ECOL 3770S: URBAN ECOLOGY
UNIVERSITY OF GEORGIA
SPRING 2018

MEETING TIMES:
Lecture: XXXX, XX-XXX
Odum School of Ecology, Room XXXX

INSTRUCTOR:
Dr. Krista Capps
Odum School of Ecology, Room 121
ugaurbanecology@gmail.com
Please follow the Contact Instructions provided below.
Office Hours: Meetings will be scheduled upon request.

COURSE OVERVIEW:
The world is becoming more and more urbanized; over 80% of the US population and 50% of the world’s population living in cities. This course will use a socio-ecological framework to study how urbanization influences biodiversity, ecosystem function, and the provisioning of ecosystem services to human populations. We will study the ecological effects of urbanization among regions with variable climate, time since human settlement, and socio-economic conditions. Key topics we will consider include biodiversity and the management of plant and animal populations, biogeochemical cycling and ecosystem metabolism, human population growth, development trajectories, and environmental justice. Students will be responsible for mastering both biophysical and social science concepts in this course. We will consider global, regional, and local urban issues, using lectures, activities using primary scientific literature, and through student oral and written reports.

This is a service-learning course. During the semester, students will participate in two group and one individual service-learning activity that either employs skills or knowledge learned in the course or teaches new skills or knowledge related to course objectives. Student engagement in the service-learning component will be up to 25% of overall instruction time.

ECOL3770S is a 3-credit hour science course with a required service learning component.

Please note, this syllabus is subject to change in response to technological issues, changes in schedule, etc.

CONTACT INSTRUCTIONS:
Please contact me using the email address provided above. I do not frequently check voicemail. Please do NOT use the eLC system or other email addresses to contact me. Emails sent to the course email are specially tagged and I will review them much more quickly.

I will address emails in chronological order and will do my best to respond to your emails in a timely fashion. If you have a question that is complicated or that you think will take an excessive amount of time to answer via email, please schedule a meeting with me. You may also choose to include a phone number where I can contact you to answer the question. If appropriate and if you provide the number, I may call you to address the question.
CONTENT-BASED LEARNING OBJECTIVES:
By the end of the course the successful student will:
- Understand and discuss socio-ecological systems thinking
- Understand and discuss how urbanization affects physical, chemical, and biological characteristics of ecosystems
- Be able to read, interpret, and synthesize primary literature on urban ecology
- Make scientifically informed decisions about societal issues related to urban areas
- Be able to discuss cities as systems of natural, social, and built components
- Be familiar with the history of urban ecology
- Be able to relate the content of this course to other courses and experiences
- Have a greater personal understanding of the ecological and social aspects of urban ecology

SKILL-BASED LEARNING OBJECTIVES:
By the end of the course the successful student will:
- Integrate art, music, or creative writing with their knowledge of urban ecology
- Work individually and in groups in a service-based environment
- Gain experience using software programs including, but not limited to: Excel, Word, PowerPoint
- Generate written products and complete oral presentations integrating scientific knowledge with experiences in service-learning
- Obtain experience working with and producing products for clients
- Be able to apply the content from this course to real-world situations

TEXT AND ADDITIONAL MATERIAL:
There is no text book for this class, but assigned readings will be posted on the eLC site.

ATTENDANCE:
Attendance is required and will be assessed through quizzes and group activities. These activities will be unannounced and there will be NO make-ups for in class activities.

COURSE GRADING:
Grading for the course will be determined by quizzes, exams, and service-learning related activities. There is no final exam for this course. The final grade distribution will be:

- Quizzes 25%
- Participation in group service-learning activities 10%
- Reflective activities 25%
- Creative product activity 10%
- Individual service-learning activity 10%
- Final products for clients 20%
The plus/minus grading system will be used, according to UGA policy. This course grading will strictly follow this plus/minus grading scale:  

- A = 93-100
- A- = 90-92.9
- B+ = 87-89.9
- B = 83-86.9
- B- = 80-82.9
- C+ = 77-79.9
- C = 73-76.9
- C- = 70-72.9
- D = 60-69.9
- F = <60

**QUIZZES:**
Five pop quizzes will be given during the semester (1-3 questions per quiz). Quizzes will be given at the beginning of class and will be focused on the reading topics due that day. Each quiz will be worth X% of your final grade.

Three short (30 min) exams will be given throughout the semester (15-20 questions per exam; questions will be true/false, multiple choice, matching, fill-in-the-blank, and/or short answer responses), but the lowest exam score will be dropped. The exams will be focused the materials/activities presented in lecture. Each exam will be 10% of your overall grade. You may not make up exams as you can miss one exam without penalty.

