

UP 406: Urban Ecology
Temple Buell Hall 225
T/TH 12:30-1:50
Fall 2024

Instructor: Rebecca Walker (she/her)

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Office hours: I will be holding office hours online via Zoom on Wednesdays from 2-3:30pm. Please reserve a time for office hours using the Calendly sign up link ([sign up here!](#)). If you are unable to attend office hours due to schedule conflicts, please send an email to arrange an appointment.

Course Description: Welcome to UP 406: Urban Ecology. In this class, we dig deep into cities as socioecological systems. Over half the global population now lives in cities, and urban land use is expected to triple in area by 2030. As a result of the increasing dominance of cities, ecologists have increasingly focused their attention on urban environments in order to understand the important processes affecting urban ecosystems. Perhaps more than any other ecosystem, however, an understanding of urban habitats requires an analysis of the social as well as ecological factors affecting ecosystems.

In this course, we will examine the new urban ecology, and combine ecological analyses with historical, anthropological, and sociological studies of urban nature. This course encourages students to understand the spatial and temporal dimensions of urban environments, including how nature extends beyond the bounds of the city.

Key questions addressed include:

- How are urban ecosystems similar to or different from other habitats?
- What are the characteristic features of urban ecosystems?
- How are cities connected to the ecology of distant ecosystems?
- How do we construct nature in urban ecosystems?
- What are the formal and informal frameworks governing urban natures?
- What are the drivers of inequality in urban environments?
- How might we advance more just urban environmental futures?

As a human-dominated ecosystem, cities require both scientific and social-scientific analysis in order to evaluate the ecological footprint of cities, assess their ecological sustainability, examine growth management, unravel the connections between ecology and public health, or work to protect plants and animals from encroaching urbanization.

Whose land is this? The University of Illinois, including its Urbana-Champaign campus, sits on land stolen from the Peoria, Kaskaskia, Peankashaw, Wea, Miami, Mascoutin, Odawa, Sauk, Mesquaki, Kickapoo, Potawatomi, Ojibwe, and Chickasaw Nations. Land was stolen not only here, where the Urbana-Champaign campus is located, but also through land grabs elsewhere by which the University was endowed and its continued existence enabled and from which we, as students and scholars, continue to benefit. I encourage you to [learn more about the taking of land that enabled our nation's system of land-grant institutions](#) (of which UIUC is one). As a

land-grant institution, the University of Illinois has a particular responsibility to acknowledge the peoples of these lands, as well as the histories of dispossession that have allowed for the growth of this institution for the past 150 years. In this class and beyond, we all must reflect on and work to address these histories and the role that this university has played in shaping them.

Course Structure — In a given week, Tuesday class periods will primarily be lecture days in which the week's topic is introduced, while on Thursdays time will be allocated for group projects and discussions.

Readings — Readings will be assigned weekly and aim to provide an interdisciplinary perspective on the week's topic. All readings will be posted on the course Canvas site, and there is no textbook for the class. Reading for each class session is **required and must be completed before class**.

Course Assignments — Your grade for this course is based on assignments in four areas:

- 20% = Participation in in-class assignments**
- 30% = Exams (midterm and final)**
- 40% = Discussion**
- 10% = Photovoice posts**

Grades will be based on a scale of A+>98>A>92>A->90>B+>88>B>82>B->80>C>70>D>60>F.

- **Participation in in-class assignments (20%)** — UP 406 will be a highly interactive class, meaning that your participation in class will be essential to your success in this course. Over the course of the semester, there will be a series of labs and projects that will be completed with groups. We will allocate time in class on Thursdays for labs and projects, but they may require some work outside of class.
- **Exams (30%)** — There will be two exams, a mid-term and a final, assessing your engagement with the key course themes and concepts covered in each half of the course. Exams will be a mix of short and long answer essay questions, written in class. Both exams will be given during regularly scheduled class time.
- **Discussions (40%)** — Your discussion grade will consist of three assignments: discussion pre-writing (15%), participation in weekly discussions (15%), and leading discussion (10%). To succeed in class discussions, you must **read critically** the assigned texts prior to class. By reading "critically," I mean going beyond simply reading for content, but also questioning the articles we read. All scholarly material is produced within and embedded in a social and political context. Your task as a reader is not simply to absorb the ideas presented in readings but to consider how the author is making their arguments, the evidence they are (or are not) using to support those arguments, and the strengths and weaknesses of those arguments. If you find them unpersuasive, can you find more persuasive ways of discussing the topics discussed? Can you help strengthen the argument or suggest alternatives?
 - **Discussion pre-writing (15%)** You will be required to complete a brief pre-writing assignment on Canvas prior to in-class discussions. These prompts

