

**1. General Information**

1a. Submitted by the College of: AGRICULTURE, FOOD AND ENVIRONMENT

Date Submitted: 11/9/2015

1b. Department/Division: Forestry

1c. Contact Person

Name: Laura R. Lhotka

Email: laura.lhotka@uky.edu

Phone: 859-257-8718

Responsible Faculty ID (if different from Contact)

Name: Steven J. Price

Email: steven.price@uky.edu

Phone: 859-257-7610

1d. Requested Effective Date: Semester following approval

1e. Should this course be a UK Core Course? No

**2. Designation and Description of Proposed Course**

2a. Will this course also be offered through Distance Learning?: No

2b. Prefix and Number: FOR 540

2c. Full Title: Urban Ecology

2d. Transcript Title: Urban Ecology

2e. Cross-listing: none

2f. Meeting Patterns

LECTURE: 3

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 3

2i. Is this course repeatable for additional credit? No

If Yes: Maximum number of credit hours:

If Yes: Will this course allow multiple registrations during the same semester?

2j. Course Description for Bulletin: Discussion-based course focused on describing urban ecosystems, the processes determining patterns of abundance and distribution of organisms in urban ecosystems, the interactions among organisms in the urban environment, the interactions between humans (and societies) and nature in urban environments, and some aspects of urban planning and urban forestry as it relates to ecology and the environment.

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SENATE COUNCIL

2k. Prerequisites, if any: Upper level course in biology, ecology, environmental policy or consent of the instructor.

2l. Supplementary Teaching Component:

3. Will this course taught off campus? No

If YES, enter the off campus address:

4. Frequency of Course Offering: Fall,

Will the course be offered every year?: No

If No, explain: The course will be offered every other year.

5. Are facilities and personnel necessary for the proposed new course available?: Yes

If No, explain:

6. What enrollment (per section per semester) may reasonably be expected?: 15

7. Anticipated Student Demand

Will this course serve students primarily within the degree program?: Yes

Will it be of interest to a significant number of students outside the degree pgm?: Yes

If Yes, explain: This course fulfills part of the requirements for the proposed Wildlife Biology and Management Minor. Students completing this minor may be interested in this course. The course may also be of interest to graduate students in the College of Agriculture, Food and Environment and College of Arts and Sciences.

8. Check the category most applicable to this course: Relatively New – Now Being Widely Established,

If No, explain:

9. Course Relationship to Program(s).

a. Is this course part of a proposed new program?: Yes

If YES, name the proposed new program: (Proposed) Wildlife Biology and Management Minor

b. Will this course be a new requirement for ANY program?: Yes

If YES, list affected programs: An elective course in the proposed Wildlife Biology and Management Minor

10. Information to be Placed on Syllabus.

a. Is the course 400G or 500?: Yes

b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from **10.a** above) are attached: Yes

## Distance Learning Form

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No

Hybrid: No

1. How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?

2. How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.

3. How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.

4. Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?

If yes, which percentage, and which program(s)?

5. How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?

6. How do course requirements ensure that students make appropriate use of learning resources?

7. Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.

8. How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (<http://www.uky.edu/UKIT/>)?

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.

10. Does the syllabus contain all the required components? NO

11. I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name:

SIGNATURE|TTBA225|Terrell T Baker|FOR 540 NEW Dept Review|20150302

SIGNATURE|LGRABAU|Larry J Grabau|FOR 540 NEW College Review|20150716

SIGNATURE|JMETT2|Joanie Ett-Mims|FOR 540 NEW Undergrad Council Review|20160408

SIGNATURE|ZNNIKO0|Roshan N Nikou|FOR 540 NEW Graduate Council Review|20160512

### New Course Form

<https://myuk.uky.edu/sap/bc/soap/rfc?services=>

Generate R

Open in full window to print or save

Attachments:

Browse...

Upload File

	ID	Attachment
Delete	5248	FOR 540 UGC Review Checklist.docx
Delete	5723	FOR540Syllabus110615_revised.pdf
Delete	6009	GEO memo of approval.pdf

First 1 Last

(\*denotes required fields)

1. General Information

- a. \* Submitted by the College of:  Submission Date: 11/9/2015
- b. \* Department/Division:
- c.
  - \* Contact Person Name:  Email:  Phone:
  - \* Responsible Faculty ID (if different from Contact)  Email:  Phone:
- d. \* Requested Effective Date:  Semester following approval OR  Specific Term/Year<sup>1</sup>
- e.
  - Should this course be a UK Core Course?  Yes  No
  - If YES, check the areas that apply:
    - Inquiry - Arts & Creativity  Composition & Communications - II
    - Inquiry - Humanities  Quantitative Foundations
    - Inquiry - Nat/Math/Phys Sci  Statistical Inferential Reasoning
    - Inquiry - Social Sciences  U.S. Citizenship, Community, Diversity
    - Composition & Communications - I  Global Dynamics

