

PATHWAYS MINORS

ECOLOGICAL CITIES

What is it?

In little more than a decade, global urban land area is expected to triple, creating a host of complex sustainability challenges. The way we design, create, and manage cities and other urbanized areas will have a significant impact on our future quality of life and the global environment. Professionals are now faced with a new and complex challenge: integrating the natural world into the built environment for the benefit of society. Students completing the Ecological Cities minor will **be better prepared to critically analyze sustainable design and practice in cities** and its scientific and cultural underpinnings.



Why do it?

Students will **gain unique experiences working with classmates from other disciplines on common problems**, giving them a considerable advantage in their future careers. The minor will be at the leading edge in training professionals to work in collaborative, interdisciplinary integrated design teams. Such collaborative problem-solving is increasingly a feature of professional life for those in careers that shape the urban environment and are particularly in demand where ecological systems are interwoven with urban systems to achieve specific outcomes.



Who is it for?

Although the minor is appropriate for students from across the university, **the minor targets students preparing for careers that shape the outdoor urban environment**, as well as those who would like a synthesized exploration of urban systems that brings together STEM disciplines, the humanities and social sciences, and design.

Pathways Core Concepts

- 4 - Reasoning in the Natural Sciences
- 5f - Foundational Quantitative and Computational Thinking

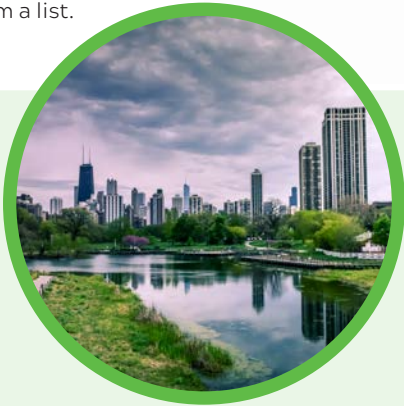
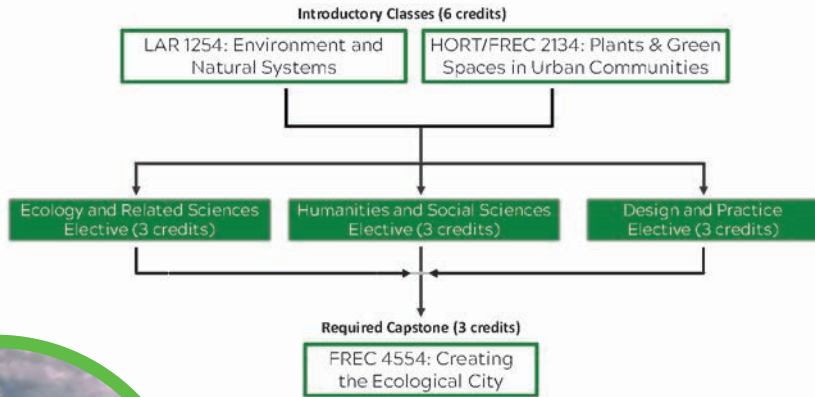
Pathways Integrative Concepts

- Ethical Reasoning
- Intercultural and Global Awareness

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Requirements

The 18-credit hour minor in Ecological Sciences includes 9 hours of required pathways courses and 9 hours of elective courses, of which some are pathways, selected from a list.



- Explore the essential role of natural systems in human well-being and urban infrastructure functions through a design lens.
- Look at cities through an ecological lens with an emphasis on using scientific inquiry as a basis for assessments of sustainability.
- Address disciplinary arenas that are foundational to creating ecological cities.
- Prepare to think analytically about how to assess sustainable design and practice in cities and its scientific and cultural foundations.

Required courses

LAR 1254: Environment and Natural Systems
HORT/FREC: 2134 Plants & Greenspaces in Urban Communities
FREC/BSE/HORT/LAR/SPIA 4554: Creating the Ecological City (senior standing required)

Elective courses

Students select 9 credit hours of elective courses, one from each category: Ecology and Related Sciences, Humanities and Social Sciences, and Design and Practice. For a complete list of elective courses, consult the checksheet at <https://registrar.vt.edu/graduation-multi-brief/index1.html>.

www.pathways.prov.vt.edu/minors

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PATHWAYS TO GENERAL EDUCATION