GEOGRAPHIC INFORMATION SCIENCE AND TECHNOLOGY - MASTER OF SCIENCE (ONLINE)

Course and Credit Requirements

The Master of Science in Geographic Information Science and Technology (GIS&T) program curriculum is composed of a minimum of 30 graduate credits, including 20 required core credits, 3-4 elective credits, and 7 credits aimed at the completion of a capstone project and the development of a professional portfolio. All courses are offered as 8-week online courses.

- The **Core Courses** (20 credits) are designed to give students a solid common foundation in GIS&T theory, methods, and applications relevant for today's geospatial professionals.
  - Students who are already proficient in areas covered by one or more of these core courses (e.g., due to prior academic or work experience) may substitute them (Students will work with a faculty advisor to develop an alternative customized curriculum that meets their needs.).
- The **Elective Course** (3-4 credits) allows students to develop specialized knowledge and skills in their areas of interest.
- The **Capstone Project** (6 credits) requires students to design and implement an applied GIS&T project in their area of interest and expertise with guidance from a faculty advisor and in collaboration with an external partner. The project culminates in a) a written technical report, peer-reviewed publication, or comparable document and b) a formal oral presentation during the Digital Symposium, a public symposium hosted at the end of each semester by the GIS&T master's program for our external partners and the geospatial community at NMSU. Examples of external partners include and are not limited to the following:
  - City, county, state, and federal government agencies like the City of Las Cruces, Doña Ana County, New Mexico Fish and Wildlife Conservation Office, New Mexico Department of Transportation, New Mexico Department of Health, United States Geological Survey, United States Department of Agriculture, and Department of Defense units like White Sands Missile Range and the National Geospatial Intelligence Agency.
  - Companies like SWCA Environmental Consultants, Bohannan Huston Inc., Wilson & Company Inc., Merrick & Company, ESRI, L3Harris Geospatial, or Maxar Technologies.
  - Nonprofits like the Southern New Mexico Trail Alliance, Friends of Organ Mountains Desert Peaks, Gila Conservation Coalition, Taos Land Trust, New Mexico Land Conservancy, Nature Conservancy, World Wildlife Fund, or United States Fund for UNICEF."
- The **Professional Portfolio** (1 credit) is a digital representation of the student's accomplishments in the master's program and knowledge and skills as a geospatial professional.

Prefix	Title	Credits
Course Requirements		
GEOG 571	Cartography and GIS [1]	4
GEOG 578	Fundamentals of GIS	4
GEOG 573	Introduction to Remote Sensing	4
GEOG 542	Programming for GIS	3
GEOG 585	Spatial Analysis and Modeling	3
GEOG 545	Geospatial Professionalism	2
GEOG 544	GIS&T Professional Portfolio	1
GEOG 505	GIS&T Capstone I - Geospatial Research Design	3
GEOG 506	GIS&T Capstone II - Geospatial Research Implementation	3
Choose one of the following electives:		3-4
GEOG 582	Advanced Remote Sensing	
GEOG 588	GIS and Water Resources	
Total Credits		**30-31**