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COLLEGE OF NATURAL RESOURCES AND ENVIRONMENT
Department of Forest Resources and Environmental Conservation
Bachelor of Science in Forest Resources and Environmental Conservation
Major: Environmental Informatics
For Students Graduating in Calendar Year 2020

Minimum credit hours required for graduation is 120. Prerequisites or enrollment restrictions may apply to some courses. Consult the undergraduate course catalog or the timetable of classes.

Degree Core Requirements (21 credits):

Forest Science (9 credits – take all)

____ 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 – take all)

____ FREC 4114 Information Technologies for Natural Resources Management (3 credits)

Environmental Economics (3 credits – take all)

____ FREC 4014 (NR 4014) Natural Resources Economics (3 credits)

Policy (3 credits – take all)

____ 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 (33 credits)

____ BIT 3424 Introduction to Business Analytics Modeling (3 credits)
____ BIT 4514 Database Technology for Business (3 credits)
____ BIT 4524 Systems Development (3 credits)
____ CS 1124 Introduction to Media Computation (3 credits)
or CS 1044 Introduction to Programming in C (3 credits)
or CS 1064 Introduction to Programming in Python (3 credits)
____ FREC 1004 Digital Planet (3 credits)
____ FREC 1044 Introduction to Environmental Informatics (3 credits)
____ FREC 3004: Environmental Informatics (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)

NOTICE: Some courses have pre-requisites. Please check the Course Catalog for details.

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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 credits)
____ Approved CLE Area 3 course: _____

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

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 – 30 credits

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IMPORTANT NOTES ON THE FOLLOWING PAGE

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ENVIRONMENTAL INFORMATICS NOTES

1. 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.

2. Foreign Language Requirement
A sequence of two (2) foreign language courses is required for graduation unless two (2) high school credits of the same foreign language or six (6) transfer credit hours of foreign language have been earned. These credits do not count toward graduation. See catalog section on "Graduation Requirements."

3. 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.

4. In-major GPA Computation
Includes all courses designated as FREC, FIW, and GEOG.

5. 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.

6. Degree Requirements
An in-major and overall GPA of 2.0 is required for graduation. Minimum hours for degree is 120. In accordance with university guidelines, courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree (e.g. CLE).

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