

# Earth and Environmental Systems

Forestry is the study of forest ecosystems and the environmental components and processes (biological, physical, and chemical) that affect them.

Forestry majors at Sewanee are broadly trained to integrate traditional forestry coursework (dendrology, silviculture, forest ecology, and natural resource management) with courses outside the department in biology, chemistry, economics, and mathematics. Courses in soils, hydrology, natural resource policy, GIS (Geographic Information Systems), wildlife management, urban forest management, and tropical and boreal forestry are also either encouraged or required. Forestry majors participate in the department's junior presentations seminar and senior capstone interdisciplinary field course along with all students majoring in geology or natural resources and the environment.

## Requirements for the Major in Forestry

The major requires successful completion of the following:

Code	Title	Semester Hours
<b>Course Requirements</b> <sup>1</sup>		
CHEM 100 or CHEM 120	Foundations of Chemistry General Chemistry (Lab)	4
FORS 121	Introduction to Forestry (Lab)	4
FORS 211	Dendrology (Lab)	4
FORS 262	Forest and Watershed Restoration (Lab)	4
FORS 303 or GEOL 314	Soils (Lab) Hydrology (Lab)	4
FORS 305	Forest Ecology (Lab)	4
FORS 312	Silviculture (Lab)	4
FORS 319	Natural Resource Management and Decisions	4
FORS 332	Oral Presentations	2
GEOL 121	Physical Geology (Lab)	4
Select one of the following:		4
An additional lab course in biology (BIOL)		
An additional lab course in chemistry (CHEM)		
BIOL 130	Field Investigations in Biology	
BIOL 200	Entomology	
ENST 240	Island Ecology (Lab) (summer program)	
PHYS 105	Energy and the Environment	
PHYS 106	Foundations of Global Warming	
Select one additional course in forestry (FORS)		4
Total Semester Hours		46

Code	Title	Semester Hours
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## Additional Requirements

A comprehensive examination

Department capstone requirement, which may be satisfied by:

- Receiving a grade of C or higher on the Elberton Project undertaken in GEOL 320 - Petrology;
- Completing no earlier than the second semester of their junior year an independent study project that culminates in a technical paper or a presentation at Scholarship Sewanee; or,
- Completing ESCI 450 during the spring semester of their senior year.

## Footnotes

<sup>1</sup> The following courses are suggested but not required: an additional chemistry lab course, one GIS-based course, MATH 101, PHIL 230 or RELG 341, and STAT 204 or FORS 307.

## Writing-Intensive Course in the Major Requirement

Students majoring in forestry, geology, or natural resources and the environment can satisfy their writing-in-the-major requirement by

1. successfully completing GEOL 320, or other designated writing-intensive course in the department, or
2. by successfully completing three forestry and/or geology designated “writing portfolio” courses. Written and edited scientific papers from each writing portfolio course are to be compiled into a scientific writing portfolio by each student, and maintained by his/her advisor.

The following courses are designated as writing portfolio or writing-intensive courses in the Department of Earth and Environmental Systems. Other courses may be approved as such during some years. In exceptional cases and by faculty permission, one of the three writing portfolio courses might be fulfilled by FORS 444 or GEOL 444.

### Writing Portfolio Courses in the Department of Earth and Environmental Systems (three required):

Code	Title	Semester Hours
<b>Forestry Major</b>		
FORS 204	Forest Wildlife Management (project report)	4
FORS 262	Forest and Watershed Restoration (Lab) (class paper)	4
FORS 305	Forest Ecology (Lab) (lab report or paper)	4
FORS 312	Silviculture (Lab) (lab report or paper)	4
FORS 319	Natural Resource Management and Decisions (project report)	4
<b>Geology Major</b>		
GEOL 320	Igneous and Metamorphic Petrology (Lab) (writing-intensive)	4
<b>Natural Resources and the Environment Major</b>		
FORS 204	Forest Wildlife Management (project report)	4
FORS 262	Forest and Watershed Restoration (Lab) (class paper)	4
FORS 305	Forest Ecology (Lab) (lab report or paper)	4
FORS 312	Silviculture (Lab) (lab report or paper)	4
FORS 319	Natural Resource Management and Decisions (project report)	4
GEOL 222	Historical Geology (Lab) (term paper)	4
GEOL 305	Economic Geological Resources (Lab) (field trip report)	4
GEOL 314	Hydrology (Lab) (lab report)	4