2. Designation and Description of Proposed Course.

- a. \* Will this course also be offered through Distance Learning?  Yes<sup>4</sup>  No
- b. \* Prefix and Number:
- c. \* Full Title:
- d. Transcript Title (if full title is more than 40 characters):
- e. To be Cross-Listed<sup>2</sup> with (Prefix and Number):
- f. \* Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours<sup>3</sup> for each meeting pattern type.
 

<input type="text" value="3"/> Lecture	<input type="text" value=""/> Laboratory <sup>1</sup>	<input type="text" value=""/> Recitation	<input type="text" value=""/> Discussion
<input type="text" value=""/> Indep. Study	<input type="text" value=""/> Clinical	<input type="text" value=""/> Colloquium	<input type="text" value=""/> Practicum
<input type="text" value=""/> Research	<input type="text" value=""/> Residency	<input type="text" value=""/> Seminar	<input type="text" value=""/> Studio
<input type="text" value=""/> Other	If Other, Please explain:		
- g. \* Identify a grading system:
  - Letter (A, B, C, etc.)
  - Pass/Fail
  - Medicine Numeric Grade (Non-medical students will receive a letter grade)
  - Graduate School Grade Scale
- h. \* Number of credits:
- i. \* Is this course repeatable for additional credit?  Yes  No
  - If YES: Maximum number of credit hours:
  - If YES: Will this course allow multiple registrations during the same semester?  Yes  No

## j. \* Course Description for Bulletin:

Discussion-based course focused on describing urban ecosystems, the processes determining patterns of abundance and distribution of organisms in urban ecosystems, the interactions among organisms in the urban environment, the interactions between humans (and societies) and nature in urban environments, and some aspects of urban planning and urban forestry as it relates to ecology and the environment.

## k. Prerequisites, if any:

Upper level course in biology, ecology, environmental policy or consent of the instructor.

l. Supplementary teaching component, if any:  Community-Based Experience  Service Learning  Both3. \* Will this course be taught off campus?  Yes  No

If YES, enter the off campus address:

## 4. Frequency of Course Offering.

a. \* Course will be offered (check all that apply):  Fall  Spring  Summer  Winter

b. \* Will the course be offered every year?  Yes  No

If No, explain: The course will be offered every other year.

5. \* Are facilities and personnel necessary for the proposed new course available?  Yes  No

If No, explain:

## 6. \* What enrollment (per section per semester) may reasonably be expected? 15

## 7. Anticipated Student Demand.

a. \* Will this course serve students primarily within the degree program?  Yes  No

b. \* Will it be of interest to a significant number of students outside the degree pgm?  Yes  No

If YES, explain:

This course fulfills part of the requirements for the proposed Wildlife Biology and Management Minor. Students completing this minor may be interested in this course. The course may also be of interest to graduate students

## 8. \* Check the category most applicable to this course:

- Traditional – Offered in Corresponding Departments at Universities Elsewhere  
 Relatively New – Now Being Widely Established  
 Not Yet Found in Many (or Any) Other Universities

## 9. Course Relationship to Program(s).

a. \* Is this course part of a proposed new program?  Yes  No

If YES, name the proposed new program:

(Proposed) Wildlife Biology and Management Minor

b. \* Will this course be a new requirement<sup>5</sup> for ANY program?  Yes  No

If YES<sup>5</sup>, list affected programs:

An elective course in the proposed Wildlife Biology and Management Minor

## 10. Information to be Placed on Syllabus.

a. \* Is the course 400G or 500?  Yes  No

If YES, the *differentiation for undergraduate and graduate students must be included* in the information required in 10.b. You must include: (i) ident additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR

b.  \* The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if appl 10.a above) are attached.

<sup>4</sup> Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.  
<sup>5</sup> The chair of the cross-listing department must sign off on the Signature Routing Log.

In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, is two hours per week for a semester for one credit hour. (from SR 5 2.1)

You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

In order to change a program, a program change form must also be submitted.