**PARTICIPATION IN GROUP SERVICE-LEARNING ACTIVITIES:**
You will receive credit for active participation in the service-learning activities. In this case, participation means much more than showing up. I will be assessing your active participation and appropriate behavior during the two group activities. I will provide details about timing, dress, activities, and the clients before each of the activities. You will also receive a rubric detailing how your participation will be assessed before each activity (each group activity is 5% of your overall grade).

**REFLECTIVE ACTIVITIES:**
You will complete five (2 out of class; 2 in-class; one combo) reflective activities associated with the group service learning projects in the course. Each activity will be worth 5% of your grade. You will receive a rubric detailing how you will be assessed when you are given the description of each assignment.

**CREATIVE PRODUCT ACTIVITY:**
You will develop a “creative product” documenting how Athens-Clarke County has changed through time (prior to European settlement to today). The product should employ art, music, or creative writing to convey the changes in Athens through time. To receive full credit, I must approve a detailed description of how you plan to address the problem. You must complete the project and you must informally present your project to the class. You will also receive a rubric detailing how the project will be assessed (10% of your overall grade).

**INDIVIDUAL SERVICE-LEARNING ACTIVITY:**
You will be responsible to identify and participate in an individual service-learning opportunity. The activity should either be one large event (full day) or multiple small events (at least 3, 1-2 hours). To receive credit for the activity, you must provide a detailed description of the activity before participating and the description must be approved by me. This description must be signed by the community or university partner after you complete the activity in order to receive full credit. You will also write a one-page essay detailing how this activity fits reflects information that you have learned in urban ecology. You will receive a rubric detailing how your participation will be assessed before the activity (5% of your overall grade).

**FINAL PRODUCTS AND PRESENTATIONS FOR CLIENTS:**
You will be responsible to work in groups to prepare final products for clients associated with our two, group service-learning activities (10% of your grade for each product). You will be assessed on the final product (group score) and your participation within your group (individual score). You will receive a rubrics detailing: 1) how the final product will be assessed, and 2) how your individual participation will be assessed by your team, before the assignments are due.

**IN-CLASS BEHAVIOR:**  
The use of cell phones and laptops in class should be limited to in-class activities. You may want to consider reading “Why smart kids shouldn’t use laptops in class” to think about the most effective method for you to take notes in class ([https://www.washingtonpost.com/news/wonk/wp/2016/05/16/why-smart-kids-shouldnt-use-laptops-in-class/](https://www.washingtonpost.com/news/wonk/wp/2016/05/16/why-smart-kids-shouldnt-use-laptops-in-class/)).

We will be completing many active learning activities in class. Many of these activities will be conducted in small groups and we may be discussing controversial topics. I expect every person to be treated with respect during these discussions and activities. I also expect students to arrive on time and to stay in class until the end of the lecture period.

**GENERAL TIMELINE OF ACTIVITIES:**  
Please note, the readings are due BEFORE class and quizzes will be given at the beginning of class and will pertain to the reading.

<table>
<thead>
<tr>
<th>Week #</th>
<th>Subject</th>
<th>Dates</th>
<th>Required Reading/Activities/Important Dates</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to course</td>
<td></td>
<td>Meadows (2008) Ch.1 and Ch. 2</td>
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|        | Thinking in systems |       | --McIntyre et al. (2008) Urban Ecology as an Interdisciplinary Field: Differences in the use of “Urban” Between the Social and Natural Sciences  
| 2      | Urban ecology as an interdisciplinary science |       | --Paul and Meyer (2001) Streams in the Urban Landscape  
--Booth et al. (2016) Global Perspectives on the Urban Stream Syndrome  
*Creative Product Proposal Due* |
|        | Socio-ecological systems |       | --Hale et al. (2016) Effects of Climate on the Expression of the Urban Stream Syndrome  
--Parr et al. (2016) Potential Roles of Past, Present, and Future Urbanization Characteristics in Producing Varied Stream Responses  
*Individual Service Proposal Due* |
| 3      | Intro. to group activities |       | |
| 4      | Urban stream ecology |       | |
|        | Urban stream ecology |       | |
|        | No class | No class | |

