Where? SEL 3101
When? Tuesday [9:00-11:50am, 13:00-15:50pm]; Wed [14:00-16:50]; Thurs [9:30am-12:20]
Who? Dr. Som B. Ale (sale1@uic.edu) SES 3358, Of. hrs (OPEN)
Ms. Crystal Guzmán (cguzma8@uic.edu), Tues PM (CRN 25694) SES 3458, Of. hrs Fri 9-10am
Ms. Meg Malone (mmalon29@uic.edu), Tues AM (CRN 34265) SES 3340, Of. hrs Tues 1-2pm
Mr. Michael Ricketts (rickett4@uic.edu), Thurs AM (CRN 25695) SES 3342, Of. hrs Thur 1-2pm
Mr. Nolan Bielinski (nbieli2@uic.edu), Wed PM CRN 32278) SES 1434, Of. hrs Mon 1-2pm

What? The course will combine lectures, discussions, hands-on activities, and field trips. The goal is to learn and apply important concepts from ecology and evolution, and to experience nature first-hand. Course performance will be based upon 1) Field trips and associated field trip reports, 2) Field experiment paper, 3) Quizzes, 4) Assignments, and 5) Participation.

Field Trips:
There will be THREE (all-day) Saturday field trips to various natural areas. You must attend all three field trips. On days with field trips we will board buses at the loading dock (W Taylor St) of SES at 7:45AM and return by 4PM. It is mandatory that you ride on the bus (you are NOT allowed to drive separately!). You are responsible for bringing along a lunch and snacks, pens, pencils, and notebook for taking field notes.

For two of the three field trips you will be responsible for writing a laboratory report (max 10 pages including figures but excluding reference page/s). Every student must write a lab report for the Warren Woods field trip. You may choose to write your second report on Indiana Dunes or Volo Bog. You must write your own report. The presence of plagiarized or identical prose among lab reports will be grounds for a score of ZERO. Failure to attend all three field trips will result in loss of all “participation” points (see below).

A lab report is due in two weeks of data-analysis week which follows after the field trip.

25 Feb Warren Woods State Park (Forest ecology and competition)
11 March Indiana Dunes National Lakeshore (Ecological succession)
1 April Volo Bog Sate Park (Plant communities and nutrient cycling)

Field Experiment:
During the semester you will conduct experiments on the feeding ecology of cottontail rabbits at the UIC Greenhouse or on seed-eating birds. You will place feeding trays with pellets of seeds for foragers for a period of three days in a row. The results from this project will be written up as a short research paper.

Quizzes:
Each laboratory period will begin with a lecture and discussion on a general topic in ecology. These lectures will provide general concepts and provide a foundation for the material of the lab and field trips. There will be five quizzes spread throughout the semester that will test on the material of these lectures. You may miss one quiz or drop your lowest score of the five quizzes.

Assignments:
There will be four homework assignments that will be distributed throughout the semester. The first and third are population modeling exercises that you will complete using Microsoft Excel.
The second is a list of peer-reviewed references that you will create, using information from search sites, such as “Web of Science”, pertaining to the ecology of species that we will assign you to. Two of these references you will later use for the fourth assignment, that is, a 10-minute presentation in lab, at the end of the semester.

**Participation:**
You are expected to come to all labs and participate in activities and discussion. Expect to be in lab for the entire allotted time. On field trips we expect students to participate fully in the nature activities, hypothesis formulations and data collection. Failure to participate will result in the loss of points.

Grading:

<table>
<thead>
<tr>
<th>Item</th>
<th>Weight</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 field trip reports</td>
<td>x 100</td>
<td>200</td>
</tr>
<tr>
<td>1 foraging expt. paper</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>4 quizzes</td>
<td>x 25</td>
<td>100</td>
</tr>
<tr>
<td>4 Assignments</td>
<td>x 25</td>
<td>100</td>
</tr>
<tr>
<td>Participation</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>500</strong></td>
</tr>
</tbody>
</table>

≥450 = A; 400-449 = B; 350-399 = C; 300-349 = D

Syllabus

Week of:

Jan 9: Ecology: Interaction of organisms with their environment
- Discussion of urban ecology
- Introduction to Campus wildlife and habitat

Jan 16: Population Dynamics
- Using Excel to model population growth
- Assignment # 1 on Population Growth

Jan 23: Foraging Ecology
- QUIZ 1
- Assignment 1 DUE
- Discussion on Setting-up foraging experiment (on mammal [e.g., cottontail] or bird [e.g., sparrow]). The class will be divided into two groups: One group will work on cottontail and the other group on sparrow. Students in groups of 2 to 3 (never a group of 4) will prepare a concept paper (one page per group) on how do they conduct their foraging experiment.
- Assignment # 2 on Wildlife Literature Review [Each student for this exercise will be assigned a species.]

Jan 30: Species Interactions
- Assignment 2 DUE
- More using Excel to model species interactions
- Assignment # 3 on Multispecies Population Dynamics
- Note: Students, in group of 2-3, turn in a collective concept paper on their foraging adventure for screening and approval. Once approved, they will immediately begin collecting data using feeding trays.

Feb 6: Complex Life Histories and Life History Tradeoffs
- QUIZ 2
- Assignment 3 DUE
- How to write a lab report
- Foraging data collection (continues)

Feb 13: Community Ecology – Direct and Indirect Effects
- Foraging data analysis

Feb 20: Species Interactions – Forest Ecology
- Preview on Warren Woods (Temperate Deciduous Forests)

*All-day Saturday (25 Feb) field trip to Warren Woods (Forest Ecology)*

Feb 27: Biodiversity Conservation
- **QUIZ 3**
- Foraging Lab Report DUE
- Analyze data from Warren Woods

Mar 6: Succession
- Preview: Indiana Dunes

*All-day Saturday (11 March) field trip to Indiana Dunes (Succession)*

Mar 13: Nutrient Cycling
- Warren Woods Report DUE
- Analyze data from Indiana Dunes

Mar 20: Spring Break

Mar 27: Global Climate Change
- **QUIZ 4**
- Indiana Dunes report DUE
- Preview on Volo Bog

*All-day Saturday (1 April) field trip to Volo Bog (Plant Communities)*

April 3: Evolutionary Ecology
- Analyze data from Volo Bog
- Assignments # 4: **Presentations**
- *Warren Woods report rewrite (optional) for max 10 points*

Apr 10: On the ecology of large predator (special topic)

Apr 17: Human Ecology
- **QUIZ 5**
- Volo Bog Report DUE
- Assignment # 4: **Presentations** (cont.)

Apr 24: No Formal (lecture) Class/Assignment catch-up
- Assignment # 4: **Presentations** (cont.)