Rev 8/09

**General Course Information**

- Full and accurate title of the course
- Departmental and college prefix
- Course prefix, number and section number
- Scheduled meeting day(s), time and place

**Instructor Contact Information** (if specific details are unknown, "TBA" is acceptable for one or more fields)

- Instructor name
- Contact information for teaching/graduate assistant, etc.
- Preferred method for reaching instructor
- Office phone number
- Office address
- UK email address
- Times of regularly scheduled office hours and if prior appointment is required

**Course Description**

- Reasonably detailed overview of the course (course description should match on syllabus and eCATS form)
- Prerequisites, if any (should match on syllabus and eCATS form)
- Student learning outcomes
- Course goals/objectives
- Required materials (textbook, lab materials, etc.)
- Outline of the content, which must conform to the Bulletin description
- Summary description of the components that contribute to the determination of course grade
- Tentative course schedule that clarifies topics, specifies assignment due dates, examination date(s)
- Final examination information: date, time, duration and location
- For 100-, 200-, 300-, 400-, 400G- and 500-level courses, numerical grading scale and relationship to letter grades for undergraduate students
- For 400G-, 500-, 600- and 700-level courses, numerical grading scale and relationship to letter grades for graduate students. (Graduate students cannot receive a "D" grade.)
- Relative value given to each activity in the calculation of course grades (Midterm=30%; Term Project=20%, etc.)
- Note that undergraduate students will be provided with a Midterm Evaluation (by the midterm date) of course performance based on criteria in syllabus
- Policy on academic accommodations due to disability. Standard language is below:  
 If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

**Course Policies**

- Attendance
- Excused absences
- Make-up opportunities
- Verification of absences
- Submission of assignments
- Academic integrity, cheating & plagiarism
- Classroom behavior, decorum and civility
- Professional preparations
- Group work & student collaboration

<p><b>UGE Review</b> (      )</p> <p>Prerequisites should match on eCATS form and syllabus</p>
<p><b>Committee Review</b> (      )</p> <p>Comments</p>

**COURSE SYLLABUS  
FOR 540  
URBAN ECOLOGY**

**Class Period**

**Meeting:** Tuesday and Thursday, 12:30-1:45

**Room:** TP Cooper 101

**Instructor**

Dr. Steven J. Price

**Phone:** 257-7610

**Email:** steven.price@uky.edu

**Office Hours:** by appointment or drop in

**Office:** TP Cooper 208A

**Research Lab:** TP Cooper 123

**Important**

I use e-mail as a regular form of communication and I check e-mail several times during work hours (8:00 am to 5:00 pm) each day (M-F). **You should check your e-mail at least once daily, respond to e-mail inquiries within 24 hours of receiving the e-mail and feel free to e-mail me with questions.**

**Required Readings:**

Students are expected to read and be familiar with the papers and other materials we discuss in class as well as any background material needed to understand those papers. Specific readings and materials are listed below, although these are subject to change.

**Prerequisites**

All students enrolled in FOR 540 should have taken at least one upper level course in biology, ecology, environmental policy or have the consent of the instructor. Students that have taken FOR 230, FOR 280 or FOR 340 will be best prepared for this course

**COURSE OVERVIEW**

**Course Description from the Course Bulletin**

Discussion-based course focused on describing urban ecosystems, the processes determining patterns of abundance and distribution of organisms in urban ecosystems, the interactions among organisms in the urban environment, the interactions between humans (and societies) and nature in urban environments, and some aspects of urban planning and urban forestry as it relates to ecology and the environment.

**Course Overview and Objectives**

Globally, more people live in urban areas than rural areas, and the percentage of the global human population living in urban areas is expected to increase substantially in the future. Unsurprisingly, urban development is among the most pervasive and ubiquitous forms of land cover change. Thus, urbanization poses significant challenges to many organisms, including humans. Urban Ecology is a 3-credit, discussion-based course, where we'll focus on describing



urban ecosystems, the processes determining patterns of abundance and distribution of organisms in urban ecosystems, the interactions among organisms in the urban environment, the interactions between humans (and societies) and nature in urban environments, and some aspects of urban planning and urban forestry as it relates to ecology and the environment.

### **Student Learning Outcomes**

1. Students will analyze the influence of urbanization and urbanized areas on natural (i.e., wildlife/plant) populations and communities as well as ecosystems and human societies.
2. Students will synthesize information on a given topic and plan and lead class discussions on specific topics in urban ecology.
3. Students will interact with researchers in the field of urban ecology, and evaluate information presented by these researchers.
4. Students will create independent research on a specific topic in urban ecology. Students will design their research, present their research and develop a product (i.e., manuscript, grant proposal, website) on this specific topic.

