

FORESTRY MAJOR

Program Curriculum

Minimum credit hours required for graduation is 120.

Code	Title	Credits
Degree Core Requirements		
FREC 2214	Introduction to Land and Field Measurements ¹	3
FREC 2314	Forest Biology and Dendrology ¹	2
FREC 2324	Dendrology Laboratory	1
FREC 2614	Human-Environment Systems ¹	3
FREC 4004	Professional Skills in Natural Resources	1
FREC/NR 4014	Natural Resources Economics ¹	3
FREC 4114	Information Technologies for Natural Resource Management ¹	3
FREC 4434	Natural Resource Policy ¹	3
Subtotal		19
Major Requirements		
ENSC 3134	Soils in the Landscape	3
FIW 2114	Principles of Fish and Wildlife Conservation	3
FREC 2514	Wildland Fire: Ecology and Management ¹	3
FREC 3214	Forest Biometrics (5A)	3
FREC 3314	Forest Ecology and Silvics	3
FREC/HORT 3354	Trees in the Built Environment ¹	3
FREC 3724	Forest Boundaries and Roads ¹	3
FREC 4214	Forest Photogrammetry and Spatial Data Processing ¹	3
FREC 4514	Forest and Tree Pest Management ¹	3
Subtotal		27
Forestry Track Requirements		
Students must customize their curriculum to complete one of the following forestry major tracks by completing courses listed under their chosen track		
Forest Resource Management Track		28
Forest Operations and Business Track		34
Urban and Community Track		27
Subtotal		27-34
Free Electives		
Select additional credits to total 120 credits.		2-11
Subtotal		29-45

Pathways to General Education

Pathways Concept 1 - Discourse

COMM 1015	Communication Skills	3
or ENGL 1105	First-Year Writing	
COMM 1016	Communication Skills	3
or ENGL 1106	First-Year Writing	
Select one of the following:		3
FREC 3734	Forest Fiber Supply (Forest Resource Management Track, Forest Management Operations and Business Track) ¹	
FREC 4454	Urban and Community Forestry (Urban and Community Forestry Track) ¹	

Pathways Concept 2 - Critical Thinking in the Humanities

Select six credits in Pathway 2 (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G02) 6

Pathways Concept 3 - Reasoning in the Social Sciences

AAEC 1005	Economics of the Food and Fiber System	3
or ECON 2005	Principles of Economics	

AAEC 1006	Economics of the Food and Fiber System	3
or ECON 2006	Principles of Economics	

Pathways Concept 4 - Reasoning in the Natural Sciences

BIOL 1105	Principles of Biology	3
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BIOL 1106	Principles of Biology	3
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Pathways Concept 5 - Quantitative and Computational Thinking

MATH 1025	Elementary Calculus	3-4
or MATH 1225	Calculus of a Single Variable	

MATH 1026	Elementary Calculus	3-4
or MATH 1226	Calculus of a Single Variable	

FREC 3214	Forest Biometrics (5A) ¹	3
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Pathways Concept 6 - Critique and Practice in Design and the Arts

Select three credits in Pathway 6a (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06A) 3

Select one of the following: 3

FREC 4444	Integrated Forest Management Practicum (Forest Resource Management Track, Forest Operations and Business Track)	
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FREC 3364	Environmental Silviculture (Urban and Community Forestry Track) ¹	
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Pathways Concept 7 - Critical Analysis of Identity and Equity in the United States

Select three credit hours in Pathway 7 (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G07) ³

Total Credits 117-135

¹ Prerequisites or enrollment restrictions may apply to some courses. Consult the undergraduate course catalog or the timetable of classes.

² Consult with your advisor regarding your forest ecology course selection. Forestry students must select FREC 3314 Forest Ecology and Silvics, as it is a necessary prerequisite for other Forestry requirements.

³ A course taken to satisfy another Pathways concept that is listed with Pathways Concept 7 will satisfy Concept 7 requirements simultaneously.

Forest Resource Management Track

Code	Title	Credits
ACIS 1004	Accounting Foundations	3
or ACIS 2115	Principles of Accounting	
CHEM 1035	General Chemistry ¹	3
FREC 2414	Field Experience in Forest Resources and Environmental Conservation	2
FREC 3224	Forest Measurements Field Laboratory ¹	1
FREC 3324	Silviculture Principles and Applications ¹	4
FREC 3544	Outdoor Recreation Planning and Management ¹	3
FREC 3714	Forest Harvesting ¹	3
FREC 3734	Forest Fiber Supply (Pathways 1 Advance Discourse) ¹	3
FREC 4354	Forest Soil and Watershed Management ¹	3

FREC 4444	Integrated Forest Management Practicum (Pathways 6 Design)	3
Subtotal		28
<i>Free Electives</i>		
Estimated free electives for Forest Management Track ²		8-10

- ¹ Prerequisites or enrollment restrictions may apply to some courses. Consult the undergraduate course catalog or the timetable of classes.
² Free elective estimations are calculated utilizing available overlap between major/track requirements and Pathways requirements.

