



Lewis F. Rogers Institute for





## Associate of Science (A.S.) in Core Curriculum with Pathway Courses related to Environmental Health

Environmental Health is concerned with the work/home/business environment as it affects humans. According to the American Public Health Association, environmental health professionals monitor upstream factors influencing the health of all who are downstream. Working in environmental health ensures that both natural and anthropogenic environments are safe.

The Environmental Health pathway is a curriculum designed to prepare students to transition into the Bachelor of Science in Environmental and Spatial Analysis at the University of North Georgia or to transfer to another four-year institution in order to pursue further study in environmental public health. Students who complete the Associate of Science in Environmental Health and wish to continue their undergraduate studies at UNG should make an appointment with their academic advisor to explore the Environmental Studies or Interdisciplinary concentration area and discuss which directed electives are most relevant to the field of environmental health.

After completing core classes, students in the Environmental Health pathway are required to take the following courses plus 7 credit hours of major specific electives. AP Credit may apply for

## Associate of Science (A.S.) in Core Curriculum with Pathway Courses related to Geography

Geography pathway courses focus on the spatial analysis of the interrelationship between humans and their natural environments linking physical sciences and social sciences.

Geographers use maps, scientific observations, data, and technology to explain the spatial arrangement of physical features and human activities on Earth's surface. Physical geography, human geography, and Geographic Information Systems or Sciences (GIS) are the three primary areas in the discipline of geography. Physical geography studies physical features and patterns on Earth's surface. Human geography explores human activities and social patterns. GIS integrates geographic concepts and data with computer programs and a variety of analytical tools.

This Associate of Science (A.S.) in Geography partic

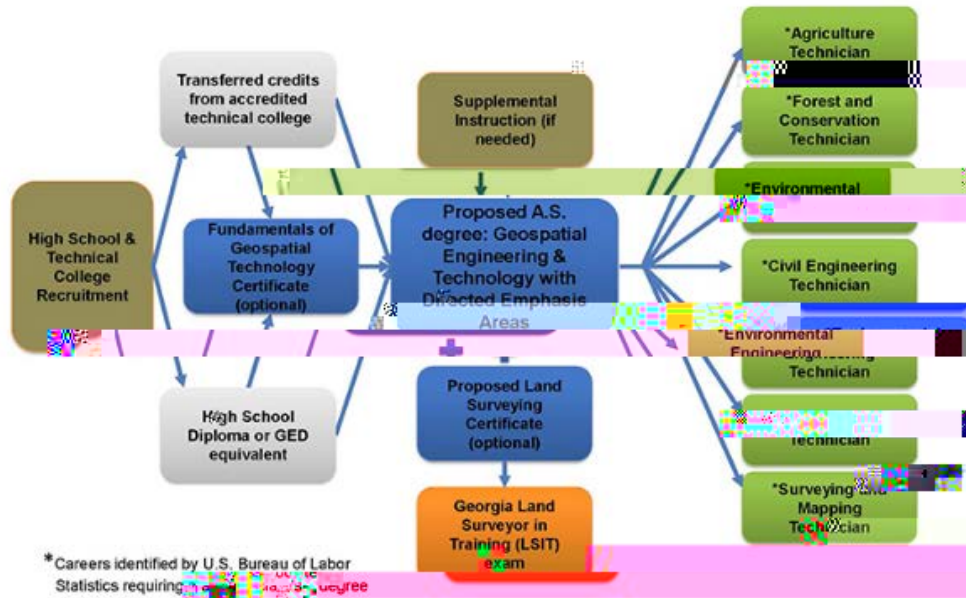
## Associate of Science (A.S.) in Core Curriculum with Pathway Courses Related to Geology

Geology is the study of the Earth. Geology describes planets' composition and the processes operating within and on its surface, its history and life. Geologists seek to understand these processes and answer practical questions using a wide array of scientific and engineering techniques ranging from field mapping, geophysical measurements, geochemical analyses, biological studies, earth and space-bound remote sensing.

The aim of geology is to ensure the future of humanity and the environment by understanding our planet's past through identifying and discovering new energy and material resources including freshwater from both terrestrial and extraterrestrial sources; forecasting and mitigating geologic hazards (such as earthquakes, volcanic eruptions, tsunamis, and landslides); formulating possible solutions to slow down anthropogenic climate change; educating the public and stakeholders on stewardship of the environment; and assisting policy and decision makers with the guiding principle that "civilizations exist by geological consent, subject to change without notice" by Will Durant.