### **Grading Procedures –Grading Criteria, Letter Grades, Assignments**

For all assignments, a hard copy will be turned in at the beginning of the class day on which it is due.

### **Grading and Grading Scale**

There will be no exams in this course. Your grade will be based on your class participation (20%), your performance in leading class discussions (20%), your review essays (30%) and your final project (30%).

### **Class Participation (20% of your grade)**

Everyone is expected to read and be familiar with the papers before they are discussed. Before each discussion, all participants (except the discussion leaders) will hand-in a brief "highlight" (1-2 paragraphs, typed, 12 point font) from one of the assigned papers. For each "highlight" the student is expected to (1) identify information that you found especially interesting in the paper, (2) and explain why this information is relevant to studies in urban ecology. In addition to the "highlight", I expect everyone to participate during class by taking part in discussion, asking questions, and making meaningful comments. I also expect you to participate in other class activities as well. They may include, but not limited to, various field trips in the urban environment. **Tip: You'll receive all the points if you turn-in well-written "highlight", participate often and make insightful comments. Reading the course material is a must!**

### **Paper Discussions (20% of your grade)**

Through the course of the semester, students will lead discussions centered on topics (see below) in urban ecology. Graduate students will lead 3 discussions; undergraduate students will lead 2 discussions. For undergraduate students, each paper discussion will be worth 10% of your grade. For graduate students, each paper discussion will be worth 6.75% of their grade.

Students will be assigned topics during the first class period. For each topic, I have selected papers that I think will provide for good discussion material; all papers should be available in the library/hyperlinked to this document. However, discussion leaders are **expected to develop their discussion as they see fit**. That is, **they should provide additional papers or other resources for the class to read** and can choose to eliminate some of the papers that I've suggested.

Students are required to talk to me about what they have planned for discussion **four business days** before their discussion date. This means that students should read the papers and have ideas for other resources to present to the class. **Two business days** prior to discussion the students will send out a resource packet to the entire class (i.e., discussion packets are due Friday mid-day for Tuesday discussions and Tuesday mid-day for Thursday discussions). This packet should include **8-10 quality** discussion questions and other resources (web sites, other papers, videos, etc.) to facilitate discussions. If needed, I can help you develop questions and aid in finding other resources. Failure to turn in your discussion questions on time will result in a 30% reduction of your discussion grade for that particular discussion.

#### **Review essays (30% of your grade)**

Students are required to write one mid-term (due Oct. 21) and one final paper (due Dec. 9). Essays are limited to 4 pages (double-spaced, 12 point font). Students will be asked to answer a "broad" question in urban ecology by referencing papers read in class or recent papers in urban ecology. The question will be provided one week prior to the due date for the essay.

#### **Project (30% of your grade)**

Students are required to complete a class project that will contribute in a meaningful way to our knowledge of urban ecology. I have several ideas for class projects, but you may develop your own ideas as well. Most ideas I have are wildlife/ecology based (because I'm an ecologist), but don't feel obligated to do an ecology project. You may work with a partner on this project. However, the scope of the project should be a reflection of the number of students working on the project. You will be required to discuss the project with me before you begin and submit a proposal ( $\leq 2$  pages) describing your plans. The proposal will count as 10% of your project grade. The outcomes of the project can vary from a paper to a website, however there must be some end-of-the semester product. You will also present a short talk describing your project to the class at the end of the semester.

#### **Potential Projects:**

- A GIS based project looking at urbanization of the Lexington area over time
- An ecological investigation of stream restoration projects in Lexington
- Migratory bird populations in greenways in Lexington
- Phenology in urban vs. rural developments (i.e., does leaf off occur faster in one environment than the other?)
- Review green roof technology in southeast US
- Urban forestry efforts in Lexington

- Write an NSF pre-proposal based on urban ecology
- Use a previously collected dataset to write a scientific paper in urban ecology
- A review paper on a topic of interest in urban ecology

## **Course Grading**

### **Undergraduate Grading Scale**

- A:  $\geq 89.46\%$   
 B:  $\geq 79.46\%$  and  $< 89.45\%$   
 C:  $\geq 69.46\%$  and  $< 79.45\%$   
 D:  $\geq 59.46\%$  and  $< 69.45\%$   
 E:  $< 59.45\%$

### **Graduate Grading Scale**

- A:  $\geq 89.46\%$   
 B:  $\geq 79.46\%$  and  $< 89.45\%$   
 C:  $\geq 69.46\%$  and  $< 79.45\%$   
 E:  $< 69.45\%$

### **Mid-term Grade**

Mid-term grades for undergraduates will be posted in myUK by the deadline established in the Academic Calendar (<http://www.uky.edu/Registrar/AcademicCalendar.htm>).

