

COLLEGE OF NATURAL RESOURCES AND ENVIRONMENT
Department of Forest Resources and Environmental Conservation
Bachelor of Science in Forest Resources and Environmental Conservation
Major: Natural Resources Conservation
Option: Conservation and Recreation Management
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 Resource 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 – take one)

- ___ COMM 2004 Public Speaking (3 credits) or FREC 3524 Environmental Interpretation (3 credits)

Option Requirements (9 credits)

- ___ FREC 3354 Trees in the Built Environment (3 credits)
- ___ FREC 3544 Outdoor Recreation Management (3 credits)
- ___ FREC 3564 Outdoor Recreation Planning (3 credits)

Restricted Electives (Minimum 36 credits – see accompanying lists)

- ___ Business Restricted Elective (3 credits)
- ___ Environmental Science Restricted Elective (3 to 4 credits)
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- ___ Geography Restricted Elective (3 credits)
- ___ Human Dimensions Restricted Elective (3 credits)
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- ___ Natural Science Restricted Electives (3 credits)
- ___ Planning and Policy Restricted Elective (3 credits)
- ___ Planning and Policy Restricted Elective (3 credits)
- ___ Tourism Restricted Elective (3 credits)
- ___ Written Communications Restricted Elective (3 credits)

CLE Requirements (36 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)

Suggested CLE Area 2 Courses

ENGL 3534 Literature and Ecology

LAR 4034 Evolution of the American Landscape

PHIL 2304 Global Ethics

PHIL 3015 Political Theory

UAP 4264 Environmental Ethics and Policy

Area 3: Society and Human Behavior (6 credits)

___ Select one course from the following list (3 credits):

___ AAEC 1005 Economics of the Food & Fiber System

___ AAEC 1006 Economics of the Food & Fiber System

___ ECON 2005 Principles of Economics

___ ECON 2006 Principles of Economics

___ Select one course from the following list (3 credits):

___ COMM 1014 Introduction to Communication Studies

___ PSYC 2004 Introduction to Psychology

___ SOC 1004 Introductory Sociology

___ SOC 1014 Introduction to Social Anthropology

___ SOC 2004 Social Organization and Social Problems

___ SOC 2024 Minority Group Relations

___ SOC 2304 Individual in Society

___ SOC 3004 Social Inequality

___ SOC 3204 Social Research Methods

Area 4: Scientific Reasoning and Discovery (8 credits)

___ BIOL 1105 Principles of Biology (3 credits)

___ BIOL 1115 Principles of Biology Lab (1 credit)

___ BIOL 1106 Principles of Biology (3 credits)

___ BIOL 1116 Principles of Biology Lab (1 credit)

Area 5: Quantitative and Symbolic Reasoning (6 credits)

___ MATH 1025 Elementary Calculus (3 credits)

___ STAT 3604 Statistics for the Social Sciences *or* STAT 3615 Biological Statistics (3 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)

___ FIW 2114 Principles of Fish & Wildlife (3 credits)

Free Electives (18 credits)

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Natural Resource Conservation Restricted Electives (substitutions possible with approval)

Natural Science Restricted Elective (Choose 3 credits)
 Select any three credits in CLE Area 4 other than those already on checksheet 3

Environmental Science Restricted Electives (Choose 9 credits)

BIOL	2204	Plants and Civilization	3
BIOL	2504	General Zoology	3
BIOL	2704	Evolutionary Biology	3
BIOL	2804	Ecology	3
BIOL	4004	Freshwater Ecology	4
CSES	3134	Soils in the Landscape	3
CSES	3114	Soils	3
CSES	3444	World Crops and Cropping Systems	3
ENSC	3604	Fundamentals of Environmental Science	3
FIW	2314	Wildlife Biology	3
FIW	3514	Fisheries Techniques	3
FIW	4214	Wildlife Field Techniques	3
FIW	4314	Conservation Biology	4
FIW	4334	Mammalogy	4
FIW	4414	Population Dynamics and Estimation	3
FIW	4424	Ichthyology	4
FIW	4434	Wildlife Habitat Ecology and Management	3
FIW	4534	Ecology and Management of Wetland Systems	3
FIW	4614	Fish Ecology	3
FIW	4624	Marine Ecology	3
FREC	2004	Forest Ecosystems	3
FREC	2514	Wildland Fire: Ecology and Management	3
FREC	3714	Forest Harvesting	3
FREC	4334	Principles of Agroforestry	3
FREC	4354	Forest Soil and Watershed Management	3
FREC	4374	Forested Wetlands	3
SBIO	2784	Global Forest Sustainability	3

