

EARTH AND ENVIRONMENTAL SCIENCE—GEOGRAPHIC INFORMATION SCIENCE (GIS), CERTIFICATE

GIS was developed in the 1960s and 1970s in response to the need for computer-based, mapping, analysis and decision, this 12-credit GIS Certificate program equips students with critical skills and knowledge through rigorous, hands-on coursework, followed by a capstone research/problem-solving experience. NJCU GIS-based projects (80+ since 1999) are frequently funded for our students, evidence of the value that organizations place upon those students able to use GIS.

The requirements for admission to this degree track are Basic Computer Skills (Pre-Program Assessment) and Basic Math Proficiency (AUR Math requirement).

Code	Title	Credits
Required		
EESC 252	GIS I: Contemporary Applications of GIS	3
EESC 350	GIS II: Contemp Analysis w/GIS	3
EESC 455	GIS III: Modeling with GIS	3
Elective: Select a minimum of three credits of SPFD X320 (Seminar in Cooperative Education), Independent Study, or other research-based course, in consultation with a faculty advisor.		3
Total Credits:		12

Student Learning Outcomes

Upon completion of the Geographic Information Science certification program, students will be able to:

1. Synthesize information from high-quality data sources whenever possible.
2. Ensure information integrity prior to analysis or publishing (e.g., through Web-based GIS).
3. Analyze data and information critically to obtain insight into potential uses or pitfalls.
4. Produce critically appraised maps and data that provide insight and/or add value.
5. Recommend courses of action in circumstances which might benefit from GIS-based data collection and analysis.
6. Communicate findings clearly and professionally to audiences from diverse backgrounds.