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## **Geography 597.03 (Cross-listed with English 597.03) Environmental Citizenship**

Meeting Days and Times; Classroom Location

### **Course Description**

The proposed Environmental Citizenship minor encompasses both "reading" and "writing" the environment (i.e., learning to interpret the physical, social, and cultural forces that shape environments, and assuming an active role in shaping environments). Geography 597.03 engages students in both dimensions of environmental citizenship through reading and discussion, weekly lab sessions, and a course project. One component of this class will consist of a case study of human-environment interaction in a local landscape—the Olentangy River Watershed.

The course will address specific environmental problems, practices, and policies as well as more general environmental processes. We will focus on change over time, including past relations of culture and environment, present issues, and possible futures, placing the present moment in historical perspective. We'll also focus on variation and linkages across space, tying local issues into progressively larger contexts. The course will be explicitly interdisciplinary, incorporating natural science (e.g., natural history; cycles of matter and energy; vegetation, land forms, and climate), social sciences (e.g., patterns of human impacts on nature, social relations that shaped human impacts, and possible future directions), and the arts and humanities (e.g., cultural conceptions of nature, relationship between conceptions and actions, the role of representation in shaping environments and our relationships to them).

As the capstone course for the Arts and Sciences Environmental Citizenship Minor, English 597.03/Geography 597.03 will help students incorporate multiple kinds of knowledge necessary for understanding environmental change and issues, thus building on other courses they have included in their minor program. Combining these varied perspectives into one course helps students develop an understanding of complex human-environment interaction, which is necessary to participate knowledgeably and fully in environmental citizenship.

### **Course Format**

Combination of lecture/discussion and lab:

- Lecture/discussion twice per week, 1 hour, 18 minutes. The focus of the sessions will vary as required by each topic, but in general each week will begin with a broad view of the topic and proceed by examining the topic in terms of the Olentangy watershed.
- Lab once per week, 2 hours. Each week will end with some hands-on field study, typically in the watershed.

### **GEC**

Geography 597.03 meets GEC Category 5: Capstone: Issues of the Contemporary World.

The goals and outcomes for this GEC category include the following:

#### **Goals:**

By drawing upon multiple disciplines, Issues of the Contemporary World coursework provides a capstone experience that helps students enrich their experiences of the increasingly global nature of the contemporary world.

#### **Expected Learning Outcomes:**

1. Students synthesize and apply knowledge from diverse disciplines to contemporary issues.
2. Students demonstrate an understanding of the relationships between information derived from different disciplines by interacting with students from different majors.

3. Students write about or conduct research on the contemporary world.

## Learning Objectives

English 597.03 will help students achieve the general learning outcomes for GEC capstone courses by

- Constructing a working definition of *environmental citizenship* built upon a "literacy model" that includes both understanding or "reading" and shaping or "writing" environments;
- Synthesizing and apply knowledge from diverse disciplines to contemporary environmental issues of both local and global scope by exploring the various physical, biological, social, political, and cultural forces that shape and are shaped by environments, and by examining those forces in relation to one another;
- Interpreting a specific local environment in terms of the various forces that gave rise to it over time and relating those local processes to broader geographical and systemic contexts, thereby understanding the reciprocal relationship between local and global processes;
- Developing ethical, sustainable options for shaping environments and communicating those to fellow citizens.

