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College of Natural Resources and Environment
Department of Forest Resources and Environmental Conservation
Ecological Cities Minor
For student date of entry under UG Catalog 2023-2024

A minimum of 18 credit hours required, to include:

Required Foundational Courses (6 credit hours)

- ___ LAR 1254 Environment and Natural Systems (3 credits) (*Pathways 4 or 5f*)
___ HORT/FREC 2134 Plants and Greenspaces in Urban Communities (3 credits) (*Pathways 4*)

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

Ecology and Related Sciences (Choose 3 credit hours)

- ___ BSE 3324 Small Watershed Hydrology (pre: PHYS 2305) (3 credits)
ENSC 3604 Fundamentals of Environmental Science (pre: BIOL 1105 or CHEM 1035) (3 credits)
FREC 2004 Forest Ecosystems (3 credits) (*Pathways 4*)
FREC 2114 Ecology of Appalachian Forests (3 credits) (*Pathways 4*)
FREC/WATR 3104 Principles of Watershed Hydrology (pre: Junior Standing, MATH 1206 or MATH 1226 or MATH 2015 or MATH 1026) (3 credits)
FREC/HORT 3354 Trees in the Built Environment (pre: FREC 2314 or BIOL/HORT 2304, FREC 2324 or HORT 3325 or HORT 3326) (3 credits)
FREC 3954 Study Abroad (with approval) (3 credits)
FREC 4354 Forest Soil and Watershed Management (pre: FREC 2004 or CSES 3114 or ENSC 3114 or GEOS 3614 or CSES 3134 or ENSC 3134) (3 credits) (*Pathways 5a*)
HORT 3454 Herbaceous Plants for Ecological Landscapes (pre: 2234 or BIOL 1105) (3 credits)

Humanities and Social Sciences (Choose 3 credit hours)

- ___ ARCH/SPIA 1044 Life in the Built Environment (3 credits) (*Pathways 3 and 7*)
ENGL 3534 Literature and the Environment (pre: 1106 or 1204H or COMM 1016) (3 credits) (*Pathways 1a or 2*)
GEOG/SPIA 2244 Sustainable Urbanization (3 credits) (*Pathways 3*)
GEOG 3244 The U.S. City (pre: Junior standing) (3 credits)
HIST 3144 American Environmental History (3 credits) (*Pathways 2 or 3*)
PSCI/UAP 3344 Global Environmental Issues (3 credits) (*Pathways 2*)
SPIA/HNFE 2314 Active Transportation for a Healthy Sustainable Planet (3 credits) (*Pathways 3*)
UAP 3014 Urban Policy and Planning (pre: 1024) (3 credits)
UAP 3354 Introduction to Environmental Policy and Planning (3 credits)
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Design and Practice (Choose 3 credit hours)

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| BC 4334 | Sustainable Building Performance Management (pre: 3064, 3014) (3 credits) |
| BSE 3334 | Nonpoint Source Pollution Assessment & Control (pre: 3324) (3 credits) |
| BSE 4126 | Comprehensive Design Project (pre: 4125) (3 credits) |
| CEE 4254 | Municipal Engineering (pre: Senior standing, 3274) (3 credits) |
| CEE 4264 | Sustainable Land Development (pre: Senior standing, 3274) (3 credits) |
| FREC 4454 | Urban and Community Forestry (pre: Junior standing) (3 credits) (<i>Pathways 1a</i>) |
| 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 credits) |
| LAR 4034 | Evolution of the American Landscape (3 credits) (<i>Pathways 1a or 2</i>) |
| LAR 4084 | Landscape Design and Planning Studio (pre: 4014) (6 credits) (VAR) (<i>Pathways 6d</i>) |
| RED 4604 | Environmental and Sustainability Issues in Housing (3 credits) (<i>Pathways 3 and 7</i>) |
| S BIO 3324 | Green Building Systems (3 credits) |
| UAP 4354 | Interdisciplinary Environmental Problem Solving Studio (Senior status required and 9 credit hours, 3000-level or above, in the Environmental Policy and Planning major or minor; pre: 3224, 3354) (4 credits) |
| UAP 4394 | Community Renewable Energy Systems (Pre: MATH 1016 or MATH 1025) (3 credits) |

Required Capstone Course (3 credit hours)

FREC** 4554 Creating the Ecological City (pre: Senior Standing, HORT 2134 or FREC 2134) (3 credits) (*Pathways 3 or 6a or 6d*)

**Cross-listings include: BSE 4554 or HORT 4554 or LAR 4554 or SPIA 4554

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

Key to Pathways Learning Core Outcomes:

1f = Foundational Discourse

1a = Advanced/Applied Discourse

2 = Critical Thinking in the Humanities

3 = Reasoning in the Social Sciences

4 = Reasoning in the Natural Sciences

5f = Foundational Quantitative and Computational Thinking

5a = Advanced/Applied Quantitative and Computational Thinking

6 = Critique and Practice in Design and the Arts

7 = Critical Analysis of Equity and Identity in the United States

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.

IMPORTANT NOTES REGARDING MINOR ON FOLLOWING PAGE

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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 GPA of 2.0 in courses comprising the minor is required to complete the minor.

Steps for completing the Ecological Cities Minor

1. Make an advising appointment with the ECOC 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.