

### Ecological Cities Minor

College of Natural Resources and Environment  
 Department of Forest Resources and Environmental Conservation  
 (For students graduating in 2020)

Student Name: \_\_\_\_\_ ID# (Last Four Numbers Only): \_\_\_\_\_

**\*Some courses have pre-requisites; consult the course catalog when planning coursework.**

*Key to Pathways outcomes:* Discourse (1-D), Critical Thinking in the Humanities (2-CTH), Reasoning in the Social Sciences (3-SS), Reasoning in the Natural Sciences (4-NS), Quantitative and Computational Thinking (5-QCT), Critique and Practice in Design & the Arts (6-D&A), Critical Analysis of Identity and Equity in the United States (7-IE).

Where more than one outcome is listed, only one outcome may be counted unless it is outcome 7-IE, which may be double counted with another outcome.

***A minimum of 18 credit hours required, to include:***

<b>Required Foundational Courses (6 credit hours)</b>		<b>Credit Hours</b>	<b>Pathways Outcomes</b>
___	LAR 1254 Environment and Natural Systems	3	4-NS/5-QCT
___	HORT/FREC 2134 Plants & Greenspaces in Urban Communities	3	4-NS

#### ***Depth Courses (Select one course from each group - 9 credit hours minimum)***

<b><i>Ecology and Related Sciences (Choose 3 credit hours)</i></b>			
___	BSE 3324	Small Watershed Hydrology (pre: CEE 3304 or CHE 3114 or ESM 3234 or ESM 3024 or ME 3404)	3
	ENSC 3604	Fundamentals of Environmental Science (pre: BIOL 1105 or CHEM 1035)	3
	FREC 2004	Forest Ecosystems	3 4-NS
	FREC 2114	Ecology of Appalachian Forests	3 4-NS
	FREC 3104	Principles of Watershed Hydrology (pre: Junior Standing, MATH 1206 or MATH 1226 or MATH 2015 or MATH 1026)	3
	FREC/HORT 3354	Trees in the Built Environment (pre: FREC 2314 or BIOL/HORT 2304, FREC 2324 or HORT 3325 or HORT 3326)	3
	FREC 3954	Study Abroad (with approval)	3 variable
	FREC 4354	Forest Soil and Watershed Management (pre: CSES 3134 or ENSC 3134 or CSES 3114 or ENSC 3114 or GEOS 3614)	3 5-QCT
	HORT 3454	Herbaceous Plants for Ecological Landscapes(pre: 2234 or BIOL 1105)	3

***Humanities and Social Sciences (Choose 3 credit hours)***

ENGL 3534	Literature and the Environment (pre: 1106 or 1204H or COMM 1016)	3	1-D
GEOG/SPIA 2244	Sustainable Urbanization	3	3-SS
GEOG 3244	The U.S. City (pre: Junior standing)	3	
HIST 3144	American Environmental History	3	2-CTH/3-SS
HIST 3156	History of the American City	3	
PSCI/UAP 3344	Global Environmental Issues	3	
SPIA/HNFE 2314	Active Transportation for a Healthy Sustainable Planet	3	3-SS
UAP 3014	Urban Policy and Planning (pre: 1024)	3	
UAP 3354	Introduction to Environmental Policy and Planning	3	

***Design and Practice (Choose 3 credit hours)***

BC 4334	Sustainable Building Performance Management (pre: 3064, 3014)	3	
BSE 3334	Nonpoint Source Pollution Assessment & Control (pre: 3324)	3	
BSE 4126	Comprehensive Design Project (pre: 4125)	3	
CEE 4254	Municipal Engineering (pre: Senior standing)	3	
CEE 4264	Sustainable Land Development (pre: Senior standing)	3	
FREC 4454	Urban and Community Forestry (pre: Junior standing)	3	
HORT 4744	Plant Establishment and Environmental Design (pre: Senior standing, 2134 or FREC 2134 or CSES 3134 or ENSC 3134 or CSES 3114 or ENSC 3114 or GEOS 3614 or LAR 1254)	3	
LAR 4034	Evolution of the American Landscape	3	1-D/2-CTH
LAR 4084	Landscape Design and Planning Studio (pre: 3016)	6	
RED 4604	Environmental and Sustainability Issues in Housing	3	3-SS+7-IE
SBIO 3324	Green Building Systems	3	
UAP 4354	Interdisciplinary Problem-Solving Studio (Restricted to majors within SPIA, pre: 3354, 3224)	4	
UAP 4394	Community Renewable Energy Systems (Pre: MATH 1016 or MATH 1025)	3	

***Required Capstone Course (3 credit hours)***

FREC* 4554	Creating the Ecological City (pre: Senior Standing, HORT 2134 or FREC 2134)	3	3-SS/6-D&A
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\*or BSE 4554 or HORT 4554 or LAR 4554 or SPIA 4554

**IMPORTANT NOTES REGARDING MINOR ON FOLLOWING PAGE**

**Notes for Ecological Cities Pathways Minor:**

1. Any course substitutions requests of the courses above must be proposed in writing to the College of Natural Resources and Environment Advising Center in 138 Cheatham Hall.
2. Some courses in the minor requirements listed above have prerequisites, so be sure to consult the University Catalog or timetable for more information.
3. A minimum grade of C- or better is required in each course applied to the minor.

**Steps for completing the Ecological Cities Minor**

1. Make an advising appointment with the EC Minor Coordinator for orientation to the minor.
2. Declare the Ecological Cities minor at the CNRE Advising Center in 138 Cheatham Hall.
3. Include minor information when updating the application for degree in Hokie Spa.
4. Students cannot graduate until they have either (1) satisfied the requirements for the minor or (2) withdrawn from the minor by notifying CNRE Advising Center office in 138 Cheatham and revising their DARS.