Urban Greening Lab: New York

This reading and field intensive course explores the theory and practice of urban “greening” by examining an urban green space in New York City. Drawing on analytical tools from the social and biophysical sciences, we will consider how New York’s historical and contemporary context shape the meaning, implementation, and social experience of its environmental spaces. We will ask, “What does it mean to green New York? What does it mean to green a city?” Rather than accepting the answer to this term as self-evident, we will give it clear analytical contours and apply our research questions accordingly.

Our analytical approach integrates ecosystem ecology concepts, urban design principles, and social scientific sensibilities.

Course Objectives
1. Define key theoretical concepts in urban ecology.
2. Identify and analyze key local and global processes that influence the ecological health of our field site in New York City.
3. Undertake, apply and evaluate primary research in urban ecology.
4. Explain the function and utility of quantitative and qualitative research strategies for understanding environmental change in cities.

Assignments
1. Reading group work: posts, facilitation, full and active participation (20%)
2. Class attendance and active participation (20%)
3. Midterm exam (20%)
4. Urban Environmental Analysis, in stages (40%)

Course Commitments
- Mutual respect: careful listening and active discussion with everyone in the class. We are in this together.
- Careful and thorough engagement with course materials is the only way to get the most out of the class.
- Clear communication regarding unavoidable absences or incomplete work: If any circumstance hinders your participation in this course, please speak with me in advance. This course relies on experiential learning, so if you will not be able to attend every session, it may not be the right fit for you this semester.
- Unexcused absences will adversely affect your grade. This is in fairness to your colleagues.
- Give credit where credit is due: plagiarism is a serious offense. We check all work to be sure it is original and your own.
- No electronic devices (cell phones or laptops) should be used in seminar sessions of the class unless you are giving a presentation. We may make class-wide exceptions for specific field projects.
- No food is permitted in class unless you are sharing with everyone.
- Please be patient with e-mail. I try to respond to class e-mail within 24 hours, but this cannot always be guaranteed. Your best bet: speak to me directly just before, or just after, a class meeting.

Major Due Dates
Class Format:

Class meets for a long session on Friday afternoons. This is a **field seminar**, which means that we will combine field work with lecture time, group discussions, and student facilitation. The course will be as rich as we make it: the more we contribute through thorough preparation and careful engagement with the field site and the materials, the more we will all learn. **Please note that attendance and participation are mandatory for all sessions, and will require you to travel to and from our field site. There are no exceptions to this rule without prior written approval by the instructor or an approved medical absence. All other absences will significantly affect your final grade. This policy is intended to ensure fairness to all students.**

Readings

All readings are available through Brightspace and Bobst Library. You are required to read assigned texts before class, by the day they are listed on the syllabus. Our online class site will be the most updated resource for weekly readings, assignments, and other materials. In many cases, you will be asked to read source material directly from Bobst, e-books and online journals.

**Urban Environmental Analysis**

One of the best ways to learn about urban environmental change is to undertake an active study. To this end, your urban environmental analysis is this course’s most significant assignment. This aspect of the course is designed to give you an experiential introduction to interdisciplinary independent research and to engage a complex urban environmental issue as an urban ecologist might. You will a) write a focused research question, b) gather data and undertake some independent fieldwork, and c) explain your findings using key concepts in urban ecology. Your final analysis (a 20-25 page research paper and short presentation) will contain a discussion of key concepts, archival work from a minimum of 15 peer reviewed sources and references, and, as applicable, primary data.

Exams

There will be a midterm examination with a format that we will discuss in the weeks leading to the exam. Questions for the midterm will draw from all syllabus and lecture material up to the date of the exam.

**Group Work and Active Participation**

During the first half of the semester, each of you will join a reading group with a set of other classmates. This group will form a core aspect of your engagement with readings, and participation in the class, and it will help create an intellectual esprit de corps among the group as a whole. You are encouraged to meet face-to-face with one another *outside of class* once a week for at least 30 minutes to collectively work through course material and to develop a deeper understanding of class readings and topics.

Our field sessions on Governors Island are an essential part of the course; please plan your schedule accordingly, in advance. The only way to reach GI is via ferry (see schedule [here](#)). If you miss the ferry, you will miss a large portion of the class, so you must be on time. You will receive a staff ID badge for your trip on the ferry. We will be meeting on site most weeks, so please plan your time accordingly.
Honor Code

All written work in this course must be original and composed exclusively by you, the author. You must acknowledge in writing any assistance you receive from the literature, other students, textbooks, internet, or any other source. Plagiarism is a serious offense and will be immediately referred to the Dean’s office. All students must adhere to the academic integrity policies of NYU.

Accommodation

Academic accommodations are available to any student with a chronic, psychological, visual, mobility, learning disability, or who is deaf or hard of hearing. Students should please register with the Moses Center for Students with Disabilities at 212-998-4980 http://www.nyu.edu/csd.

Safety

Remember to adhere to the most recent guidelines for protection against Covid 19 (NYU’s vaccination policy, social distancing, indoor masking). Please contact me directly if this is of concern.

In this class, you will spend a significant amount of time outside investigating the world around you. During this course, let’s be open and honest about inclusion and diversity in ecology. This site from Cornell contains helpful resources, including recent publications about facilitating an inclusive environment for individuals undertaking fieldwork, and a link to a recording of a really engaging and important webinar. I encourage you to check them out if you have a chance.

