

BIOLOGY 5440/CMP 6610
Urban Ecology
Spring Semester, 2016

Time and Place: TH 9:10 a.m., LS 102
Instructor: Fred Adler
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The Course: This course explores the ecology (interactions between living things and their surroundings) of cities, looking both at biological and physical processes. We will study the principles (not laws) of ecology as they play out in cities, and challenge ourselves to think about the implications of these principles and their exceptions.

Classes: Class on most Tuesdays will be lecture and discussion to present general concepts. On Thursdays, we will explore particular points in more detail with a guest, a field trip, focused discussion, or a group activity.

Reading: We will be using the textbook “Urban Ecosystems: Ecological Principles for the Built Environment” for this class (available at the bookstore) in addition to one or two readings each week from the primary literature posted at a secret location on the web site. It is essential for you to have read all of the material **before** class on Tuesday.

Deliverables. Grades will be determined by performance on the following elements.

1. Midterm on March 10 (15%),
2. Take-home final, handed out on April 26, due in one week (25%),
3. One or two weekly homework problems, due on the Tuesday of the next week (15%),
4. Four one page essays to be done individually based on the readings, consisting of a summary of the paper followed by a reflection on a particular strength, weakness, application or other extension of the article (15%), due on the Thursday of the assigned week,
5. One research proposal, developed in groups and ideally inspired by a field trip or discussion (15%), due on April 26,
6. Participation in discussions and other class activities (15%).

ADA policy The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union, 1-6020. CDS will work with you and the instructor to make arrangements for accommodations.

Accommodations policy. The instructor does not grant content accommodation requests as the course content fulfills legitimate pedagogical goals

Classroom etiquette. Students will maintain a respectful and safe learning atmosphere, and class will be cancelled if this atmosphere is violated.

COURSE OUTLINE
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Watch the web site in case the readings are updated. The starred readings (first one in the list if there is more than one) will be the subjects for the one page essays, due on Thursday of the assigned week.

Week of	Topic	Thursday activity	Problems	Reading
January 11	Introduction (Chap 1)	Campus walk		[1, 2, 3]
January 18	The Urban Metabolism (Chap 2)	Discussion and footprints	2.2.1, 2.3.1	[4]*
January 25	Urban Climate (3.1)	Visit from Susan Bush	3.1.1	[5]
February 1	The Urban Water Cycle (3.2)	Jordan River Parkway	3.2.3	[6]
February 8	Urban Nutrient Dynamics (3.3)	Discussion (inc. Sect 3.4)	3.3.2	[7]
February 15	Urban Biodiversity (4.1)	Discussion	4.1.2	[8]
February 22	Invasive Species (4.2)	Discussion	4.2.1, 4.2.2	[9, 10]*
February 29	Urban Species Interactions (4.3)	Discussion	4.3.3	[11, 12]
March 7	Review	Midterm		
March 21	Urban Diseases (4.4)	Discussion	4.4.1	[13]
March 28	Traits of Urban Organisms (4.5)	Discussion	4.5.2	[14, 15]*
April 4	Urban Evolution (4.6)	Field trip, Steve Burian	4.6.2	[16, 17]
April 11	Urban Health (5.1)	Visit from Dr. Makoto Jones	5.1.2	[18, 19]
April 18	Urban Policy (5.2)	Panel preparation (5.3)	5.2.1	[20, 21]*
April 25	Panel Discussion	Take home final		[22]

References

- [1] J. P. Collins, A. Kinzig, N. B. Grimm, W. F. Fagan, D. Hope, J. Wu, and E. T. Borer, "A new urban ecology," *American Scientist*, vol. 88, pp. 416–425, 2000.
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