

Geographic Information Science and Technology

MAJOR MAP

How to use the map

This map is designed to give you information about your chosen major that will help keep you on track for graduation within 4 years. The introductory sections will help orient you to the “big picture” ideas like the topics and areas of interest inside your major, the kinds of courses you will take, university policies including admissions, and other general topics. The chart on the second page will help you to develop a productive plan to make the most of your 4 years at East Carolina University and prepare yourself for the job market after graduation.

Remember, it is important that you diversify your experiences, both for success in your degree program and for success outside of school. While coursework is important, it should not be your only focus. The chart below will show you how to incorporate other kinds of experiences that will expand your knowledge of your chosen field and make you a more desirable job candidate. The map is only a guideline. Remember to speak with your advisor often to learn about new opportunities, clarify concerns, and develop a plan that is right for you.



Questions?

East Carolina University offers an array of support to help you grow and learn from your first day of orientation until your graduation. New Student Orientation, Pirate to Pirate Mentoring, the University Writing Center, and the Career Center are only a few of the services and centers available to assist you throughout your time on campus.

WORKPLACE SUCCESS

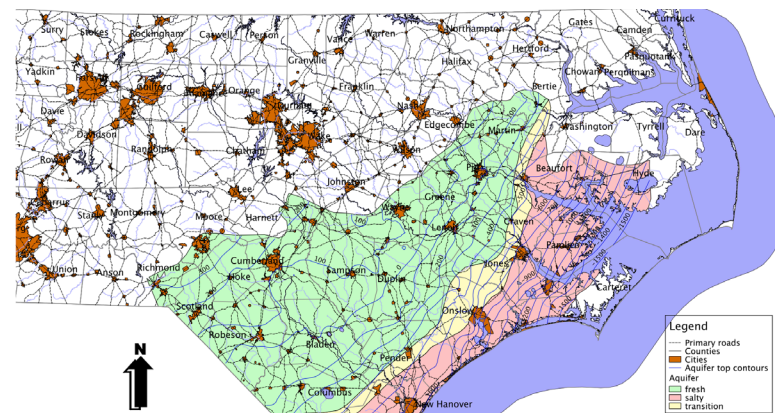
What employers want

With your GIST major, you will pursue a career that requires specific skills and experiences. These include:

1. Apply remote sensing and GIS for planning, hazards and educational analysis;
2. Create, maintain and ensure accuracy of spatial data sets;
3. Use spatial analysis techniques and spatial statistics;
4. Design maps and other geospatial visualizations;
5. Collect GPS and spatial data in the field;
6. Apply computer programming skills;
7. Have good verbal and written communication skills;
8. Professional interaction and interpersonal skills;
9. Be self-motivated and independent

WHAT CAN I LEARN?

Knowledge of Geographic Information Systems (GIS) is an increasingly sought after skill in industries from agriculture to public health. The GIST degree will teach the skills you need to successfully use GIS software in a professional setting. You will learn how to analyze your spatial data, use cartography techniques to communicate your results in maps, and collaborate with peers in GIS and GIS-dependent fields. You will create a professional-quality GIS portfolio piece using a combination of data identification and collaboration, analytical map development and spatial analysis techniques.




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THOMAS HARRIOT COLLEGE OF ARTS AND SCIENCES

Geographic Information Science and Technology



ADMISSIONS INFO

You can apply to the Thomas Harriot College of Arts and Sciences through the Office of Undergraduate Admissions website at www.ecu.edu/admissions. To be considered for admission, freshmen applicants will submit their high school transcript and standardized test scores. Transfer applicants will submit official transcripts from all previously attended institutions. Application deadlines and specific admissions requirements for freshmen and transfer applicants are listed on the website.

COURSE HIGHLIGHTS

The major offers a number of exciting courses. Some of these include:

- GEOG 2400: Spatial Data Analysis. This course is the foundation for data management and analysis in geographic information science. It introduces quantitative expressions common to geographic information science and descriptive and inferential spatial statistics.
- GEOG 2410: Fundamentals of Geographic Information System (GIS). This course serves as the foundation for understanding and using geographical information systems with an emphasis on creation, visualization and analysis of geographically referenced data.
- GEOG 3430: Geographic Information Systems I: An intermediate level GIS class with an in-depth focus on data creation, editing, and analysis.
- GEOG 3460: GIS Applications Programming: Use Python and other programming tools to automate geoprocessing tasks and create web GIS applications.

ABOUT THE CONCENTRATION

Our modern civilization consumes ever-increasing amounts of geospatial data. Creating information out of this torrent of data requires broad education and technical skills. The B.S. degree program in Geographic Information Science and Technology (GIST) at ECU can provide you this cutting-edge combination and open the doors to an exciting career in business, environmental conservation,

public utilities, and local to national government.

You can also earn a certificate in Geographic Information Science (GIS) whatever major program you are in, to get the breadth and intensity to launch your career.