## Assignments/Projects

- **Responses to class readings.** To facilitate productive discussion in class, each student will write two short (500- to 600-word) responses to our assigned readings. The responses should (1) *identify* (i.e., quote or paraphrase and cite) a particular passage or claim in the text; (2) *relate* that passage or claim to the overall argument or thesis of the reading (e.g., Does the passage introduce a key theme? Does it provide crucial supporting evidence for a claim? Is it the most significant—or troubling—passage in the reading?); (3) pose a *question* about the passage or claim relevant to our course work; and (4) propose an *activity* that we might engage in either in or out of class to examine the question further (e.g., compare our text to a specific other text, check the facts in our text against a specific other resource).
- **Lab assignments.** Each of the weekly labs/field trips will require a short (1-2 page) write-up regarding the *outcome* of the activity: i.e., how the activity contributes to our *understanding of the processes* shaping the Olentangy watershed, and how *different types of knowledge* contribute to that understanding. Some of the labs will include an activity, the outcome of which will be part of the assignment (e.g., in Week 2 you will produce a representation of the river, and in Week 3 you will measure and map stretches of the river). There will be lab assignments each week except for Week 1 (introduction) and Week 10 (workshop on interpretive guides).
- An **interdisciplinary interpretive guide** (in any genre or medium) designed for a general audience and focused on a *place* within the Olentangy River Watershed (e.g., a dam, a bike path, a park, an historical structure, and so on) that is relevant to a current environmental issue. The guide should incorporate information from the physical sciences, the social sciences, and the arts and humanities, thus providing an interdisciplinary "reading" of the place.

The guide may be collaboratively authored and should be suitable for use by a government agency or nonprofit organization whose mission includes educating the public about environmental issues. In connection with this project, you will write a cover letter to the agency or organization in which you lay out the goals, background work, extent, medium, and design of your project. You will also prepare a 5-minute oral "pitch" for your project, which you will deliver in class during the last week of classes.

## Textbooks

Readings from the course will come from a course packet available through Grade A Notes and online texts available through Carmen. See the daily schedule for specific titles.

## Grading

**Grading scale:** OSU standard.

**Grade calculation:**

Responses to readings:	20% (2 x 10%)
Lab assignments:	40% (8 x 5%)
Interdisciplinary interpretive guide:	40%

## Schedule

	Topics, Readings, and Due Dates
<b>Week 1</b>	<p><b>Introduction to Environmental Citizenship and Literacy</b></p> <p><b>Readings:</b></p> <ol style="list-style-type: none"> <li>Excerpts from Dobson and Bell, <i>Environmental Citizenship</i> (2006)</li> <li>Orr, David. Chapter 5 ("Ecological Literacy") from <i>Ecological Literacy</i> (1992)</li> </ol>
Day 1	Introduction to the course, each other, and the concept of environmental citizenship
Day 2	Environmental literacy: using multiple kinds of knowledge to comprehend a local environment
Day 3 / Lab	Introduce the Olentangy River: what do you see and what do you think it means?
<b>Week 2</b>	<p><b>Interdisciplinarity and Natural History</b></p> <p><b>Possible Readings:</b></p> <ol style="list-style-type: none"> <li>Roorbach, "Song of the Olentangy" (<i>Harpers</i>, April 2000)</li> <li>Flanagan, "Indian Summer" (<i>The Full Round</i>, 1973)</li> <li>Allen, "River Walks" (<i>Walking Distance: An Ohio Odyssey</i>, 1993)</li> <li>Terry Tempest Williams, "Ground Truthing" in <i>The Open Space of Democracy</i> (2004)</li> <li>Excerpts from E. O. Wilson, <i>Biophilia</i> (1984)</li> </ol>
Day 1	Interdisciplinary "natural histories" of the Olentangy: poetry, nature writing, policy, science. What do we get from each? What is missing in each?
Day 2	Science writing and natural history: overlap between scientific and literary attempts to comprehend and represent environments. How do each deal with issues of Representation and Reality?
Day 3 / Lab	Produce a representation of a portion of the Olentangy River through nature writing, photography, painting, etc. Compare different representations: what did individuals include and what did they not? How might their choice of what to notice and represent be shaped by their experience, prior knowledge, worldview, and so on?
<b>Week 3</b>	<p><b>Hydrology and Watersheds in a World of Global Warming</b></p> <p><b>Readings:</b></p> <ol style="list-style-type: none"> <li>Selections from Chapter 15 (Fresh water) of Strahler and Strahler <i>Introducing Physical Geography</i> (2002) and Chapter 20 (Water supply) of Botkin and Keller <i>Environmental Science</i> (2007)</li> <li>Select pages from Randall Sanders, <i>A Guide to Ohio Streams</i> (2001)</li> <li>Selections from Ellen E. Wohl, <i>Virtual Rivers</i> (Yale UP, 2001).</li> <li>Selections from Mann and Kump <i>Dire Predictions: Understanding Global Warming (The illustrated guide to the findings of the IPCC)</i> (2009)</li> </ol>
Day 1	Water basics: the hydrologic cycle and its expression on the landscape
Day 2	Focus on surface water, especially in the Midwest: interaction of land and water
Day 3 / Lab	Field research to measure and map several reaches of the Olentangy River (its contours, flow, reach types, etc.).
<b>Week 4</b>	<p><b>Ecology and Biodiversity in a World of Global Warming</b></p> <p><b>Readings:</b></p> <ol style="list-style-type: none"> <li>Selections from Chapter 8 (Biogeographical processes) of Strahler and Strahler <i>Introducing Physical Geography</i> (2002) and Chapters 6 (Ecosystems) and 7 (Biological Diversity) of Botkin and Keller <i>Environmental Science</i> (2007)</li> <li>Select pages from Randall Sanders, <i>A Guide to Ohio Streams</i> (2001)</li> </ol>

