

# **Department of Geosciences**

## **Undergraduate Degree Programs**

- [Geosciences, B.S. \(Geography Concentration\)](#)
- [Geosciences, B.S. \(Geology and Environment Concentration\)](#)
- [Geosciences, B.S. \(Geospatial Science Concentration\)](#)
- [Geosciences, B.S. \(Paleontology Concentration\)](#)
- [Geographic Information Systems Minor](#)
- [Geography Minor](#)
- [Geology Minor](#)
- [Paleontology Minor](#)

## **Graduate Degree Programs**

- [Geosciences, M.S. \(Geospatial Analysis Concentration\)](#)
- [Geosciences, M.S. \(Paleontology Concentration\)](#)
- [Geographic Information Systems Graduate Certificate](#)

## **Careers in Geosciences**

Geoscience jobs are plentiful, salaries are robust, and the demand for young and enthusiastic geoscientists is expected to continue growing. The Department of Geosciences prepares students for a number of careers, in state, federal and local government and private sector agencies as environmental scientists, hydrologists, mining and geological engineers, paleontologists, spatial analysts, cartographers, natural hazard and emergency analysts. Recent graduates are employed with Virginia, Tennessee, and North Carolina Department of Transportation, Oak Ridge National Lab, TVA, National Geospatial Intelligence Agency, Tennessee Department of Environment, and several private consulting industries. Additional graduates are continuing their education in MS and PhD programs at UT-Knoxville, Virginia Tech, Texas A&M University, University of Kansas, Colorado School of Mines, and University of Arkansas. For more career information associated with this program, visit the Occupational Outlook Handbook (OOH) at [bls.gov/ooh/](https://bls.gov/ooh/).

## **Program Highlights**

- The Department of Geosciences includes an Honors-in-Discipline Program, which emphasizes student learning through experience, research and scholarship.
- Professors and students conduct research in the realm of ground-penetrating radar, remote sensing using drones, advanced software for cartography, hydrology, soil mechanics, volcanology, tsunamis, and other geological and engineering hazards. In addition, geospatial labs interact with students and research in other academic units such as surveying, public health, anthropology/archaeology, and biology.
- The program is one of only a few programs around the country that highlight vertebrate paleontology. Students have opportunities to conduct research at the Gray Fossil Site, which is a renowned working fossil site owned and operated by ETSU.

## **Points of Interest**

- All Geosciences students work both in the lab and in field. The undergraduate programs have many classes with multiple field trips with a culminating class field trip during spring break. Past trips have included the Grand Canyon, Colorado Plateau, and Death Valley, as well as Puerto Rico, Ontario, Canada, and Hawaii. Student fieldwork is common at the Gray Fossil Site, which is located 20 minutes from campus.
- Local field trips include visiting Appalachian Mountains, caves, streams, rock exposures along hiking trails, and local mines in Tennessee and North Carolina. Fieldwork is also the main stay in our geospatial realm with students learning to make data points in the field, fly one of the six drones used in the department, and learn to operate the ground-penetrating radar and magnetic susceptibility instruments.

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