health.

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. A grade of "C-" or better is required for all courses taken for the major. Students may not take any of these courses S/U.

Prefix	Title	Credits
General Education		
Area I: Communications		
English Composition - Level 1		
ENGL 1110G	Composition I	4
or ENGL 1110H	Composition I Honors	
English Composition - Level 2		
ENGL 2210G	Professional and Technical Communication	3
or ENGL 2210H	Professional and Technical Communication	
or ENGL 2215G	Advanced Technical and Professional Communication	
or ENGL 2221G	Writing in the Humanities and Social Science	
Oral Communication		
COMM 1115G	Introduction to Communication	3
or COMM 1130G	Public Speaking	
or HNRS 2175G	Introduction to Communication Honors	
Area II: Mathematics		
MATH 1220G	College Algebra	3
or MATH 1250G	Trigonometry & Pre-Calculus	
or MATH 1350G	Introduction to Statistics	
or MATH 2350G	Statistical Methods	
Area III/IV: Laboratory Sciences and Social/Behavioral Sciences		
GEOG 1110G	Physical Geography (Departmental Requirement)	10-11
GEOG 1120G	World Regional Geography (Departmental Requirement)	

or GEOG 1130G Human Geography		
Either an Area III/IV Laboratory Sciences Course or Social/ Behavioral Sciences Course (4 or 3 credits) ¹		
Area V: Humanities ¹		3
Area VI: Creative and Fine Arts ¹		3
General Education Elective		
MATH 1350G	Introduction to Statistics	3
or MATH 2350G	Statistical Methods	
Viewing a Wider World ²		6
Departmental/College Requirements		
Introductory GIS&T Courses		
GEOG 2130	Map Analysis & Interpretation	3
GEOG 373	Introduction to Remote Sensing	4
GEOG 381	Cartography and GIS	4
GEOG 481	Fundamentals of GIS	4
Advanced GIS&T Courses		
GEOG 473	Advanced Remote Sensing	4
GEOG 442	Programming for GIS	3
GEOG 485	Spatial Analysis and Modeling	3
Human Geography, Physical Geography, and Environmental Studies Courses		12-13
Select 12-13 credits from the following, choosing at least one course from each of these three areas: Physical Geography, Human Geography, and Environmental Studies.		
Physical Geography		
GEOG 351	Biogeography	
GEOG 353	Geomorphology	
GEOG 357	Weather & Climate: Earth's Dynamic Atmosphere	
GEOG 452	Landscape Ecology	
Human Geography		
GEOG 361V	Challenges and Opportunities of Globalization	
GEOG 363V	Culture, Nature, and the Environment	
GEOG 365V	The City	
Environmental Studies		
GEOG 325V	New Mexico and the American West	
GEOG 326	U.S. National Parks	
GEOG 328V	Environment and Society of Latin America	
GEOG 331V	Environment and Society of Europe	
GEOG 435	Planning a Sustainable World	
GEOG 455	Southwest Environments	
GEOG 483	Field Explorations in Geography	
Second Language Requirement (required - see below)		6-8
Electives, to bring the total credits to 120 ³		35-39
9 credits must be upper-division		
Total Credits		120

¹ See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) section of the catalog for a full list of courses.

² See the Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) (VWW) section of the catalog for a full list of courses. Geography students are required to complete two VWW courses, totaling 6 credits. One VWW course must be selected from outside the College of Arts and Sciences, and the other must be from outside the Department of Geography and Environmental Studies.

Students may substitute three credits earned through a Study Abroad Experience for one of the VWW course requirements.

- ³ Elective credits may vary depending on factors such as General Education course selection, second language requirements, prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount listed in the requirements is what's needed to reach the total of 120 credits but may vary based on the specific degree. However, students may need to complete more or fewer credits on a case-by-case basis, so it's important to discuss elective requirements with an advisor.

Second Language Requirement

For the Bachelor of Science in Geography with a concentration in Environmental Studies, all majors must demonstrate one-year proficiency in a foreign language (through the 1120 level, completed with a C- or better) or equivalent/placement. The options to fulfill this requirement are listed below. The number of credits required may vary depending on the student's existing language proficiency. Consult an advisor for more information on the courses needed to fulfill the second language requirement for this degree. Please note that language immersion courses are available through the Office of Experiential Learning and Education Abroad.

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 credits beyond the 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

OR

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.