are intended to guide your reading of assigned materials and prepare you to engage thoughtfully in discussions. Your answers do not have to be overly formal (bullet points are fine) but should be thoughtful. Discussion pre-writing assignments are **due at midnight on the Wednesday before Thursday class discussions**. These will be graded as Very Good (you took it seriously) or Good (could have engaged more deeply with the material). There will be 12 weeks of discussions. To receive full credit, you must submit a minimum 10 posts and earn a VG on at least 8 posts. (So you can skip two weeks and you can earn a G two weeks)

- ***Participation in discussion (15%)*** You are expected to participate thoughtfully in class discussions. I recognize that people feel different degrees of comfort speaking in public, and to this end, I evaluate participation based on the quality of your participation, not its quantity. Quality can mean the insight you bring to class discussions, how you listen to and respond to your peers, and the generosity and respect you offer to your peers (even when you disagree with a point that has been made).
- ***Leading discussion (10%)*** Each discussion will be guided by a student discussion leader. Discussion leaders will begin by introducing the assigned readings. Paper overviews should include 1) the field or discipline of the paper/paper lead author, 2) the research question or thesis statement of the article, 3) a very quick description of methods and study design, 4) an explanation of one of the key figures in the paper, 5) overview of important results and insights, 6) and the significance of the work to the topic for the class. After the papers have been introduced, the leader will then be responsible for guiding the class in a discussion of the readings through a series of provocative questions. Questions should ***compare and contrast*** the perspectives of each article, note ways in which articles ***complement or complicate*** one another, and ***synthesize key themes*** across articles. Discussion leaders should prepare 5 questions for class discussion, to be **emailed to the instructor by 10 pm on the day before class**.
- **Photovoice Assignments (10%)** — Each week, students will be required to submit a [Photovoice](#) post. Photovoice is a participatory research method that embraces the idea that a picture is worth 1,000 words by having participants use images as a tool to show how a particular topic relates to their own lived experiences. Through photos, participants and researchers collectively draw out themes, insights, and phenomena. We will be adapting this research method to the purposes of our class to build a collective understanding of key themes from the course and how urban ecology shapes the world around us.

Photovoice posts are meant to be a chance to reflect on lecture, reading, and discussions from the week in order to synthesize key insights and connect them to your own life. Posts must include: 1) **a photo** that you take, out in the world, that relates to/challenges/expands upon/responds to insights from the week's classes, 2) a **short paragraph** explaining why you chose to take this photo and how it relates to the topic for this week. In addition, your explanation must make a **thoughtful connection to one of**

the readings or to a specific point made during class discussion from this week. Posts can be submitted on Canvas anytime during the week but are **due by the end of the week, on Sundays at 11 pm**. Photos submitted for Photovoice posts should be taken by the student and should not include images with people's faces or identifying information.

There are 12 weeks in which you will have the opportunity to submit a Photovoice post, and you are required to submit 10 posts (you can skip two weeks). Like discussion pre-writing, photovoice posts will be graded as Very Good or Good, and to receive full credit you must earn a minimum of 8 VGs.

Academic Honesty — You are strongly encouraged to discuss class assignments with others, but your work in papers and exams must be your own. Do not quote directly or paraphrase from published works without a proper citation. Citations must be in APA format. You may use artificial intelligence (AI) for idea generation, but all written work must be your own, and all essays will be passed through AI detection software. When in doubt about what academic integrity requires, ASK! Failure to abide by the principles of academic honesty, including plagiarism and the unauthorized use of AI, will result in a failing grade for the course. Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the Academic Integrity Policy: <https://studentcode.illinois.edu/article1/part4/1-401/>. Ignorance is not an excuse for any academic dishonesty. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.