	3. Selections from Ellen E. Wohl, <i>Virtual Rivers</i> (Yale UP, 2001). 4. Selections from Mann and Kump <i>Dire Predictions: Understanding Global Warming (The illustrated guide to the findings of the IPCC)</i> (2009)
Day 1	Habitats and biodiversity
Day 2	Focus on wetlands (definition, function, socio-natural significance)
Day 3 / Lab	Field Trip to the OSU Olentangy Research Wetlands.

Week 5	<b>Science as Representation</b> <b>Readings:</b> 1. Noel Castree, 2005, Pages 1-20 of <i>Nature</i> (2005) 2. David Takacs, 1996, Chapter 1 of <i>The Idea of Biodiversity</i> (1996)
Day 1	Contested definitions of “nature” and the politics of science
Day 2	Case study of contested science: the politics of biodiversity and ecological knowledge
Day 3 / Lab	Fieldtrip to OSU farm OR OSU extension: scientific approaches to agricultural development, with special attention to issues related to water quality (e.g. soil erosion, chemical runoff)

Week 6	<b>Environmental History of Agriculture</b> <b>Readings:</b> 1. David Lowenthal “Environmental history: from Genesis to apocalypse“ (2001) 2. William Cronon, Chapter 3 (on grain) of <i>Nature's Metropolis</i> (1991) 3. Ian Bowler Chapter 1 (on industrialization of agriculture) of <i>Geography of Agriculture in Developed Market Economies</i> (1992)
Day 1	Environmental History as an approach for describing and explaining environmental change (focus on links between social and natural processes); Describing agricultural expansion and related changes in land use/land cover
Day 2	Explaining agricultural change: causes across space and scale
Day 3 / Lab	Fieldtrip to Stratford Ecological Center, for different perspective on agricultural practices, development, the knowledge behind these perspectives, with special attention to issues related to water quality (e.g. soil erosion, chemical runoff)

Week 7	<b>Environmental History of Urbanization</b> <b>Readings:</b> 1. Paul Robbins, Chapter 1 of <i>Political Ecology</i> (2004) 2. William Cronon, Chapter 5 (on meat) of <i>Nature's Metropolis</i> (1991) 3. Chapters 3 and 4 from Knox and McCarthy <i>Urbanization: An Introduction to Urban Geography</i> (2005)
Day 1	Political Ecology as an approach for describing and explaining environmental change (focus on contextualizing local problems in processes at multiple scales); Describing urbanization and related changes in land use/land cover
Day 2	Guest speaker on Central Ohio: description and explanations for patterns of exurban change (speaker from the OSU exurban change project)
Day 3 / Lab	Use of historical maps to document land use change in the Olentangy watershed over time