# Associate of Science (A.S.) in Core Curriculum with Pathway Courses Related to Geospatial Engineering Technology

## AGET Technician Career Pathways



UNG has developed a new Associate of Science starting in Fall 2018. The goal -- to meet the demand for highly skilled and educated technicians in the burgeoning field of geospatial technology. Students enrolled in GET will be prepared for careers in fields such as land-use planning, flood plain mapping, environmental protection, precision farming and national security. GET funding provides an open lab for student use on the Gainesville campus to allow students free access to technology, tools, and tutoring to aid in academic success.

### Lab Hours

Tuesdays:	5:30 p.m. - 9:30 p.m.
Thursdays:	5:30 p.m. - 9:30 p.m.
Fridays:	3:00 p.m. - 7:00 p.m.
Saturdays:	8:00 a.m. - 12:00 p.m.







# Bachelor Degree Focus Areas

## Earth Systems Engineering Focus

This multi-disciplinary focus area is for those students who may wish to select their directed electives from courses which are applicable to working as a geospatial professional within engineering industries such as civil, environmental, geologic, agriculture, and ocean engineering, and others which are principally focused on earth related systems and projects.

## Earth Systems Science Focus

## Career Info for Environmental and Spatial Analysis

Most GIS and environmental professionals work full time, which is at least 40 hours per week. Individuals can expect both fieldwork and indoor work. When working outside, you may stand for long periods and often walk long distances, sometimes in bad weather. Handheld technologies are used in the field; data analysis is completed in the computer lab. Some technicians fly UAVs (drones) to collect aerial imagery of environmental conditions and then process the imagery with their other mapping data. Demand for surveying services is closely tied to construction activity, and job opportunities will vary by geographic region, often depending on local economic conditions. Increasing use of geographic technologies and data will drive employment growth in the careers of surveying, mapping technicians, geographers, environmental engineering, urban planning and community development.

Discovering GIS as a Career Choice

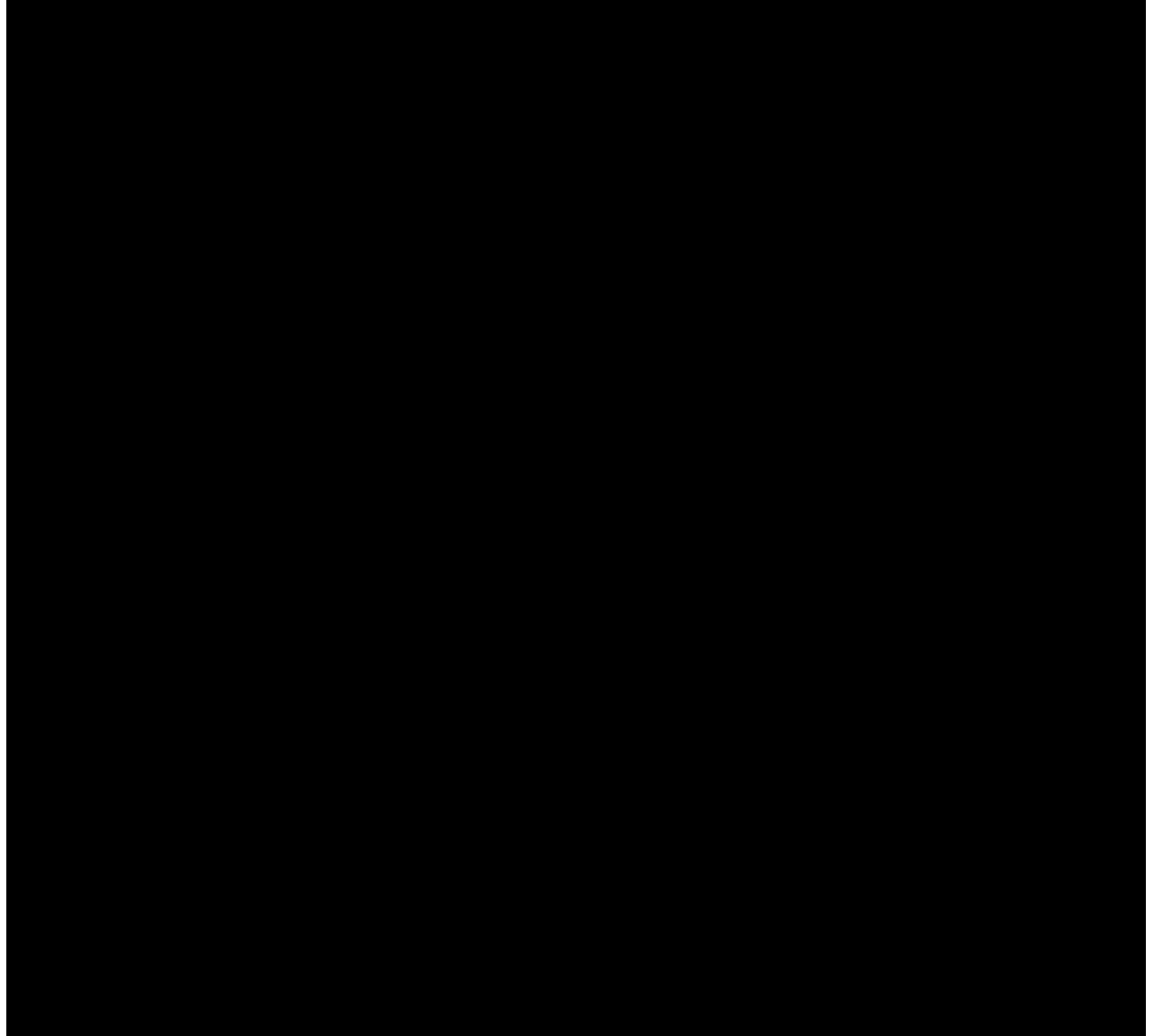
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Executive Director, American Association of Geographers