Student Conduct — The Department of Urban and Regional Planning (DURP) is committed to creating an environment of inclusion and opportunity that is rooted in the very goals and responsibilities of practicing planners. Conduct that interferes with the rights of another or creates an atmosphere of intimidation or disrespect is inconsistent with the environment of learning and cooperation that the program requires. By enrolling in class in the Department of Urban and Regional Planning, students agree to be responsible for maintaining a respectful environment in all DURP activities, including classes, projects, and extracurricular programs. We will be governed by the University Student Code. See Student Code Article 1—Student Rights and Responsibilities, Part 1. Student Rights.

Mental Health — Significant stress, mood changes, excessive worry, substance/alcohol misuse or interferences in eating or sleep can have an impact on academic performance, social development, and emotional wellbeing. Campus offers a variety of confidential services including individual and group counseling, crisis intervention, psychiatric services, and specialized screenings, covered through the Student Health Fee. If you or someone you know experiences a mental health concern, please contact or visit any of the University's resources provided below. Getting help is a smart and courageous thing to do.

- Counseling Center (217) 333-3704
- McKinley Health Center (217) 333-2700
- National Suicide Prevention Lifeline (800) 273-8255
- Rosecrance Crisis Line (217) 359-4141 (available 24/7, 365 days a year)

If you are in immediate danger, call 911.

Community of Care — As members of the Illinois community, we each have a responsibility to express care and concern for one another. If you come across a classmate whose behavior concerns you, whether in regards to their well-being or yours, we encourage you to refer this behavior to the Student Assistance Center (217-333-0050 or <http://odos.illinois.edu/community-of-care/referral/>). Based on your report, the staff in the Student Assistance Center reaches out to students to make sure they have the support they need to be healthy and safe. Further, as a Community of Care, we want to support you in your overall wellness. We know that students sometimes face challenges that can impact academic performance (examples include mental health concerns, food insecurity, homelessness, personal emergencies). Should you find that you are managing such a challenge and that it is interfering with your coursework, you are encouraged to contact the Student Assistance Center (SAC) in the Office of the Dean of Students for support and referrals to campus and/or community resources.

Students with Disabilities — To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor as soon as possible and provide the instructor with a Letter of Academic Accommodations from Disability Resources and Educational Services (DRES). To ensure that disability-related concerns are properly addressed from the beginning, students with disabilities who require assistance to participate in this class should apply for services with DRES and see the instructor as soon as possible. If you need accommodations for any sort of disability, please speak to me after class, or make an appointment to see me or see me during my office hours. DRES provides students with academic accommodations, access, and support services. To contact DRES, you may visit 1207 S. Oak St., Champaign, call 217-333-1970, e-mail disability@illinois.edu or visit the DRES website at <http://www.disability.illinois.edu/>. Here is the direct link to apply for services at DRES, <https://www.disability.illinois.edu/applying-services>.

Disruptive Behavior — Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office for Student Conflict Resolution (<https://conflictresolution.illinois.edu>; conflictresolution@illinois.edu; 333-3680) for disciplinary action.

Emergency Response Recommendations — Emergency response recommendations and campus building floor plans can be found at the following website: <https://police.illinois.edu/em/run-hide-fight/>. I encourage you to review this website within the first 10 days of class.

Religious Observances — Illinois law requires the University to reasonably accommodate its students' religious beliefs, observances, and practices in regard to admissions, class attendance, and the scheduling of examinations and work requirements. Students should complete the Request for Accommodation for Religious Observances form should any instructors require an absence letter in order to manage the absence. In order to best facilitate planning and communication between students and faculty, students should make requests for absence letters

as early as possible in the semester in which the request applies.

Sexual Misconduct Reporting Obligation — The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University’s Title IX and Disability Office. In turn, an individual with the Title IX and Disability Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options. A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: wecare.illinois.edu/resources/students/#confidential.

Other information about resources and reporting is available here: wecare.illinois.edu.