Week 8	<p><b>Variations in Environmental Perceptions</b></p> <p><b>Readings:</b></p> <ol style="list-style-type: none"> <li>1. Excerpts of John Rennie Short <i>Imagined Country: Environment, Culture, Society</i> (2005)</li> <li>2. Selections from Adamson, Joni, Mei Mei Evans, and Rachel Stein, eds. <i>The Environmental Justice Reader: Politics, Poetics, &amp; Pedagogy</i>. Tucson: The University of Arizona Press, (2002)</li> </ol>
Day 1	Changes in perceptions over time: compare contemporary and historical ideas about the Olentangy (what it is, what it's good for, how it should be treated, etc.)
Day 2	Differences in perceptions by social groups: compare by race, gender, profession (e.g. environmentalist, developer, scientist)
Day 3 / Lab	Interview individuals who represent different groups about what they know and think about the Olentangy. Why do different people have different ideas about the river?
Week 9	<p><b>Environmental "Issues" of the Olentangy</b></p> <p><b>Readings:</b> Selection of current, representative documents from the Ohio EPA, ODNR, and FLOW, and other environmental NGOs</p>
Day 1	Range of issues raised by others: by govt, citizen groups, scientists, artists, media, artists, etc. (What counts as an environmental issue, and to whom? Why does one issue count and another not? How are different domains of knowledge drawn upon?) <i>May include a variety of issues, such as: channelization and flooding, pollution, dams and biodiversity, habitat preservation, urbanization, recreation, subsistence fishing, carbon sequestration, relationship between local/regional/national/global policy regarding water and watershed issues (e.g. clean water, climate change, biodiversity conservation)</i>
Day 2	Current management approaches to the Olentangy (issues, policies, plans, etc.)
Day 3 / Lab	Examination of kinds of knowledge incorporated into current management approaches
Week 10	<p><b>Possibilities for Environmental Citizenship</b></p> <p><b>Readings:</b></p> <ol style="list-style-type: none"> <li>1. Terry Tempest Williams, "Engagement" in <i>The Open Space of Democracy</i> (2004)</li> <li>2. Terry Tempest Williams, "Clan of One-Breasted Women" from <i>Refuge</i> (1992)</li> <li>3. Lubchenco, Jane. Entering the Century of the Environment: A New Social Contract for Science. <i>Science</i> 279 (491-497) (1998)</li> <li>4. Environmental Citizenship Web sites: Ohio League of Conservation Voters [<a href="http://www.ohiolev.org/">http://www.ohiolev.org/</a>]; Aldo Leopold Leadership Program [<a href="http://www.leopoldleadership.org/">http://www.leopoldleadership.org/</a>]; Friends of the Ravines [<a href="http://www.friendsoftheravines.org/">http://www.friendsoftheravines.org/</a>]</li> </ol>
Day 1	Guest speaker panel of local people involved in environmental action (policy makers, scientists, activists, artists, etc.). What do they do? What do they see as the pros and cons of their work? How did they into it, and what preparation does one need? What are key challenges?
Day 2	Conclusion. Discussion of OSU motto: "Education for Citizenship."
Day 3 / Lab	Workshop on interpretive guides.
Final Project	Presentation of interpretive guides (During Final Exam Period)

## **Policies on Attendance and Deadlines**

Regular attendance is essential to your success in this course. You are responsible for any work due, assigned, or done in any class you miss for any reason, and you must assume that your grade may suffer if you miss any class meetings. More than *two* unexcused absences will result in a failing grade, regardless of your grades on individual assignments.

In fairness to all members of the class, we cannot accept any late work unless you have made arrangements for an extension before the due date (genuine emergencies excepted, but we reserve the right to decide what constitutes an emergency). Please do not assume that we will automatically agree to extensions.

## **Academic Honesty**

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct ([http://studentaffairs.osu.edu/info\\_for\\_students/csc.asp](http://studentaffairs.osu.edu/info_for_students/csc.asp)).

## **Disability Services**

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>.