Forest Operations and Business Track

Code	Title	Credits
ACIS 1004 or ACIS 2115	Accounting Foundations Principles of Accounting	3
FREC 2414	Field Experience in Forest Resources and Environmental Conservation	2
FREC 3224	Forest Measurements Field Laboratory ¹	1
FREC 3324	Silviculture Principles and Applications ¹	4
FREC 3714	Forest Harvesting ¹	3
FREC 3734	Forest Fiber Supply (Pathway 1a (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G01A)) ¹	3
FREC 4444	Integrated Forest Management Practicum (Pathway 6d (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06D))	3
FREC 4714	Harvesting Systems Evaluation ¹	3
<i>Business Restricted Electives</i>		
Select 12 credits from the following: (substitutions possible with approval)		12
AAEC 2104	Personal Financial Planning	
AAEC 3454	Small Business Management and Entrepreneurship	
AAEC 3504	Marketing Agricultural Products ¹	
AAEC 4424	Ag Financial Management ¹	
AAEC 4754	¹	
or AAEC 3314	Environmental Law	
REAL 4064	Real Estate Appraisal	
ACIS 2116	Principles of Accounting ¹	
ENGL 3764	Technical Writing ¹	
or ENGL 377	Business Writing	
FIN 2114	Investments and Financial Literacy	
FIN 3054	Legal and Ethical Environment of Business ¹	
FIN 3104	Introduction to Finance ¹	
FREC 4024	Forest Resources Management and Business	
MGT 2064	Foundations of Entrepreneurship	
MGT 3304	Management Theory and Leadership Practice	
MKTG 3104	Marketing Management	
S BIO 2614	Introduction to Forest Products Marketing	
Subtotal		34
<i>Free Electives</i>		
Estimated free electives for Forest Operations and Business Track ²		2-4

- ¹ Prerequisites or enrollment restrictions may apply to some courses. Consult the undergraduate course catalog or the timetable of classes.
² Free elective estimations are calculated utilizing available overlap between major/track requirements and Pathways requirements.

Urban and Community Forestry Track

Code	Title	Credits
CHEM 1035	General Chemistry ¹	3
FREC 2254	Arboriculture Field Skills	1
FREC 3364	Environmental Silviculture (Pathway 6d (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06D)) ¹	3
FREC 3454	Trees in the Built Environment Lab ¹	1
FREC 4454	Urban and Community Forestry (Pathway 1a (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G01A)) ¹	3
HORT 3325 or HORT 3326	Woody Landscape Plants Woody Landscape Plants	3
<i>Applied Plant and Environmental Sciences Restricted Electives</i>		
Select six credits from the following:		6
ENT 4254	Insect Pest Management	
FREC 4354	Forest Soil and Watershed Management ¹	
HORT/FREC 2134	Plants and Greenspaces in Urban Communities	
LAR 1254	Environment and Natural Systems	
PPWS 2754	Weeds That Shape Our World ¹	
PPWS 4104	Plant Pathology ¹	
PPWS 4604	Biological Invasions ¹	
<i>Policy, Planning, and Public Relations Restricted Electives</i>		
Select six credits from the following:		6
AAEC 3314	Environmental Law	
FREC 3544	Outdoor Recreation Planning and Management ¹	
FREC/BSE/LAR/HORT/SPIA 4554	Creating the Ecological City	
GEOG 3244	The U.S. City ¹	
LAR 4034	Evolution of the American Landscape	
PR 2044	Principles of Public Relations	
PSCI/UAP 3344	Global Environmental Issues: Interdisciplinary Perspectives ¹	
PSCI 3424	State and Local Government ¹	
SPIA/GEOG 2244	Sustainable Urbanization	
SPIA 2554	Collaborative Policy-Making and Planning	
UAP 2014	Urbanization and Development	
UAP 3434/ PSCI 3414	Public Administration ¹	
UAP 4344	Law of Critical Environmental Areas	
UAP 4374	Land Use and Environment: Planning and Policy ¹	
Subtotal		26
<i>Free Electives</i>		
Estimated Free Electives for Urban and Community Forestry Track ²		9-11

- ¹ Prerequisites or enrollment restrictions may apply to some courses. Consult the undergraduate course catalog or the timetable of classes.
- ² Free elective estimations are calculated utilizing available overlap between major/track requirements and Pathways requirements.

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 Forest Resources and Environmental Conservation 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 Pathways to General Education
 - Passing the following courses, or their equivalents: BIOL 1105 Principles of Biology, BIOL 1106 Principles of Biology, and MATH 1025 Elementary Calculus
2. **Foreign Language Requirement:** A sequence of two (2) foreign language courses is required for graduation unless two (2) high school units 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:** If studying overseas or at another U.S. university, begin planning at least 9 months prior to your departure to allow time to determine what substitutions, if any, will be allowed and to arrange your schedule to ensure that all requirements for graduation will be met.
4. **In-major GPA Computation:** Includes all courses designated as FREC.
5. An in-major and overall GPA average 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. Pathways to General Education).
7. **Prerequisites:** 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.
8. **Acceptable Substitutions:** The following requirements have acceptable substitutions.
 - a. ENSC 3134 Soils in the Landscape: CSES 3114 Soils