

# GEOGRAPHY & ENVIRONMENTAL STUDIES

The Department of Geography & Environmental Studies offers undergraduate, master's, and doctoral geography degree programs with concentrations in environmental studies and geographic information science and technology.

Geographers study how and why human activities, natural features, and interactions between people and the environment vary across space and through time, and why this matters. Geographers thus address complex challenges ranging from poverty, ethnic conflict, and economic competition to environmental degradation, natural disasters, and climate change. They enter jobs in private, public, or non-profit settings in diverse areas, including and not limited to urban and regional planning, environmental consulting, natural resource management, public health, data and information management, and geospatial intelligence.

Students in the Department of Geography & Environmental Studies can choose from a wide range of courses in physical geography, human geography, human-environment geography, regional geography, and geographic information science and technology, tailoring their educational journey to align with their individual interests and career goals. Within physical geography, we offer classes such as Biogeography, Geomorphology, and Climatology, which focus on plants and animals, landforms, and climate, respectively. Challenges of Globalization, The City, and Geohumanities are among our human geography course offerings. With respect to human-environment geography, Planning a Sustainable World, Field Explorations, and U.S. National Parks are excellent choices. Regional geography classes address the human, physical, and human-environment geography of world regions such as Latin America, Europe, and New Mexico and the American West. Finally, in geographic information science and technology, students have opportunities to solve geographic problems using tools such as Remote Sensing, Geographic Information Systems (GIS), and Global Navigation Satellite Systems (GNSS). Maps are a common output of these efforts.

To support student educational and research needs, the Department of Geography & Environmental Studies has a computer teaching laboratory and a contracts and grants research laboratory (Spatial Applications Research Center – SpARC), both of which are equipped with state-of-the-art workstations that run a wide array of software packages. The Department also has unoccupied aerial systems (aka drones), a field spectroradiometer, survey-grade GPS units, and other equipment to foster research and research training. Excellent working relationships with various units on campus (e.g., the Water Resources Research Institute and Jornada Experimental Range) moreover provide students with opportunities for interdisciplinary and multidisciplinary exchanges.

## Undergraduate Program Information

The Department of Geography & Environmental Studies offers a Bachelor of Science degree in Geography with concentrations in Environmental Studies (ES) (<https://catalogs.nmsu.edu/nmsu/arts-sciences/geography/geography-environmental-studies-bachelor-science/>) and Geographic Information Science and Technology (GIS&T) (<https://catalogs.nmsu.edu/nmsu/arts-sciences/geography/geography-gis-tech-bachelor-science/>). Both concentrations require students to develop a broad geographic foundation by completing core courses in human, physical, and human-environment geography. Both concentrations also address the range of geographic challenges noted above and

complement each other. In fact, some students may wish to pursue both concentrations. However, some students may prefer more quantitative or more qualitative approaches to geographic problem solving and focus on only one of these two concentrations. In those cases, the GIS&T concentration is most suitable for students interested in computers, science, technology, statistics, and spatial analysis and modeling, while the ES concentration is most optimal for students interested in the overlapping cultural, social, and policy-related aspects of environmental issues.

The Department also offers Undergraduate Minors in Geography (<https://catalogs.nmsu.edu/nmsu/arts-sciences/geography/geography-undergraduate-minor/>) and Geographic Information Science and Technology (<https://catalogs.nmsu.edu/nmsu/arts-sciences/geography/geographic-information-science-technology-undergraduate-minor/>).

For more information about the undergraduate programs, please visit the Department of Geography & Environmental Studies home page (<https://geography.nmsu.edu/>). For additional questions, please contact any of the faculty members (<https://geography.nmsu.edu/about-us/faculty.html>) of the Department.

## Graduate Program Information

The Department of Geography & Environmental Studies offers graduate study leading to a Master of Applied Geography (MAG) (<https://catalogs.nmsu.edu/nmsu/graduate-school/geography-master-applied-geography/>) degree and to a Doctor of Philosophy (PhD) (<https://catalogs.nmsu.edu/nmsu/graduate-school/geography-doctor-philosophy/>) in Geography degree. The MAG program offers thesis and non-thesis (i.e., residency) paths for earning the master's degree. The PhD program is offered collaboratively with the Department of Geography & Environmental Studies at the University of New Mexico. The MAG and PhD programs both focus on applied approaches for understanding complex environmental issues, with students' choices of research design ranging from qualitative to quantitative and mixed methods.

The Department also offers a Graduate Minor in Geographic Information Science and Technology (<https://catalogs.nmsu.edu/nmsu/graduate-school/geographic-information-systems-graduate-minor/>).

The Department participates in the Western Regional Graduate Program (WRGP), which is supported by the Western Interstate Commission of Higher Education (WICHE). The WRGP is a tuition-reciprocity arrangement that enables students that are legal residents in WICHE states (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming) to attend NMSU and pay the resident tuition rate, instead of the nonresident rate that an out-of-state student would normally pay.

The Department offers some teaching and research assistantships, which are usually allocated during the admission process based on student qualifications and departmental needs.

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