Class Schedule

We ek	Date	Lecture Topic	Readings	Group Activity	Discussion Topic and Leaders	Photo -voice post due?
Section 1: The Nature of Urban Nature						
1	T 27-Aug	Introduction to social-ecological systems	1. Angelo and Wachsmuth, 2015 2. Hinchliffe, 2007 - ch.1 3. Ramalho and Hobbs, 2007	Lab 1: Mapping a social-ecological system	What is "urban?" What is "nature?" Troubling categories and boundaries Leaders: NA	yes
	Th 29-Aug					
2	T 3-Sept	What is urban ecology?	1. Groffman et al., 2017 2. Schell et al. 2020 <i>Further reading: Niemelä, 1999; Cadenasso and Pickett, 2008</i>	Group Project 1: iNaturalist lab (urban yards and biodiversity).	What is urban ecology? Leaders: Matt Siciliano Bee Mensing Maeve Conlon	yes
	Th 5-Sept					
3	T 10-Sept	Urban Metabolism	1. Whyte, 2022 2. Pincetl et al., 2014 <i>Further reading: Cronon, 1991 - Ch. 4</i>		Metabolism — metaphor or material reality? Leaders:	yes
	Th 12-Sept					
4	T 17-Sept	Urban Political Ecology: race, class, and nature	1. Pulido, 2000 2. Maantay, 2002 3. Pulido, 2016	Lab 2: Race, class, and urban nature	Race, class, power, and privilege	yes

	Th 19-Sept				Leaders:	
5	T 24-Sept	Guest Lecture: Dr. Meghan Klasic, EPA (via Zoom) - governance of urban nature				no
	Th 26-Sept	Guest Lecture: Dr. Lindsey Kemmerling (via Zoom) - evolutionary, ecological, and social consequences of contaminants in the urban environment				
Section 2: The Urban Environment						
6	T 1-Oct	Urban Soils	<ol style="list-style-type: none"> 1. Fissore et al., 2012 2. Edmondson et al. 2011 3. McClintock 2014 	Lab 3: Urban soils	Urban soils as socationature	yes
	Th 3-Oct					
7	T 8-Oct	The urban watershed	<i>Choose one</i> <ol style="list-style-type: none"> 1. Groffman et al., 2003 2. McGrane et al., 2016 	Group Project 2: Restoration and revitalization of urban aquatic habitat	Urban watersheds: biophysical, sociopolitical	yes
	Th 10-Oct	<i>Guest Lecture Thurs: Dr. Jess Rudnick, USFS</i>	<i>Choose one</i> <ol style="list-style-type: none"> 3. Finewood et al., 2019 4. Pelling, 2003 			
8	T 15-Oct	Urban Climate and Air	<ol style="list-style-type: none"> 1. Ackley et al. 2015 2. Graham, 2015 		City Air	yes
	Th 17-Oct					
Section 3: Urban Species						
9	T 22-Oct	Cities as Habitats / Urban biodiversity	****Each Group reads the paper corresponding to their number <ol style="list-style-type: none"> 1. Marzluff, 2005 2. Vickers et al., 2015 3. Turo et al. 2020 4. Wood et al., 2023 	Lab 4: Designing urban habitat	Drivers of urban biodiversity	yes
	Th 24-Oct					

			<i>Swan et al. 2011</i>			
10	T 29-Oct	Midterm - in class, covers material from Sections 1 and 2.				no
	Th 31-Oct	Bed bugs (zoom lecture)	Wang et al. 2010	Group Project 3: Managing Urban Species	NA	
11	T 5-Nov	Adaptations to the urban environment	1. Schell et al., 2020 2. Lowry et al., 2012 3. Tella et al. 2020			Avoiders, adapters, and exploiters Leaders:
	Th 7-Nov					
Section 4: Constructed Urban Nature						
12	T 12-Nov	Urban Greenspaces	1. Tempesta, 2015 2. Rigolon and Németh, 2021 3. Immergluck and Balan, 2018 <i>Further reading:</i> <i>Angelo, 2019;</i> <i>Loughran, 2017</i>	Group Project 4: Preventing green gentrification	Politics of Greening Leaders:	yes
	Th 14-Nov					
13	T 19-Nov	Urban Canopy	1. Anderson et al., 2021 2. Perkins and Heynen, 2004 3. Carmichael and McDonough, 2019 <i>Further reading:</i> <i>McHale et al., 2007; Reidman et al., 2022</i>		Trees for who and for what? Leaders:	yes
	Th 21-Nov					
14	T 26-Nov	No class - fall break				
	Th 28-Nov					
15	T 3-Dec	No class - study for your final				
	R 5-Dec	Yards (zoom)	1. Padullés Cubino et al. 2020 2. Kolbert, 2008		Yards: good, bad, ugly Leaders:	yes
16	T 10-Dec	Final Exam - in class, covers material from Sections 3 and 4				no