### **Course Outline**

The schedule below is tentative and the dates and topics may change. I will always try my best to keep you informed of any changes. I may change or add reading assignments throughout the semester. Discussion leaders may also add readings as they see fit. Dr. Price will lead several of the discussions. Discussion dates denoted by "\*" will be led by students.

### **Week 1**

#### **(Sept 2): Course Introduction**

- 1) Introduction
- 2) Syllabus
- 3) Reading/finding scientific papers
- 4) Important resources - These resources may help you find material for discussion. By no means does this list reflect all the resources out there, though. So be diligent and don't limit yourself.

#### **Websites**

- [www.sciencedaily.com](http://www.sciencedaily.com)
- <http://www.conservationmagazine.org/magazine/>
- Urban Ecology Institute (<http://www.urbaneco.org/>)
- Urban Ecology Research Lab (UW) (<http://www.urbaneco.washington.edu/>)
- Baltimore Ecosystem Study
- Central Arizona-Phoenix Long Term Ecological Research

- United Nations, Department of Economic and Social Affairs, Population Division (2014).  
World Urbanization Prospects: The 2014 Revision, Highlights (ST/ESA/SER.A/352)

Scientific Journals (also check out the papers listed below for Journal Info.)

- |                                 |                                  |
|---------------------------------|----------------------------------|
| - Urban Ecosystems              | -Trends in Ecology and Evolution |
| - Landscape and Urban Planning  | - Pro. Nat. Acad. Of Sci. (PNAS) |
| - Conservation Biology          | - BioScience                     |
| - Biological Conservation       | - Nature                         |
| - Ecological Applications       | - Science                        |
| - Biodiversity and Conservation | - Ecology                        |
| - Global Change Biology         | - PLoS One                       |

Books (Lots of good books out there, these are just a few)

- Gaston, K.J. (ed.) 2010. Urban Ecology. Cambridge University Press, Cambridge.
- Richter M and U. Weiland (ed.) 2012. Applied Urban Ecology. Wiley-Blackwell, UK.

**Week 1**

**(Sept 4): What is Urban Ecology?**

- 1) Student Discussion Assignments
- 2) Assignments

- McIntyre, N.E. 2000. Urban ecology as an interdisciplinary field: differences in the use of 'urban' between the social and natural sciences. Urban Ecosystems 4: 5-24. (Pages 1-15)
- Listen to Urban Ecology on Talk of the Nation, Science Friday
- What is America's best city? (Business Week)

**Week 2**

**(Sept 9): Rates of urbanization (past, present, future)**

Assignments

- Aliq, R.J., J.D. Kline and M. Lichtenstein. 2004. Urbanization on the US landscape: looking ahead in the 21<sup>st</sup> century. Landscape and Urban Planning 69: 219-234.
- Montgomery, M.R. 2009. Urban Transformation of the developing world. Science 761-764.
- Irwin, E.G. and N.E. Bockstael. 2007. The evolution of urban sprawl: Evidence of spatial heterogeneity and increasing land fragmentation. Proceedings of the National Academy of Sciences 104: 20672-20677.

**Week 2**

**(Sept 11): Urban areas and ecosystem functions**

Assignments

- Patiki et al. 2006. Urban ecosystems and the North American carbon cycle. Global Change Biology 12: 2092-2102

- Kaye, J.P., Groffman, P., N.B. Grimm, L. Baker, and R. Pouyat. 2006. A distinct urban biogeochemistry? Trends in Ecology and Evolution 21:192–199.
- Eigenbrod, F., V.A. Bell, H.N. Davies, A. Heinemeyer, P.R. Armsworth, P.R. & K.J. Gaston. 2011. The impact of projected increases in urbanization on ecosystem services. Proceedings of the Royal Society B 278, 3201-3208.

### **Week 3**

#### **(Sept 16): Populations and communities in the urban environment - general patterns**

##### Assignments

- McKinney, M.L. 2006. Urbanization as a major cause of biotic homogenization. Biological Conservation 127: 247-260
- Blair, R.B. 1996. Land use and avian species diversity along an urban gradient. Ecological Applications 6: 506-519.
- Whitney, G.G. and S.D. Adams. 1980. Man as a maker of new plant communities. Journal of Applied Ecology 17: 431-448.