DEGREE OPTIONS

With a B.S. degree in Geographic Information Science and Technology Electives, you can expect to complete:

- A total of 120 semester hours
- General education requirements: 40 semester hours
- Core degree requirements: 25 semester hours
- GIST electives: 12 semester hours
- Environmental and human geography: 9 semester hours
- Cognates: 9 semester hours
- Electives: 23 semester hours

Geographic Information Science and Technology MAJOR MAP

DEGREE INFORMATION



	FIRST YEAR >>>	SECOND YEAR >>>	THIRD YEAR >>>	FOURTH YEAR >>>
THE COURSES YOU NEED	Begin working on general education requirements, taking 3 each semester including ENGL 1100 in the fall and MATH 1065 in the spring. Register for GEOG 2410, 2400 and a GEOG elective. Also, take a cognates course.	Continue with general education requirements, taking a total of 13 semester hours including ENGL 2201. Register for GEOG 3420, 3450, 3430 and a GEOG elective. Also register for 2 cognates courses.	Begin getting into a minor or continue taking electives. Continue with 1 general education requirement and GIS elective each semester. Register for GEOG 3460 in the fall and GEOG 4410 in the spring.	Complete the general education requirements and take two more GIS electives. Complete minor or general electives. Register for GEOG 4430 in the fall and GEOG 4999 in the spring.
GAIN RELEVANT EXPERIENCE	Explore your major and career options in consultation with your advisor. Meet early with the GIST internship coordinator to discuss internship options in your junior year. Explore resources and sign up for newsletters at the GIS Lounge .	Meet with Career Services often to work on your post-graduation plans. Investigate job-related skills and identify gaps in your résumé so you can address them early. Use the Occupational Outlook Handbook , USAJobs.gov , and/or other resources available through Career Services to identify common skills in your career field.	Internships, part-time jobs, student leadership positions, and volunteer or community engagement activities can help build your résumé and give you valuable experience. Consider doing an internship with a local or regional public and private sectors.	Volunteering for political, governmental, or social organizations is a great way to get experience in your field, build your résumé, test your interest in working with diverse populations, and develop your professional network. During your final year you should also participate in ECU's Research and Creative Achievement Week .
COMMUNITY CONNECTION	Emails from the department will let you know about upcoming guest lectures, internship opportunities, and special events. Keep up with the department social calendar to attend events such as the Colloquium series that exposes students to different career options.	Join student or national organizations that suit your interests, which may include the American Congress on Surveying & Mapping , American Society of Photogrammetry & Remote Sensing , Cartography and Geographic Information Society or Urban Regional Information Systems Association .	Connect with the Center for Leadership and Civic Engagement to explore local opportunities. Volunteer through GIS Corps to help in a variety of mapping activities around the globe for disaster response, crowdsourcing, Humanitarian Open Street map projects, or to teach K-12 students about geospatial thinking.	Submit a proposal to present a polished research paper from one of your classes at the Southeastern Division of the American Association of Geographers, International Cartographic Conferences, or the GIS Annual meetings.
THINK GLOBALLY	Being internationally aware and culturally competent is increasingly important. Think about ways you could build these skills, which may include foreign language or Global Understanding courses, study abroad, or internationally-focused courses or student organizations.	Integrate internationally-oriented classes into your electives and consider a minor or second major in an international field or foreign language like Spanish or Chinese. Consider a Summer or semester-long study abroad program. Apply for study abroad scholarships in the early Fall.	Make the most of your return from your study abroad or internship program by becoming more active in your student organizations. Work with the Office of Global Affairs and the Career Center to learn how to leverage your study abroad experience to improve your job placement possibilities.	Take on a leadership position in one of your globally-oriented student organizations. Complete your program by incorporating more internationally-focused courses.
CAREER PREPAREDNESS	Visit Career Services to learn about their resources. Check out the Bureau of Labor Statistics and Virtual Job Shadow to explore potential careers. Log in to Handshake to set up your profile, check out career events, and begin to explore potential employers and job opportunities.	Meet with your Career Counselor to explore your goals and develop your résumé. Attend career fairs and other employer-related activities. Speak to your instructors and advisors about career options often. Consider contributing to faculty research projects to gain experience.	Develop your LinkedIn profile. Meet with your Career Counselor to discuss postgraduation plans. If needed, research graduate schools and program requirements. Continue to attend career fairs and other employer-related career events.	Meet with your Career Counselor to put your post-graduation plans into action. Refine your résumé, LinkedIn profile, and interview skills. Complete the Pirate Employment Survey.

APPLY FOR SCHOLARSHIPS EACH YEAR

CONSIDER AN INTERNSHIP

POST-GRAD OPTIONS

Students who graduate with a degree in Geographic Information Science and Technology have a variety of career options. Some of these include:

- Cartographer/CAD Analyst
- Imagery Intelligence Analyst
- Site Location Analyst
- GIS Database Administrator
- Internet Mapping
- Specialist Photogrammetrist
- Field Mapping Specialist
- Urban and Regional Planning
- Environmental Health
- Map Library Services
- Transportation and Logistics
- Intelligence/National Security
- Emergency Management
- Environmental Management
- Coastal Management

VISIT US ONLINE

For more information and an interactive map PDF, visit: <https://geography.ecu>