A column by Doug Richardson



When people ask what is so great about GIS, it's difficult for me to clearly explain because I'm still learning.

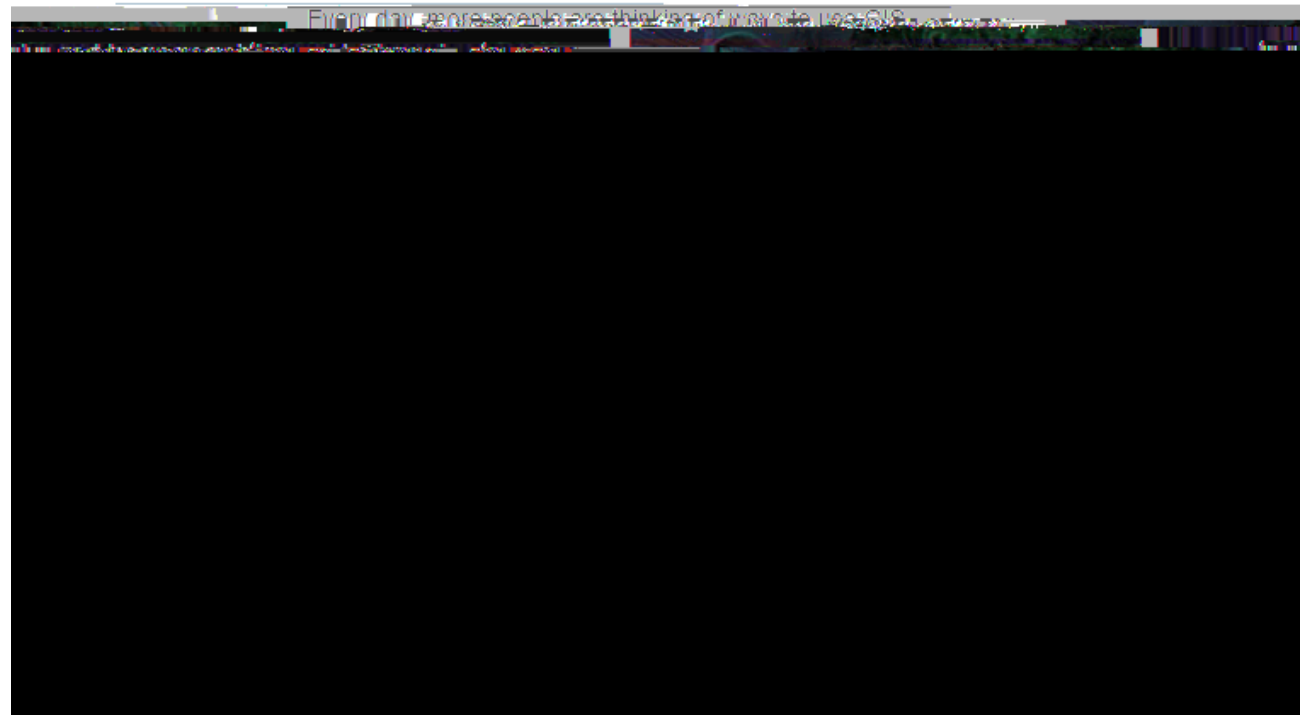
GIS is a powerful tool that can be used in many ways. It can be used to analyze spatial data, create maps, and solve complex problems. GIS is a versatile tool that can be used in many different fields, including business, science, and education. GIS is a powerful tool that can be used in many ways. It can be used to analyze spatial data, create maps, and solve complex problems. GIS is a versatile tool that can be used in many different fields, including business, science, and education.