### **Week 3**

#### **(Sept 18): - Project Proposal Ideas; Presentations to class**

### **Week 4**

#### **(Sept 23): Timing of Reproduction, Reproductive success**

##### Assignments

- Gazal et al. 2008. GLOBE students, teachers and scientists demonstrate variable differences between urban and rural leaf phenology. Global Change Biology 14: 1568-80.
- Chamberlain et al. 2009. Avian productivity in urban landscapes: a review and meta-analysis. Ibis 151:1-18.

### **Week 4**

#### **(Sept 25): Reproduction and water quality issues**

- Smits, A.P., D.K. Skelly and S. R. Bolden. 2014. Amphibian intersex in suburban landscapes. Ecosphere 5:11
- Skelly, D.K., S.R. Bolden and K.B. Dion. 2010. Intersex frogs concentrated in suburban and urban landscapes. EcoHealth 7: 374-379.

**Project proposals due to classmates (see instructions above); send out via email**

### **Week 5**

#### **(Sept 30): Body size and urbanization**

##### Assignments

- Yom-Tov, T. 2003. Body sizes of carnivores commensal with humans have increased over the past 50 years. Functional Ecology 17: 323-327.

- Luiselli, L., Angelica, F.M. and Akani, G.C. 2002. Comparative feeding strategies and dietary plasticity of the sympatric cobras *Naja melanoleuca* and *Naja nigricollis* in three diverging Afrotropical habitats. *Canadian Journal of Zoology* 80:55-63.
- Liker, A. et al. 2008. Lean birds in the city: body size and condition of house sparrows along the urbanization gradient. *Journal of Animal Ecology* 77: 789-795.

## **Week 5**

### **(Oct 2): Communication and soundscapes**

- Barber, J.R., K.R. Crooks and K.M Frstrup. 2010. The costs of chronic noise exposure for terrestrial organisms. *Trends in Ecology and Evolution* 25: 180-189.
- Birds raise their voice over noisy traffic; *The Science Show*, ABC Radio National, April 17, 2010 <http://www.abc.net.au/rn/scienceshow/stories/2010/2875169.htm>
- Halfwerk et al. 2011. Low-frequency songs lose their potency in noisy urban conditions. *Proceedings of the National Academy of Sciences* 108: 14549-14554.
- Kuehne, L.M., B.L. Padgham and J.D. Olden. 2013. The soundscapes of lakes across an urbanization gradient. *PLoS one* 8:e55661

## **Week 6**

### **(Oct 7): Some Aspects of Physiology**

- Urban Heat Islands (an introductory video)
- Angilletta et al. 2007. Urban physiology: City ants possess high heat tolerance. *PLoS one* 2: e258.
- Gregg, J.W., C.G. Jones and T.E. Dawson. 2003. Urbanization effects on tree growth in the vicinity of New York City. *Nature* 424: 183-187.
- Partecke, J. I. Schwabl, and E. Gwinner. 2006. Stress and the city: Urbanization and its effects on the stress physiology in European Blackbirds. *Ecology* 87: 1945-1952.

## **Week 6**

### **(Oct 9): Disease Ecology**

#### Assignments

- Bradley, C.A. and S. Altizer. 2006. Urbanization and the ecology of wildlife diseases. *Trends in Ecology and Evolution* 22:95-102.
- Bradley, C.A., S.E.J. Gibbs and S. Altizer. 2008. Urban land use predicts West Nile Virus exposure in songbirds. *Ecological Applications* 18: 1083-1092.
- Reisen, W.K., R.M. Takahashi, B.D. Carroll and R. Quiring. 2008. Delinquent mortgages, neglected swimming pools, and West Nile Virus, California. *Emerging Infectious Diseases* 14: 1747-1749.

## **Week 7**

### **(Oct 14): Exotic and invasive species**

#### Assignments

- Gelbard, J.L. and J. Belnap. 2003. Roads as conduits for exotic plant invasions in a semiarid landscape. *Conservation Biology* 17: 420-432.

- Riley, S.P. et al. 2005. Effects of urbanization on the distribution and abundance of amphibians and invasive species in southern California streams. Conservation Biology 19: 1894-1907.
- Duguay et al. 2007. Effects of surrounding urbanization on non-native flora in small forest patches. Landscape Ecology 22:589-599.

