

Syllabus for Biology 295S.74, Prof. Will Wilson (December 13, 2006)
Ecosystem Services and Urban Ecology
Tu 2:50 PM-5:20 PM
Bio Sci 037 (Wilson Lab, not the assigned room 028)

Ecosystem Services is a phrase used to identify the services provided by ecological systems, specifically to humans. Besides wildlife habitat and recreation opportunities, urban ecosystems provide important, economically valuable services for sustainable living such as absorbing runoff from streets, parking lots, and roofs during heavy rains, enhancing air quality, and reducing urban heating effects.

Motivation for the course: Bringing together economic arguments for and against conserving open space in urban environments, and presenting them in a citizen-accessible format. This presentation may have direct implications. Recently the Open Space Committee of the Durham City/County Open Space and Trails (DOST) Commission (of which I've been a member for the last several years) has been promoting urban open space, but the arguments we make may not be terribly compelling to the City Council and County Commission. A better understanding of the economic and social arguments of open space (somewhat synonymous to urban ecosystems) might help these arguments.

Goals of the course: The first goal is to gain an understanding of the economics of ecosystems services, which requires a working knowledge of urban ecology. I will be upfront: My expertise is in theoretical ecology, not this topic, and, like all of the students in the course, I want to learn more. This situation means that for the course to be successful, a high level of student commitment is needed. The second goal is to make the urban open space arguments to Durham's elected officials and citizens. Elected officials listen to voters, meaning that a message to citizens ought to have an impact. DOST, in part, has an educational mission, making appearances at several City and County public events. I'm hoping that in this course we can produce and publish an open-access book on Ecosystem Services and Urban Ecology aimed at the citizens of Durham. A goal too lofty?

Structure of the course: As I wrote when each student asked for permission numbers, this course requires self-motivation and direction, with everybody working together and separately to pose, research, refine, and express questions and answers. Results and discussions will need to be written and edited over and over. My present idea is to separate the course into short three- or four-week sections during which three-person teams will research subtopics, and write up draft chapters. If it looks like we'll succeed in getting a book together, then we'll discuss the details associated with publishing.

Some skills to learn:

- Reading and gathering research material. Document sources.
- Developing a filter while reading to separate important concepts from details.
- Learning what is NOT important when talking to a general audience.
- Synthesize ideas. Work collaboratively.

Some rules to live by:

- Never cut/paste from external sources into chapters!!! Plagiarism is EVIL, intended or not.
- Always read, then write your synthesis from scratch.-
- Writing is hard work; live with it; work on it.

Things to do before our first meeting (if possible):

1) I have put together an initial reading list on my web site,
www.biology.duke.edu/wilson/EcoSysServices/index.html

Please determine topics most closely aligned with your personal interests before our first class meeting.

2) We'll use "zoho.com" and its "writer" utility to write the book. Please get an account there, let me know, and I'll share with you the outline I've started.