4
<table>
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<tr>
<th>Week</th>
<th>Topic</th>
<th>Readings</th>
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<tbody>
<tr>
<td>5</td>
<td>Reflection activity</td>
<td><strong>Reflection activity #1 (in class)</strong></td>
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<td></td>
<td>Cities and ecology</td>
<td>Douglas and James (2015) Ch. 1</td>
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<td><strong>Service Activity Friday or Saturday</strong></td>
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<td>6</td>
<td>The urban atmosphere</td>
<td>--Douglas and James (2015) Ch. 4</td>
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<td></td>
<td>--Shepherd et al. (2013) Urban Climate Archipelagos: A New Framework for Urban Impacts on Climate</td>
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<td>Cities as systems</td>
<td>Douglas and James (2015) Ch. 3</td>
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<td>7</td>
<td>Modeling urban systems</td>
<td>Adler and Tanner (2013) Ch. 2</td>
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<td>Element Cycling</td>
<td>--Weathers, Strayer, and Likens (2013) Ch. 5</td>
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<td></td>
<td><strong>Service Activity Friday or Saturday</strong></td>
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<td>8</td>
<td>Urban ecosystem processes</td>
<td>Adler and Tanner (2013) Ch. 3</td>
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<td>9</td>
<td>Reflection activity</td>
<td><strong>Exam 2; Reflection activity #3 (out of class)</strong></td>
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<td>10</td>
<td>Urban ecosystem services</td>
<td>--McDonald et al. (2013) Urbanization and Global Trends in Biodiversity and Ecosystem Services</td>
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<td>--Gomez-Baggethun et al. (2013) Urban Ecosystem Services</td>
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<td></td>
<td>--Wilkinson et al. (2013) Urban Governance of Biodiversity and Ecosystem Services</td>
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<td>Urban biota</td>
<td>--Baldock et al. (2015) Where is the UK’s pollinator biodiversity? The importance of urban areas for flower-visiting insects</td>
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<td>11</td>
<td>Invasion ecology</td>
<td>--Lockwood, Hoopes, and Marchetti (2007) Ch. 5</td>
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<td>12</td>
<td>Disease ecology</td>
<td>--LaDeau et al. (2015) The ecological foundations of transmission potential and vector-borne disease in urban landscapes</td>
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<td>--Pauchard and Barbosa (2013) Regional Assessment of Latin America: Rapid Urban Development and Social Economic Inequity Threaten Biodiversity Hotspots</td>
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<td><strong>Reflection activity #4 due (in class)</strong></td>
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<td>--Ewing et al. (2008) Relationship Between Urban Sprawl and Physical Activity, Obesity, and Morbidity</td>
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<td>--Sharma et al. (2015) Soil heavy metal contamination in residential neighborhoods in post-industrial cities and its potential human exposure risk</td>
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<td><strong>Individual Service Activity Completed</strong></td>
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13

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<th>Reflection activity</th>
<th>Exam 3; Creative Product Due</th>
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<tr>
<td>Reflection activity #5 (in class)</td>
<td>Reflection activity #5 (in class)</td>
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14

| No class | No class |

15

| No class | No class |

**Group Presentations**

**Group Presentations**

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**Academic Honesty:**

The Institute of Ecology adheres to the University’s standards in defining academic honesty; you are bound by the rules governing academic honesty at UGA. Cases of suspected academic dishonesty will be reported to the Office of Judicial Programs. Ignorance of what constitutes plagiarism or dishonest work is no excuse. Conviction will result in a grade of “F” for the course and may incur additional penalties from the University. Please refer to the UGA Academic Honesty Policy and Student Honor Code.

**Access Statement:** If you plan to request accommodations for a disability, please register with the Disability Resource Center. They can be reached by visiting Clark Howell Hall, calling 706-542-8719 (voice) or 706-542-8778 (TTY), or by visiting [http://drc.uga.edu](http://drc.uga.edu). Please register with the DRC within the first two of weeks of class if you need additional in-class or exam support, so that I can provide the support you need.

**Sensitivity to Religious Practices:**

Students should address potential conflicts due to religions practices with the faculty member at the beginning of the semester so that arrangements can be made to accommodate the religious observance if that accommodation does not create an undue hardship. Absence from classes or examinations for religious reasons does not relieve students from responsibility for any part of the course work required during the period of absence. It is the obligation of students to provide faculty with reasonable notice of the dates of religious holidays on which they plan to be absent. It is the responsibility of the instructor and student to determine the conditions under which work will be made up when a student misses class or other academic obligations because of a religious holiday.

**Commitment to Diversity (Statement Signed by Dr. Capps and others):**

We, the undersigned, are UGA faculty and staff who stand united against acts of hate and bigotry directed at our students and fellow employees in the wake of the presidential election. Words and acts of hate are forms of violence that threaten our mission as a public research university committed to the betterment of our global society through teaching, learning, and the development and dissemination of new knowledge.

We pledge to stand up for, support, and defend the most vulnerable among us, those deliberately targeted in the lead up to the election, and those who are now victims of hate in its wake — members of our community who are undocumented, people of color, LGBTQ people, Muslims (and other religious minorities), immigrants, the differently abled, and women. We have seen firsthand the anxiety and fear generated in the months leading up to this election and in its aftermath.
We affirm UGA’s commitment to fostering an environment that is inclusive and respectful of diversity in all its forms – in our classrooms, our offices, on campus, and beyond. We are prepared to defend and support our campus community as we protect our democracy.