Course Description
Welcome to Urban Environments! This course will deal broadly with the general topic of ecology of, in, and, for cities. Urban environments are the ecosystems in which over half of the world’s human population lives. Considerations of urban ecology will range from the organismal to the landscape level of organization and from local to global scales. Although there are many ways to approach the study of urban systems, this course uses a perspective from ecosystem science and how to better manage ecosystems in cities for urban sustainability and resilience.

Learning Outcomes and Goals
Throughout, we will consider how social, ecological, and technological spheres can be integrated to advance understanding and effective management of urban ecological systems. Student will demonstrate and apply systems approaches across the five units covered in this course: the urban physical environment, urban ecosystem structure, urban ecosystem process and function, urban ecosystem change, and urban resilience and sustainability challenges.

Format
We will meet twice per week with most classes consisting of lecture, discussion, and individual and team activities. Students will be required to actively participate in discussions and activities. Lectures that include presentation material will be posted on iCollege after the classes, but these should not be a substitute for taking notes. Throughout the semester, we will have student-led “integrative discussions” in which small teams will summarize concepts from previous classes and lead a discussion on current topics and primary literature in the field of Urban Environments. Other class periods may include guest seminars and field studies.

Required Text
The textbook is available from Amazon.com and Cambridge University Press.

Additional readings from other books, news articles, and primary literature will be provided.

Special Needs
Students who wish to request accommodation for a disability may do so by registering with the Office of Disability Services. Students may only be accommodated upon issuance by the Office of Disability Services of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought.

Students with special needs should then make an appointment with me during the first week of class to discuss any accommodations that need to be made.

Academic Honesty
The policy on academic honesty is published in the Student Code of Conduct and the Student Handbook. All GSU students are responsible for abiding by its tenets. Lack of knowledge of this policy is not an acceptable defense to any charge of academic dishonesty.
EVALUATION AND ASSESSMENT

**Course Requirements**
Students are responsible for all assignments, even if they are absent. Late papers, failure to complete the readings assigned for class discussion, and lack of preparedness for in-class discussions and presentations will jeopardize your successful completion of this course.

Although many of the requirements for the graduate and undergraduate portions of the course are the same, the expectations and evaluation of student work are not. Graduate students are expected to lead an additional Integrative Discussion and will have additional readings and essays. Graduate students will be assessed based on expectations of graduate work, and undergraduates will be evaluated based on expectations of an upper-level undergraduate course.

iCollege is an essential resource for this class. Students must be diligent in checking it for readings, assignments, and announcements.

**Attendance Policy**
Class participation is a vital part of class and includes: keeping up with reading, contributing meaningfully to class discussions, active participation in group work, and coming to class regularly and on time. You are required to attend every class and arrive on time. More than two absences will justify a grade reduction. Attendance and lateness policies will be enforced as of the first day of classes for all registered students. If registered during the add/drop period, you are responsible for any missed assignments, readings, or other coursework. Significant lateness will be considered as an absence for the day. Late work will be accepted at a penalty of 50% of the assignment grade.

**Grading**
All assignments will need to reflect professional standards of analysis, ethics, presentation, writing, and timeliness. Grades will be awarded based on the following:

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<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Participation and Discussion</td>
<td>20%</td>
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<tr>
<td>Short Assignments</td>
<td>20%</td>
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<tr>
<td>Integrative Discussions</td>
<td>20%</td>
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<td>Exams</td>
<td>40%</td>
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A+ (97–*)  A (96–90)  B+ (89–87)  C+ (79–77)  D (69–60)
A (96–90)   B (86–80)  C (76–70)   F (59–*)

**Participation and Discussion**
You are required to complete all assigned readings before class. We will discuss the readings in class, and 20% of your grade will be determined by your contributions to those discussions.

You must come prepared to every class with 1) a list of unfamiliar concepts and terms from the readings and their definitions, 2) at least one thought-provoking question for discussion, and 3) a readiness to actively contribute to in-class discussions and activities. Discussion questions may be collected.

**Short Assignments**
You will have assignments of short (5 min) in-class essays at the beginning of some classes and post-class response papers associated with discussion topics, field studies, or guest seminars. These short papers will help you synthesize readings, identify areas where you need further discussion/clarification, and gauge your reaction to course material.

**Integrative Discussions**
You will be assigned to small teams or pairs to lead the Integrative Discussion sections. Students will lead the full class-length Integrative Discussions, including a presentation to summarize/review the readings and material from the previous lectures as well as lead discussion or activities on the assigned topic.
Exams
Two take-home exams will be posted on iCollege. Exams will be comprehensive, designed for you to showcase what you have learned and how your scientific and critical reasoning skills have advanced as a result of this course.

Class Calendar / Course Schedule

Class #

1. Urban Environments: Introductions, history, frameworks, and tools
2. Urban Environments: Ecology in, of, and for cities
3. Abiotic Physical Environment: Climate and urban climate
4. Abiotic Physical Environment: Hydrology and urban water
5. Abiotic Physical Environment: Urban air and air pollution
6. Integrative Discussion: Urban Physical Environment
7. Field Study
8. Ecosystem Structure: Populations, communities, ecosystems, and landscapes; Flora and plant ecology in cities
9. Ecosystem Structure: Organisms and fauna in cities (species interactions)
10. Ecosystem Structure: Biodiversity, conservation, and extinction in cities
11. Integrative Discussion: Ecosystem Structure
12. Exam 1
13. Field Study
14. Ecosystem Processes: Net primary production, carbon storage, metabolism
15. Ecosystem Processes: Urban nutrient cycles, biogeochemistry, budgets
16. Ecosystem Processes and Services: Urban services, disservices, and human well-being
17. Integrative Discussion: Ecosystem Processes
18. Urban Ecosystem Change: Urban growth and disturbance
19. Urban Ecosystem Change: Urban adaptation, succession, and disturbance
20. Integrative Discussion: Urban Ecosystem Change
21. Cities and the Future: Sustainability and resilience
22. Field Study
23. Cities and the Future: Transitions and transformations
24. Cities and the Future: Urban design, place, and placemaking
25. Integrative Discussion: Cities and the Future
26. Exam 2

Please regularly check for updates on iCollege.