

ETSU
Department of Geosciences
Undergraduate Research
Honors Program



DEPARTMENT of
GEOSCIENCES

College of Arts & Sciences

EAST TENNESSEE STATE UNIVERSITY

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The Undergraduate Research Honors Program (URHP) in the Department of Geosciences is designed to provide an enhanced educational program of study for students with majors in Geosciences (with concentration in Geospatial Sciences, Geology and Environment, Paleontology, and Geography & Sustainability). To ensure the quality of the program, only a limited number of spaces are available. All students selected for the program will be eligible for up to 8 semesters of URHP scholarships and a range of other benefits, detailed here: [Benefits & Opportunities \(etsu.edu\)](https://etsu.edu)

The Geosciences UHRP program focuses on student learning through original research. Our Honors students work with a diverse group of faculty, graduate students, and researchers to explore research opportunities and become involved in research activities. Our URHP students participate in professional conferences and present their work with peers and faculty supervisors.

I. Academic Program

Number of Credit Hours Required

The Geosciences Undergraduate Research Honors Program consists of a minimum of 18 credits, including: 1) 12 credits of Geosciences honors enriched courses, and 2) 6 credits of Honors Thesis research or a combination of 3 credits of Honors Thesis and 3 credits of Honors Geosciences Field Experience.

1. Honors-enriched Courses (minimum 12 credits): Several Geosciences upper level and some lower-level courses are enriched with an addition of a variety of laboratory, field and/or theoretical project components specifically designed to expose an honors student to a higher-level learning experience (section VI for details).
2. Honors Thesis Research (6 credits): Comprised of GEOS 4905 Independent Study (3 credits) plus GEOS 4018 Honors Thesis (3 credits). Students will identify and initiate a research project appropriate for an Honors Thesis which will be completed over at least two semesters. The student and a faculty project supervisor will mutually agree to the project.

or

Honors Geosciences Field Experience (3 credits) and Honors Thesis Research (3 credits). Students will participate in GEOS 3700-088: Geosciences Field Experience which visits a different region of North America or an international location each year. Course work includes production of a term paper, two oral presentations and active participation during the field experience. The Honors Thesis Research will include additional research on an aspect of the region mutually agreed to by the student and a field experience instructor.

II. Eligibility, Retention & Graduation Requirements

URHP students must meet all requirements and comply with policies of the Honors College. Current policies are detailed here: [Policies for Current Students \(etsu.edu\)](https://etsu.edu/urhp/policies). General information includes:

1. Eligibility

Applications for admission to the URHP program will be accepted from students in the second semester of their freshman year onward. However, admission will be contingent upon their final grades upon completion of the freshman year.

Both ETSU students and transfer students must have a minimum overall ETSU GPA of 3.2 and a minimum GPA of 3.5 in Geosciences courses.

2. Retention

A URHP student must remain registered for a minimum of 15 credits per semester. An exception is one capstone semester when students may register for only 12 credit hours, contingent on approval of the Honors College URHP Director.

Students must maintain a minimum overall ETSU GPA of 3.2 with a minimum GPA of 3.5 in Geosciences.

Honors students who do not meet these requirements may be granted one semester of probation by the Honors College and URHP Coordinator. If the student meets the retention requirements after the probationary period, they will be allowed to remain in the Honors Program.

3. Graduation

To graduate with Honors in Geosciences, an honors student should have a minimum 3.2 GPA, complete all required courses (Honors, General Education, Academic Proficiencies), and complete and orally present the Honors Thesis. In addition, the honor thesis grade must be B or higher.

III. Application & Admission Procedures

Interested students should complete an online application for the URHP program, available here: [Qualifications & Application \(etsu.edu\)](https://etsu.edu/urhp/qualifications).

The URHP application includes:

1. A statement describing student's expectations of the ETSU Geosciences Undergraduate Research Honors Program, career goals, and proposed faculty mentor name (after consultation with the faculty mentor).
2. A list of Geosciences courses that have been taken and the grades earned.
3. A list of future Honors classes required for timely graduation (after consultation with Geosciences URHP Coordinator).
4. A letter of recommendation from faculty (in Geosciences or related field) requested by the student and submitted directly to the Honors College application portal.

IV. University Research Honors Scholarships

Beginning Fall 2023, newly admitted students (both Tennessee residents and Out-of-State) who participate in the Undergraduate Research Honors Program will receive a scholarship of \$2500 (\$1250 per semester) towards tuition. This scholarship is awarded for a maximum of eight semesters of study, contingent on maintaining eligibility. The 8-semester maximum is cumulative with other ETSU tuition scholarships, such as APS. Scholarships are awarded to eligible students for both fall and spring semesters as they become available. Details of URHP Scholarships and info for URHP students admitted prior to Fall 2023 can be found here: [Benefits & Opportunities \(etsu.edu\)](https://etsu.edu)

V. Program Coordination & Student Mentoring

URHP Coordinator

1. The URHP coordinators are responsible for administration of the Geosciences Undergraduate Research Honors Program.
2. The honors program coordinator will advise honors students, maintain folders, monitor progress, assemble reports, and meet with students once each semester.