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In addition to my coursework, my work experiences have solidified my interest in geography and GIS. I was lucky to have the opportunity to work as an intern with Doug Richardson at the American Association of Business Geographers. I have the ability to work in a field that is both challenging and rewarding. I am a hard worker and I am always looking for ways to improve myself.

For my first day walking into the library, when John brought me to where he'd be working, it was a big room with a computer, a few chairs, and a table stretching around the entire room with piles and piles of papers, books, binders, and notes. On the opposite wall were stacks of boxes, some taller than me. At first, I was a bit stunned. What was I supposed to be doing here? But

I've heard so many incredible stories over the years from professors and supervisors—from living for months in the inescapable heat to the bitter cold in the jungle as a cartographer to working with permafrost in the Arctic. From the most amazing ways to use GIS to the most amazing ways.



# Certificates: A Great Add On!

## Earth Science Certificate

Earth science describes the planet's features, patterns, composition and the

## Fundamentals of Geospatial Technology Certificate

Location is a fundamental attribute of all features. Professionals in a wide range of disciplines are utilizing geospatial technologies to collect, manage, and analyze geographic information for a deeper understanding of our world. In many careers, applied knowledge of geospatial technology has become a presumed prerequisite and allows users to determine unique and informative knowledge for myriad industries.

## Geographic Information Science Certificate

Professionals in a wide range of disciplines are utilizing GIS to collect, manage, and analyze geographic information for a deeper understanding of our world. In many careers, applied knowledge of geospatial technology has become a presumed prerequisite. In many corporations, GIS professionals are part of the IT department. Students with an interest in a career in computer science would be more job ready if also prepared to use software applications for GIS.

## Space Studies Certificate

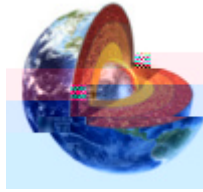
A certificate in space studies introduces students to the operational complexities of space ventures. Space activity is a multi-disciplinary industry and coursework in space studies allows students to correlate the space experience to several fields of study. Often political, legal, ethical, historical, scientific and technological aspects are considered when studying space ventures.

## Surveying Certificate (Coming Fall 2018)

A certificate in surveying prepares students to meet the industry demands for surveying technicians in the state of Georgia. Courses focus on applied skills specific to the field of surveying and are combined with either the Associate Pathway in Geospatial Engineering T(d )8.7(sos)3.6(d )8.7osaysosd ring T(d )87( )]TJ 0( )]TJ9

# Get involved with Student Clubs!

## GeoScience Association



Our primary function is to create opportunities for students interested in geosciences to further their interests and build relationships with other students with similar interests. We work with the geology department to maintain the university's rocks, minerals, and fossils collection and we also maintain close ties to the Geospatial Alliance club for continuing education opportunities in Geographic Information Science. Special topics lectures have included but are not limited to: medical geology, planetary geology, mineralogy and GIS, and environmental geology.

## GeoSpatial Alliance



The purpose of the Geospatial Alliance is to promote further educational and networking opportunities for students in the many fields of study that incorporate Geospatial Technology (GST). The specific objectives are: Discussing of current issues in geospatial science and technology, networking with the regional geospatial community, scheduling field trips and invited speakers to increase knowledge of the GST field, exploring the interconnections between GST and other disciplines, and promoting awareness of geospatial technologies and applications through educational outreach.

## Engineering Club



An academic and professional networking opportunity for the engineering students at the University of North Georgia Gainesville campus. This club is open to all engineering majors and will address general aspects of the engineering profession with a special emphasis groups of those interested in the earth related engineering fields and a group of those interested in the mechanical related engineering fields. The engineering club may often partner with associated clubs such as the geospatial alliance, geoscience and other clubs for activities and events.

## Student Chapter of the American Institute of Professional Geologist



The American Institute of Professional Geologists (AIPG) was founded in 1963 to promote the profession of geology and to provide certification for geologists as a vehicle for establishing a standard of excellence for the profession.



IESA Homepage: <https://ung.edu/institute-environmental-spatial-analysis/index.php>

Admissions: <https://ung.edu/landing/admissions.php>

Financial Aid & Scholarships: <https://ung.edu/financial-aid/index.php>

Tuition & Fees: <https://ung.edu/business-office/index.php>

### Application Deadlines

Spring Semester

November 1<sup>st</sup>

Fall & Summer

Early Action: November 15<sup>th</sup>

Regular Admissions: February 15<sup>th</sup>

Associate Degree Seeking Students: March 15<sup>th</sup>

### Dual Enrollment Deadlines

Spring: November 1

Summer: March 15

Fall: March 15