Ecology and Evolution
BIOS 230—Summer 2016
Mondays, Wednesdays, Fridays 10:00-11:40 a.m.
Burnham Hall 208

Instructor: Karin Nelson, Ph.D.
E-mail: knelsonn@uic.edu
Office hours: After class or Wednesday afternoons by appointment in SES 3378

TA: Nick Crouch
E-mail: ncrouc2@uic.edu
Office hours: By appointment; Science and Learning Center (SES 201)

Prerequisites: BIOS 101

Required Textbooks:
Evolutionary Analysis (5th Edition) by Freeman and Herron.

Grading Policy and Exams:
Grades will be calculated out of a 400-point scale. There will be 2 exams (100 points each), which may be a
combination of multiple choice, fill in the blank, short answer, or essay questions. Each test will count for 1/2
of your final grade. Additionally, there will be several in-class exercises, online homework assignments, and
problem sets worth a total of 200 points. I do not grade on a curve. Points and grades are as follows:
A=360+; B=320-359; C=280-319; D=240-279; F=<239. Your grade will be based on the points you earned.
There will be no rounding of scores.

Exam scores can be viewed in Blackboard (gradebook) at: www.blackboard.uic.edu. Grades are usually
available one week after exams; grading errors must be brought to the TA’s/instructor’s attention within 10
days of grade posting for consideration. Notes, supplemental articles, and videos will also be posted in
Blackboard (documents).

Attendance at all exams is mandatory! If you have a serious illness, contact Dr. Nelson in advance of the
exam and provide signed documentation of your calamity when you are well. Otherwise, absence will result
in a score of zero. If you miss an exam due to a death in the family, you will have my condolences, but your
absence will not be excused without an obituary, death notice, mass card, or death certificate.

Cheating will be dealt with harshly. If you cheat, you will be caught. You will fail the exam. You will fail
the course. You may face further disciplinary action, including expulsion from UIC. Please do your own
work!

Readings:
I recommend completing the readings before each lecture and reviewing notes and readings shortly after each
lecture. Don’t get behind in the reading—it can take much longer to read the material and learn the new
terminology than you think!

Students with Disabilities:
Students with disabilities must inform the instructor of the need for accommodations. Those who require
accommodations for access and participation in this course must be registered with the Disability Resource
Center. Please contact ODS at 312/413-2183 (voice) or 312/413-0123 (TTY).
Last day to drop this course without penalty: Friday, June 17, 2016
Last day to drop and receive a “W” on your transcript: Friday, July 15, 2016

How to succeed in this class:
• Attend class regularly.
• Pay attention in class.
• Take your own notes.
• Read the textbook (and keep up with the readings).
• Learn the vocabulary in the textbook.
• Review the questions at the end of each chapter.
• Read the supplemental readings on Blackboard.
• Ask the TA or instructor if you have questions about the material.
• You should spend at least two hours studying for every one hour you spend in class. For the summer session, that means 5 hours in class per week and at least 10 hours per week studying.
• If you have academic issues that extend beyond this class (test anxiety, study problems, reading comprehension, tutoring needs, etc.), please contact UIC’s Academic Center for Excellence (http://www.uic.edu/depts/ace/strategies.shtml)

How to fail in this class:
• Never attend lecture; only attend exams.
• Don’t read the book.
• Rely exclusively on the instructor’s notes.
• Don’t ask questions when you are confused.
• Don’t do anything except cram all night before an exam.
• Miss an exam without a written doctor’s note.

Other:
Please be courteous to your fellow students and turn your cell phone off before entering the classroom. Texting/Facebooking during class is prohibited and will result in confiscation of your device for the duration of the semester.

I’m happy to answer questions you might have about the material. However, I prefer that you ask me these questions at the end of class or during my office hours. I prefer NOT to receive emailed questions due to the large volume of email I receive daily.

The syllabus schedule may be revised during the semester. You will be notified of any changes.
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture Topic</th>
<th>Reading Assignment</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>6/13</td>
<td>Introduction to Evolution + Ecology; Beginnings of Evolutionary Thought; Charles Darwin and contemporaries</td>
<td>Chap. 2</td>
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<td></td>
<td>6/15</td>
<td>Molecular evolution</td>
<td>Chap. 1</td>
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<td></td>
<td>6/17</td>
<td>Mutation and Genetic Variation</td>
<td>Chap. 5</td>
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<td>2</td>
<td>6/20</td>
<td>Natural Selection/Hardy Weinberg</td>
<td>Chap. 3, 6, 7</td>
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<td>6/22</td>
<td>Speciation</td>
<td>Chap. 16</td>
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<td>6/24</td>
<td>Evolutionary Trees</td>
<td>Chap. 4</td>
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<td>3</td>
<td>6/27</td>
<td>Plant and animal adaptations to physical conditions</td>
<td>Chap. 6, 7</td>
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<td>6/29</td>
<td>Life history</td>
<td>Chap. 13</td>
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<td></td>
<td>7/1</td>
<td>Balancing birth and death; Population growth and life tables</td>
<td>Chap. 8, 9</td>
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<td>4</td>
<td>7/4</td>
<td><strong>NO CLASS—Fourth of July Holiday</strong></td>
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<td></td>
<td>7/6</td>
<td>Population growth and intra-specific competition; Metapopulations</td>
<td>Chap. 11, 19</td>
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<td>7/8</td>
<td><strong>MIDTERM EXAM</strong></td>
<td>Chap. 2, 23, 24</td>
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<td>5</td>
<td>7/11</td>
<td>Climate/Biomes</td>
<td>Chap. 13</td>
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<td></td>
<td>7/13</td>
<td>Inter-specific competition and Niches</td>
<td>Chap. 14</td>
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<td>6</td>
<td>7/15</td>
<td>Predation/Optimal Foraging</td>
<td>Chap. 15</td>
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<td>7/20</td>
<td>Community structure and Ecosystems</td>
<td>Chap. 16</td>
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<td>7</td>
<td>7/22</td>
<td>Food webs/Niches</td>
<td>Chap. 17</td>
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<td>7/25</td>
<td>Succession/Soil formation</td>
<td>Chap. 18; pp. 58-68</td>
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<td>7/27</td>
<td>Energy and Nutrient Flux</td>
<td>Chap. 20, 22</td>
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<td>8</td>
<td>7/29</td>
<td>Biodiversity and Disturbance</td>
<td>Chap. 19, 26</td>
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<td>8/1</td>
<td>Introduced species/Conservation, sustainability; human population</td>
<td>Chap. 27</td>
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<td>8/3</td>
<td>Pest control/Pollution/Climate Change</td>
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<td>8/5</td>
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<td><strong>FINAL EXAM: Friday at 10 a.m. in our regular classroom</strong></td>
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