Human Dimensions Restricted Electives (Choose 6 credits)

AAEC	3304	Rural and Regional Development	3
AAEC	3324	Environment and Sustainable Development	3
COMM	3204	Multicultural Communication	3
ECON	3024	Economic Justice**	3
ECON	4894	Law and Economics**	3
FIW	4464	Human Dimensions of Fish and Wildlife	3
FREC	3574	Environmental Education Service Learning	3
SBIO	3004	Sustainable Nature-Based Enterprises	3
SOC	3204	Social Research Methods	3
SOC	3504	Population Trends and Issues	3

** Enrollment in these courses is restricted to majors during initial class registration. Students should request them during the drop-add period and will be admitted as space allows.

Written Communications Restricted Electives (Choose 3 credits)

AEE	3624	Communicating Agriculture in Writing	3
ENGL	3104	Professional Writing	3
ENGL	3774	Business Writing	3

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Geography Restricted Electives (Choose 3 credits)

FREC	2124	Forests, Society & Climate	3
GEOG	1004	Introduction to Human Geography	3
GEOG	1014	World Regions	3
GEOG	1104	Introduction to Physical Geography	3
GEOG	3104	Environmental Problems	3
GEOG	4044	Biogeography	3
GEOG	4204	Geography of Resources	3

Business Restricted Electives (Choose 3 credits)

AAEC	3454	Small Business Management	3
ACIS	1004	Accounting Foundations	3
ACIS	2115	Principles of Accounting	3
MGT	3304	Management Theory and Leadership Practice	3
MKTG	3104	Marketing Management	3

Tourism Restricted Electives (Choose 3 credits)

HTM	2454	Travel & Tourism Management	3
HTM	2464	Introduction to Service	3
HTM	3454	Tourism Analysis	3
HTM	3484	Socio-Cultural Impacts of Tourism	3

Planning and Policy Restricted Electives (Choose 6 credits)

AAEC	3314	Environmental Law	3
AAEC	4754	Real Estate Law	3
FREC	4454	Urban Forest Management and Policy	3
LAR	3044	Land Analysis and Site Planning	3
PSCI	1014	Introduction to United States Government and Politics	3
PSCI	1024	Introduction to Comparative Government and Politics	3
PSCI	2054	Introduction to World Politics	3
PSCI	3214	Political Participation	3
PSCI	3224	Public Opinion	3
PSCI	3334	Judicial Process	3
PSCI	3354	Constitutional Law: Structures and Relations	3
PSCI	3414	Public Administration	3
PSCI	3424	State and Local Government	3
PSCI	3554	Comparative Political Economy	3
PSCI	3744	Public Policy Analysis	3
UAP	3014	Urban Policy and Planning	3
UAP	3344	Global Environmental Issues	3
UAP	3354	Introduction to Environmental Policy and Planning	3
UAP	4184	Community Involvement	3
UAP	4344	Law of Critical Environmental Areas	3
UAP	4374	Land Use and Environment	3

Statistics Restricted Electives (CLE5 – Choose 3 credits)

STAT	3604	Statistics for Social Sciences	3
STAT	3615	Biological Statistics	3

NOTICE: Some courses have prerequisites. Please check the Course Catalog for details.
IMPORTANT NOTES ON THE FOLLOWING PAGE

NATURAL RESOURCES CONSERVATION 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 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
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:** Includes all courses designated as FIW, FREC, GEOG, NR, and SBIO.
5. An in-major and overall GPA of 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.