### **Essay questions distributed**

#### **Week 7**

#### **(Oct 16): Climate change and urbanization**

##### **Assignments**

- Parris, K.M. and D.L. Hazell. 2005. Biotic effects of climate change in urban environments: the case of the grey-headed flying fox (*Pteropus poliocephalus*) in Melbourne, Australia. Biological Conservation 124: 267-276.
- Nelson et al. 2009. Forecasting the combined effects of urbanization and climate change on stream ecosystems: from impacts to management options. Journal of Applied Ecology 46: 154-163.
- Mantyka-Pringle et al. 2014. Understanding and predicting the combined effects of climate change and land-use change on freshwater macroinvertebrates and fish. Journal of Applied Ecology 51: 572-581.

#### **Week 8**

#### **(Oct 21): Review Essay #1 Due**

#### **Week 8**

#### **(Oct 23): Interactions between people and nature in urban environments**

##### **Assignments**

- Robb, G. N. et al. 2008. Food for thought: supplementary feeding a driver of ecological change in avian populations. Frontiers in Ecology and the Environment 6: 476-484.
- Miller, J. 2005. Biodiversity conservation and the extinction of experience. Trends in Ecology and Evolution 20: 430-434.
- Mehtälä, J. and T. Vuorisalo. 2006. Changing values of urban biodiversity: a reply to Miller. Trends in Ecology and Evolution 21: 116-117.

#### **Week 9**

#### **(Oct 28): Urban ecology and socio-economics**

##### **Assignments**

- Hope et al. 2003. Socioeconomics drive urban plant diversity. Proceedings of the National Academy of Sciences 100:8788-8792.
- Pickett et al. 2008. Beyond urban legends: An emerging framework of urban ecology, as illustrated by the Baltimore Ecosystem Study. BioScience 58:139-149.

#### **Week 9**

#### **(Oct 30): Urban ecology and human health and wellbeing**

## Assignments

- [Turner et al. 2004. Global Urbanization and separation of humans from nature. BioScience 54:585-590.](#)
- [Ulrich, R.S. 1984. View through a window may influence recovery from surgery. Science 224: 420-421.](#)
- [Fuller et al. 2007. Psychological benefits of greenspace increase with biodiversity. Biology letters 3: 390-394.](#)

## **Week 10**

### **(Nov 4): Integrating nature into urban planning and design**

#### Assignments

- [Miller et al. 2008. Biodiversity Conservation in local planning. Conservation Biology 23:53-63.](#)
- [Stokes et al. 2010. Local land-use planning to conserve biodiversity: planners' perspectives on what works. Conservation Biology 24: 450-460.](#)

## **Week 10**

### **(Nov 6) - Guest Speaker – Urban planning and design**

## **Week 11**

### **(Nov 11): Conservation infrastructure**

- [Green Roofs can save millions of dollars \(from Science Daily\)](#)
- [Obernforfer, E., et al. 2007. Green roofs as urban ecosystems: ecological structures, functions, and services. BioScience 57: 823-833.](#)
- [Loram, A. 2007. Urban domestic gardens: the extent and structure of the resource in five major cities. Landscape Ecology 22:601-615.](#)

## **Week 11**

### **(Nov 13): The importance of urban greenways for biodiversity**

#### Assignments

- [Greenways for wildlife – North Carolina State University](#)
- [Bryant, M.M. 2006. Urban landscape conservation and the role of ecological greenways at local and metropolitan scales. Landscape and urban planning 76: 23-44.](#)
- [Guzy, J.C., S.J. Price, and M.E. Dorcas. 2013. The spatial configuration of greenspace affects semi-aquatic turtle occupancy and species richness in a suburban landscape. Landscape and Urban Planning 117:46-56.](#)

## **Week 12**

### **(Nov 18): Guest Speaker – Urban Stream Restoration**

## **Week 12**

### **(Nov 20): Urban Forests**

#### Assignments



- Stein, S.M., R.E. McRoberts, R.J. Alig, M.D. Nelson, D.M Theobald, M. Eley, M. Dechter and M. Carr. 2005. Forests on the edge: housing development on America's private forests. Gen. Tech. Rep. PNW-GTR-636. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 16 p.
- Le Roux et al 2014. The future of large old trees in urban landscapes. PLoS One 9:e99403.

### **Week 13**

#### **(Nov 25): Valuation of urban green spaces**

- More, T.A., T. Stevens and P. G. Allen. 1988. Valuation of urban parks. Landscape and Urban Planning 15: 139-152.