Required Books and Materials

A paper field notebook for use on all field trips. We will usually take field notes in the traditional fashion in order to avoid distracting our guest guides and speakers. I recommend that you purchase one Rite-in-the-Rain or similar waterproof notebook (you can decide if you want the spiral bound or the looseleaf type). As many of our activities will be outside, I recommend that you acquire field (rubber-soled) boots, poncho/raingear, old pants, hats, bug spray, sunblock, gloves, an old backpack, etc. Please note that we will be traveling to field sites (which may be remote or wet or during inclement weather), so I advise you to seek out a secure location where you can store valuables (computers, ipads, etc.) while we are in the field (or do not bring them with you to class).

I am grateful to Professor Kara Schlichting, Queens College, for suggesting many of the readings that appear in the early sessions of this syllabus. Where guest experts lecture, I am grateful to each for selecting the readings for that session.

Lecture and Reading Schedule

September 3: Introduction to the Course: understanding New York’s urban ecological fabric

Class will meet on campus.

Required preparation:


Cities as Ecosystems? Read and listen.
Sept 10 Governors Island: Ecosystems, Histories, and Futures for Conservation

Meet at Governors Island

Watch:
- CUNY DiverseCITY. https://www.youtube.com/watch?v=dCDG9Y1fMbl

Read:
- http://www.shandakenprojects.org/governors-island/about-the-island
- 'Global City/Local Site: New York City – The View from Governors Island', a seminar paper by Professor Douglas Tallack - 14/01/2009 (available as a resource on Brightspace
- Schlicting, K. New York’s Post-industrial waterfront.

In: Resilience in Ecology and Urban Design: Linking Theory and Practice for Sustainable Cities:


Sept 17: History in the present: the socioenvironmental structure and function of Governors Island

Meet at Governors Island

Survey thoroughly: The NPS's historical resources study of the island is a good source for background knowledge--but it is mainly military history, so read this ‘against the grain’ for environmental dimensions and note them with your reading group.

NPS's Environmental Impact statement for the island

Read:

*on reserve in Bobst as a physical book (not available as an e-book yet!).

NYC language map entry for Governors Island: how does this “map” onto Island history?

Sept 24: Coastal Zones and Urban Processes

Meet at Governors Island

In addition to cleaning up solid waste, bacterial contamination, and industrial pollutants, we now face the near-invisible, and potentially extremely dangerous presence of microplastics contamination. These contaminants can enter aquatic ecosystems via mismanaged waste, surface runoff, wastewater effluent, and combined sewage outflows. Defined as plastic particles less than 5mm in size, microplastics are extremely hazardous to a range of organisms, including humans. They represent a crucial potential source of toxicity to community members who use the river for recreational activities like fishing. They also pose an emergent threat to overall biodiversity protection, since microplastics enter food webs, bioaccumulate in organisms and introduce new, adverse health effects. The toxicity of microplastics is not limited to their presence in food webs; microplastics can also absorb contaminants like PCBs and pesticides. They can also be colonized by bacteria - including bacteria sometimes pathogenic to fish.

To prepare for today, review this Riverkeeper resource thoroughly: be sure you are familiar with “what we find” and the impacts this introduces for humans and non-humans alike.

Read:

**Microplastics: a Macro-problem**, Wateronline

Using a comparative eye, consider how social and cultural analysts can engage urban coastal plastics and urban coastal resilience:
https://www.inhabitedsea.org/plasticity

**Banning Plastics?**

Klinenberg, E. *The Seas are Rising*  

**Oct 1: Nutrient Cycling and the Life Beneath our Feet: Soils Rich Shaw**  
*Meet at Governors Island*

Read:

Shaw, R. “Soil Science in New York City.”

**October 8: The Bee Conservancy Rebecca Louie, Managing Director of the Bee Conservancy and author of Compost City**  
*Meet at Governors Island*

Read:

TBA

**October 15: Journey to “the Hills”**  
*Meet at Governors Island*

The Regional Plan Association early report from 2006. Read this as a snapshot of how the park might have turned out, and then consider the remaining readings for today:

This chapter in May Joseph's *Fluid New York*


[link to article](https://www.placesjournal.org/journal/2018/80-of-the-worlds-population-lives-under-sky-glow-new-study-finds/) "The New Public Landscapes of Governors Island"

*In: Resilience in Ecology and Urban Design: Linking Theory and Practice for Sustainable Cities:*


**October 22: TBA**

*Meet at Governors Island*


[link to article](https://www.usanpn.org/publications) National Phenology Network


study-finds/


Panko, Ben. (10 June 2016). “Nighttime light pollution covers nearly 80% of the globe”. Science. DOI: 10.1126/science.aaf5777


October 29: Interdisciplinary Dialogues, Transdisciplinary Conversations All-Course Session on Collaborative Research.
In today’s session, you’ll meet students from some of the other courses in the Urban Greening Lab consortium. You will discuss the ways that your group’s research project can be in active dialogue with the findings of other classes on similar topics. Our goal is to establish a set of connections with students who are studying similar questions, but who are using different methodological strategies for answering them.

November 5: Mid-term Exam Meet at NYU

November 12: Cycling Life: Pollinators, Insects, and Biodiversity in the Urban Forest
Meet at NYU

Dr. Sarah Kornbluth (AMNH) will share her long term research and data aggregation project, the Bee Database.


https://science.sciencemag.org/content/359/6374/392

November 19: Independent Research Week (and Thanksgiving break week!)

December 3: Research Workshop
Meet at NYU

December 10: The Virtual Coming Together: all four urban ecology courses this semester will meet for a final session to share research findings.