

COLLEGE OF NATURAL RESOURCES AND ENVIRONMENT
Department of Forest Resources and Environmental Conservation
Bachelor of Science in Forest Resources and Environmental Conservation
Major: Forestry
Option: Urban Forestry
For Students Graduating in Calendar Year 2021

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)

- ☐ 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 2614 Human-Environment Systems (3 credits)
- ☐ FREC 3524 Environmental Interpretation* (3 credits) **or** COMM 2004 Public Speaking (3 credits)
- ☐ FREC 4014 (NR4014) Natural Resources Economics* (3 credits)
- ☐ FREC 4114 Information Technologies for Natural Resource Management* (3 credits)
- ☐ FREC 4434 Natural Resource Policy* (3 credits)

Urban Forestry Option Requirements (28 credits)

- ☐ CSES 3134 (ENSC 3134) Soils in the Landscape (3 credits)
- ☐ FREC 2134 (HORT 2134) Plants and Greenspaces in Urban Communities (3 credits)
- ☐ FREC 3314 Forest Ecology and Silvics* (3 credits)
- ☐ FREC 3354 (HORT 3354) Trees in the Built Environment* (3 credits)
- ☐ FREC 3454 Trees in the Built Environment Lab* (1 credit)
- ☐ FREC 4454 Urban and Community Forestry* (3 credit)
- ☐ FREC 4514 Forest and Tree Pests* (3 credits)

Geospatial Analysis Elective (3 credits – take one)

- ☐ FREC 4214 Forest Photogrammetry and Spatial Data Processing* (3 credits)
- ☐ GEOG 4354 (GEOS 4354) Introduction to Remote Sensing (3 credits)

Physical Science Elective (3 credits – take one)

- ☐ BIOL 1106 Principles of Biology (3 credits)
- ☐ BIOL 2304 (HORT 2304) Plant Biology* (3 credits)
- ☐ CHEM 1036 General Chemistry* (3 credits)
- ☐ GEOS 1004 Earth Science (3 credits)
- ☐ GEOS 1024 Earth Resources, Society, & Environment (3 credits)

Woody Plant Identification Elective (3 credits – take one)

- ☐ HORT 3325 Woody Landscape Plants (3 credits)
- ☐ HORT 3326 Woody Landscape Plants (3 credits)

Urban Forestry Restricted Electives (21 credits – see accompanying lists)

- ☐ Advanced Forestry and Environmental Science Restricted Elective (6 credits)
- ☐ Applied Plant Sciences Restricted Elective (6 credits)
- ☐ Policy, Planning, and Business Restricted Elective (9 credits)

*Course may have prerequisites, corequisites, or other restrictions. Consult Course Catalog for details.

CLE Requirements (36–38 credits)

Area 1: Writing and Discourse (6 credits)

____ ENGL 1105 First-Year Writing (3 credits)

____ ENGL 1106 First-Year Writing (3 credits)

Area 2: Ideas, Cultural Traditions, and Values (6 credits)

____ FREC 2554 (LAR 2554, NR 2554) Leadership for Global Sustainability (3 credits)

____ CLE Area 2 course: _____ (3 credits)

Area 3: Society and Human Behavior (6 credits)

____ AAEC 1005 Economics of the Food and Fiber System **or** ECON 2005 Principles of Economics
(3 credits)

____ CLE Area 3 course: _____ (3 credits)

Area 4: Scientific Reasoning and Discovery (8 credits)

____ BIOL 1105 Principles of Biology (3 credits)

____ BIOL 1115 Principles of Biology Laboratory* (1 credit)

____ CHEM 1035 General Chemistry* (3 credits)

____ CHEM 1045 General Chemistry Lab* (1 credit)

Area 5: Quantitative and Symbolic Reasoning (6–8 credits)

____ MATH 1025 Elementary Calculus (3 credits) **or** MATH 1225 Calculus of a Single
Variable (4 credits)

____ MATH 1026 Elementary Calculus (3 credits) **or** MATH 1226 Calculus of a Single
Variable (4 credits)

Area 6: Creativity and Aesthetic Experience (1 credit)

____ CLE Area 6 course: _____ (1 credit)

Area 7: Critical Issues in a Global Context (3 credits)

____ CLE Area 7 course: _____ (3 credits)

Free Electives (12–14 credits)

*Course may have prerequisites, corequisites, or other restrictions. Consult Course Catalog for details.

Urban Forestry Restricted Electives (21 credits – see lists below)

Advanced Forestry and Environmental Science Restricted Electives (Choose 6 credits)

CSES	4444	(ENSC 4444) Managed Ecosystems, Ecosystem Services, and Sustainability*	3
CSES	4774	(ENSC 4774) Reclamation of Drastically Disturbed Lands*	3
FIW	2114	Principles of Fisheries and Wildlife Management* (CLE 7)	3
FREC	2514	Wildland Fire: Ecology and Management*	3
FREC	3214	Forest Biometrics*	3
FREC	3364	Environmental Silviculture*	3
FREC	3544	Outdoor Recreation Planning & Management	3
FREC	3754	Watersheds and Water Quality Monitoring*	3
FREC	4334	(CSES 4334) Principles and Practice of Agroforestry	3
FREC	4354	Forest Soil and Watershed Management*	3
FREC	4374	Forested Wetlands*	3

Applied Plant Sciences Restricted Electives (Choose 6 credits)

CSES	2564	Turfgrass Management*	3
CSES	3644	(ENSC 3644) Plant Materials for Environmental Restoration*	3
ENT	4254	Insect Pest Management	3
FREC	2254	(HORT 2554) Arboriculture Field Skills	1
HORT	2244	Plant Propagation	3
HORT	4744	Plant Establishment & Environmental Design*	3
PPWS	4104	Plant Pathology*	3
PPWS	3754	Weeds that Shape Our World*	3
PPWS	4604	Biological Invasions*	4

Policy, Planning, and Public Relations Restricted Electives (Choose 9 credits)

AAEC	3314	Environmental Law (CLE 7)	3
COMM	2044	Principles of Public Relations (CLE 3)	3
GEOG	3244	The U.S. City	3
LAR	2XXX	Any 2000-level course or higher	3
MGT	3304	Management Theory and Leadership Practice	3
PSCI	3344	(UAP 3344) Global Environmental Issues: Interdisciplinary Perspectives	3
PSCI	3424	State and Local Government*	3
SPIA	2244	(GEOG 2244) Sustainable Urbanization	3
SPIA	2554	Collaborative Policy-Making and Planning (CLE 3)	3
UAP	1024	Public Issues in an Urban Society (CLE 3)	3
UAP	2014	Urbanization and Development (CLE 3)	3
UAP	3434	(PSCI 3414) Public Administration*	3
UAP	4344	Law of Critical Environmental Areas	3
UAP	4374	Land Use and Environment: Planning and Policy*	3

*Course may have prerequisites, corequisites, or other restrictions. Consult Course Catalog for details.

IMPORTANT NOTES ON THE FOLLOWING PAGE

URBAN FORESTRY 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, 1115, and CHEM 1035, 1045
 - ✓ One of: BIOL 1106, BIOL/HORT 2304, CHEM 1036, GEOS 1004
 - ✓ and MATH 1026
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.
4. **In-Major GPA Computation:** In-major GPA computation includes all courses designated as FIW, FREC, GEOG, NR, and SBIO.
5. An in-major and overall GPA of at least 2.0 is required for graduation.
6. 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. Some of the listed courses have prerequisites and some courses must be taken in sequence to satisfy prerequisites. Be sure to consult with the University Catalog or check with your advisor.