Minimum credit hours required for graduation is 120.

**Degree Core Requirements (21 credits):**

**Forest Science (9 credits)**
- FREC 2214 Introduction to Land and Field Measurements (3 credits)
- FREC 2314 Forest Biology and Dendrology (2 credits)
- FREC 2324 Dendrology Laboratory (1 credit)
- FREC 3314 Forest Ecology and Silvics (3 credits)

**Geospatial Analysis (3 credits)**
- FREC 1004 Digital Planet (3 credits)

**Environmental Economics (3 credits)**
- FREC 4014 Natural Resources Economics (3 credits)

**Policy (3 credits)**
- FREC 4434 Natural Resource Policy (3 credits)

**Oral Communication (3 credits — choose one)**
- COMM 2004 Public Speaking (3 credits) or FREC 3524 Environmental Interpretation (3 credits)

**Computational Requirements (30 credits)**
- BIT 3424 Introduction to Business Analytics Modeling (3 credits) (Pre: BIT 2406 or CS 1054 or CS 1114 or CS 1124 or CS 1705)
- BIT 4514 Database Technology for Business (3 credits)
- BIT 4524 Systems Development (3 credits)
- CS 1124 Introduction to Media Computation or CS 1044 Introduction to Programming in C or CS 1064 Introduction to Programming in Python (3 credits)
- FREC 1044 Introduction to Environmental Informatics (3 credits)
- FREC 4114 Information Technologies for Natural Resources Management (3 credits)
- FREC 4214 Forest Photogrammetry and Spatial Data Processing (3 credits)
- FREC 4444 Integrated Forest Management Practicum (3 credits)
- STAT 2524 Data Science (3 credits)
- STAT 3615 Biological Statistics (3 credits)
Curriculum for Liberal Education Requirements (36 credits)

Area 1: Writing and Discourse (6 credits)
   ___ Approved CLE Area 1 course: ____________________________
   ___ Approved CLE Area 1 course: ____________________________

Area 2: Ideas, Cultural Traditions, and Values (6 credits)
   ___ Approved CLE Area 2 course: ____________________________
   ___ Approved CLE Area 2 course: ____________________________+

Area 3: Society and Human Behavior (6 credits)
   ___ AAEC 1005 or 1006 Economics of Food & Fiber Systems OR Econ 2005 Principles of Economics (3)
   ___ Approved CLE Area 3 course: ____________________________

Area 4: Scientific Reasoning and Discovery (8 credits)
   ___ BIOL 1105 Principles of Biology (3)
   ___ BIOL 1106 Principles of Biology (3)
   ___ BIOL 1115 Principles of Biology Laboratory (1)
   ___ BIOL 1116 Principles of Biology Laboratory (1)

Area 5: Quantitative and Symbolic Reasoning (6 credits)
   ___ MATH 1025 Elementary Calculus or MATH 1225 Calculus of a Single Variable or MATH 1525 Elementary
     Calculus with Matrices (3 credits)
   ___ MATH 1026 Elementary Calculus or MATH 1226 Calculus of a Single Variable or MATH 1526 Elementary
     Calculus with Matrices (3 credits)

Area 6: Creativity and Aesthetic Experience (1 credit)
   ___ Approved CLE Area 6 course: ____________________________

Area 7: Critical Issues in a Global Context (3 credits)
   ___ Approved CLE Area 7 course: ____________________________

Free Electives -- 33 credits

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IMPORTANT NOTES ON THE FOLLOWING PAGE.
Environmental Informatics Notes

Satisfactory Progress
By the end of the semester in which the student has attempted 60 hours (including transfer, advanced placement, advanced standing, and credit by examination), "satisfactory progress" towards a B.S. degree in the College of Natural Resources and Environment will include the following minimum criteria:

- Having an in-major and overall grade point average (GPA) of at least 2.0.
- Passing at least 24 semester credits that apply to the Curriculum for Liberal Education (CLE)
- Passing the following courses, or their equivalents: BIOL 1105, 1106 and 1115, 1116; MATH 1025, 1225, or 1525.

Foreign Language Requirement: Students who did not successfully complete at least two (2) units of a single foreign or classical language during high school must successfully complete: a) six (6) semester hours of a single college level foreign or classical language (credits do not count toward graduation) or b) receive credit by examination for six (6) semester hours of a single foreign or classical language (credits do not count toward graduation). This must be accomplished by the end of the academic year in which the student has attempted 60 semester credit hours (including transfer, advanced placement, advanced standing, and credit by examination). For additional information refer to the Language Study Requirement section of the current undergraduate catalog.

Policy on Student Exchanges
Studying overseas or at another U.S. university is a wonderful opportunity to enhance your education. However, planning for an exchange should begin at least 9 months prior to leaving. This will allow time to determine what substitutions, if any, will be allowed and time to arrange your schedule at Virginia Tech to ensure that all requirements for graduation are met. You must complete an Exchange Program checklist (available in 138 Cheatham Hall) and obtain the required signatures before beginning the exchange program.

Curriculum Planning
Students should plan early with their advisors to determine appropriate sequences for their courses. Some courses must be taken in sequence to satisfy prerequisites.

Degree Requirements
An in-major and overall GPA of 2.0 is required for graduation. In-major GPA is calculated based on all courses with prefixes FREC, FIW, and GEOG. Minimum hours for degree is 120.

Prerequisites
Some of the listed courses have prerequisites. Be sure to consult with the University Catalog or check with your advisor.