### **Week 14**

#### **(Dec 2): Guest Speaker: Urban Forestry**

Essay questions distributed

### **Week 14**

(Dec 4): No class

### **Week 15**

(Dec 9): Review Essay # 2 Due

### **Week 15**

(Dec 11): Student Presentations

### **Week 16**

(Dec 15): Student Presentations

## **Course Policies**

### **Classroom behavior, decorum, and civility**

All cell phones must be turned off before discussion begins. It goes without saying that everyone should treat each other with respect during class discussion of the class. Failure to adhere to these standards will result in a reduction of the Discussion portion of the grade.

### **Professional Preparation**

This course helps prepare you for your professional career. Students are expected to attend class and be on time. Excessive (>3) tardiness will result in a reduction of the Discussion portion of the grade. Additionally, students will be prepared to participate in class discussion. Please be professional at all times.

### **Attendance Policy**

You must initial the roll sheet each day you are here. Excessive unexcused absences (> 1) during discussion will result in a reduction of your grade. For each unexcused absence after the permitted after 1 day, your final discussion grade will be reduced by 10% for each day missed.

Make-up assignments will be given only to students who miss an exam as a result of excused absences. In all other circumstances, a grade of 0 (zero) will result for the missed exam.

The official UK statement on excused absences (S.R. 5.2.4.2) defines the following as acceptable reasons for excused absences:

- a. serious illness;
- b. illness or death of family member;
- c. University-related trips;
- d. major religious holidays;
- e. other circumstances your professor finds to be "reasonable cause."

Per Senate Rule 5.2.4.2, students missing any graded work due to an excused absence are responsible: for informing the Instructor of Record about their excused absence within one week following the period of the excused absence (except where prior notification is required); and for making up the missed work. The professor must give the student an opportunity to make up the work and/or the exams missed due to an excused absence, and shall do so, if feasible, during the semester in which the absence occurred.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Two weeks prior to the absence is reasonable, but should not be given any later. Information regarding major religious holidays may be obtained through the Ombud (859-257-3737, [http://www.uky.edu/Ombud/ForStudents\\_ExcusedAbsences.php](http://www.uky.edu/Ombud/ForStudents_ExcusedAbsences.php)).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

### **Verification of Absences**

Students may be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request "appropriate verification" when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

### **Academic Integrity**

Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: <http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable

as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of *Student Rights and Responsibilities* (available online <http://www.uky.edu/StudentAffairs/Code/part2.html>) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

**Please note:** Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

#### **Accommodations due to disability**

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (DRC). The DRC coordinates campus disability services available to students with disabilities. It is located on the corner of Rose Street and Huguelet Drive in the Multidisciplinary Science Building, Suite 407. You can reach them via phone at (859) 257-2754 and via email at [drc@uky.edu](mailto:drc@uky.edu). Their web address is <http://www.uky.edu/StudentAffairs/DisabilityResourceCenter/>.

#### **Emergency Situations**

If an emergency arises in this classroom, building or vicinity, your instructor will advise you of actions to follow to enhance your safety. If a situation requires emergency shelter (i.e., during a severe weather event), the nearest shelter location is the basement. If building evacuation occurs (i.e., fire alarm), follow posted evacuation routes and assemble on the sidewalk outside the front of the building so the instructor can help ensure their students have evacuated the building safely and they are not hindering

emergency personnel access to the building. If you may require assistance during an emergency, notify the instructor at the beginning of the semester. In order to prepare for emergencies while on campus please continue to the below links for detailed emergency response guidelines: the UK Division of Crisis Management & Preparedness website (<http://www.uky.edu/EM/emergency-response-guide.html>) and the College of Agriculture, Food and Environment (<http://www.ca.uky.edu/>). To receive emergency messages, sign up for UK Alert (<http://www.uky.edu/EM/UKAlert>). Always turn cellular phones to silent mode when entering the classroom. If you observe or receive an emergency alert, immediately and calmly inform your instructor.

**Ett, Joanie M**

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**From:** Ett, Joanie M  
**Sent:** Wednesday, December 09, 2015 12:56 PM  
**To:** Ett, Joanie M  
**Subject:** FW: Approval for two new forestry courses

**From:** Schein, Richard H  
**Sent:** Tuesday, December 08, 2015 12:00 PM  
**To:** Lhotka, Laura R <[laura.lhotka@uky.edu](mailto:laura.lhotka@uky.edu)>  
**Subject:** RE: Approval for two new forestry courses

Dear Colleagues in Forestry,  
Geography has reviewed your proposal for 2 new courses (FOR 540 and FOR 560). They are exciting and interesting questions. We “wish them well.” We have no objections to FOR 540. We would like to see FOR 560 cross-listed with GEO 531.  
Sincerely,  
Rich Schein

^^  
Richard H. Schein  
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