Honors Faculty Mentor

The honors faculty will consist of those teaching honors courses and/or directing honors thesis in any given year and will be responsible for maintaining the standards of the respective honors enriched courses taught by them.

VI. Honors-Enriched Courses & Enrichment Experiences

Honors-Enriched Courses:

- GEOS 2000-088 Earth Materials (4 credits)
- GEOS 2020-088 Scientific Methods in Geosciences (4 credits)
- GEOS 2480-088 Field Methods in Geosciences (4 credits)
- GEOS 2500-088 Digital Mapping with GIS (3 credits)
- GEOS 3000-088 Volcanology (3 credits)
- GEOS 3060-088 Geomorphology (4 credits)
- GEOS 3391-088 Paleobiology (4 credits)
- GEOS 3395-088 Vertebrate Paleontology (4 credits)
- GEOS 3090-088 Meteorology and Climatology (4 credits)
- GEOS 3400-088 Geography of the United States (3 credits)
- GEOS 3481-088 Natural Hazards and Society (3 credits)
- GEOS 3500-088 Geographic Information Systems (3 credits)
- GEOS 3600-088 Remote Sensing (3 credits)
- GEOS 3700-088 Geosciences Field Experience (3 credits)
- GEOS 4120-088 Petrography (4 credits)
- GEOS 4200-088 Soil Geoscience (3 credits)
- GEOS 4237-088 Advanced Remote Sensing (3 credits)
- GEOS 4307-088 Regional Geography (3 credits)
- GEOS 4317-088 Advanced Geographic Information Systems (3 credits)
- GEOS 4540-088 Sedimentation-Stratigraphy (4 credits)
- GEOS 4587-088 Engineering Geology (4 credits)
- GEOS 4617-088 Structural Geology (4 credits)

GEOS 4700-088 Natural Resource Management (3 credits)

GEOS 4857-088 Principles of Hydrogeology (4 credits)

Honors Thesis:

GEOS Honors Thesis (3-6 credits). Prerequisites: Permission of Department Chair. The Department of Geosciences will require the completion of a senior Honors Thesis as a capstone course. A Geosciences faculty member, chosen in coordination with the student, will direct a 6-credit hour thesis project (3 credits as GEOS 4905 Independent Study plus 3 credits of GEOS 4018 Honors Thesis, OR 3 credits as GEOS 3700-088 Honors Field Experience plus 3 credits of GEOS 4018 Honors Thesis). One additional faculty member will serve on the committee as a reader with the faculty advisor. An oral presentation of thesis results is required.

Example Enrichment Experiences:

- Honors students will select a topic, work with relevant real-world data, and apply scientific methods to analyze the data.
- Honors students will be required to write a term papers on a topic within the field of study, which involves synthesis of published literature on the topic or comparing and contrasting key sources.
- Honors students will present their research to the class using either an oral presentation, poster presentation, or original map composition.
- Honors students will be required to volunteer with a partner institution, nonprofit group, city or state park, or local or state government and amass a minimum of 20 hours of community service.
- Honors students will be expected to study earth materials (soil/rock/water) from the region and describe the findings in detail.

VII. Geosciences Undergraduate Research Honors Student Checklist

Name: _____ Student #: _____

- All Geosciences Honors students must complete a minimum of 12 credits of Geosciences honors enriched courses [GEOS XXXX-088]

Honors Enriched Course	Credits	Semester Completed
Total		

- Honors-in-Geosciences students must complete 6 credits of Honors Thesis research [GEOS 4905 and 4018] or 3 credits of Honors Thesis [GEOS 4905] and 3 credits of Geosciences Field Experience [GEOS 3700-088]
- Junior Year: Meet with faculty members in the department to determine thesis project and supervisor. Submit a research proposal to research supervisor and Department Honors Coordinator.
- Junior Year: Choose one additional reader for your thesis.
- Junior Year: Juniors in GEOS Honors program are required to participate in the Research-in-Progress session at the Annual Dr. Jay Boland Undergraduate Research Symposium.
- Senior Year: Fall semester and Spring semester – register for Honors Thesis credit hours and complete thesis research project.
- Senior Year: Publicly present thesis either at a department seminar, or through a professional setting (Boland Symposium, Appalachian Student Research Forum, or professional conference).
- Senior Year: Careful editing of the thesis by the committee (supervisor and reader) for content, organization, and grammar is required.
- The signed thesis must be turned into the Honors College by Nov. 15 (Fall Semester) or April 15 (Spring Semester).
- Submission as an eThesis.