Instructor of Record

Dr. Michael Tyree
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Office hours: MW 10-12noon; R 9-10; or by Appt.

Course Description
The goal of this course is to provide a broad overview of ecological principles as they apply to plants and plant dominated terrestrial systems predominately at two scales of organization. The first half of the course will cover plant physiological ecology with emphasis on plant stress and mechanisms associated with tolerance. The second half of the course will emphasize ecosystem ecology and global change. These scales of study are designed to complement courses in population and community ecology already offered within the Biology department.

Learning outcomes
Upon completion of this course students will gain: 1) an understanding of the major ecological principals at the scale of physiological and ecosystem ecology; 2) experience with field sampling techniques and experimental designs; 3) synthesize learned concepts to solve problems presented as case studies.

Meeting Time & Location
Lecture: MWF 9:05am – 9:55am in Weyandt Hall, Room 6
Lab: W 8-9am in Weyandt Hall Room 6

Course requirements
- There is no assigned textbook for this course, however, I will be assigning journal articles from throughout the course.
- We will be going outside occasionally for lab so you will need to dress appropriately.
- Check email and D2L prior to each meeting.

Course Evaluation

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<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Midterm Exam</td>
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<td>Final Exam</td>
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<td>Recitation</td>
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<td>Assign &amp; Exp'ts</td>
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<tr>
<td>Case Studies (2)</td>
<td>20%</td>
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<td>Total</td>
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Grading Scale
- A: ≥ 89.5%
- B: 79.5% – 89.4%
- C: 69.5 – 79.4%
- D: 59.5 – 69.4%
- F: ≤ 59.4%

Exams - there will be two exams worth 40% of your final grade, given throughout the semester. Exams will cover lecture material, laboratory material, and assigned journal articles. Exam format will be primarily essay questions. I believe exams should serve as learning tools, therefore, you will be given the chance to correct any incorrect answers to earn up to 50% of your missed points back. For example if you received an 80% on exam 1, you will have the opportunity to correct any incorrect answers and receive up to a 90% for your grade.

Recitation - each student will be required to lead two paper reviews (10%). This involves meeting with me to select a journal article (research article) that interests you and is pertinent to current course topic. I will assign the paper to the class and you will lead a recitation session the following week. The remaining 10% will be based on your attendance and participation during the rest of the recitations.

Case studies - you will be assigned two case-studies throughout the semester. These writing assignments will require you synthesize some of what we talk about in class with journal articles to appropriately address the scenario. These case-studies are designed to provide you with a real-world problem then evaluate your problem
solving skills and your ability to become knowledgeable about the topic. You will be given two weeks to complete each case study and each will be worth 10% of your final grade.

**Assign & Exp’ts** - your average lab grade will be weighted 20% of your final grade. This will include skills tests, your active involvement, and field experiments.

**List of topics** *(this is a tentative list of topics that can be adapted to fit the needs of the class)*

**Physiological ecology topics**
- Plant growth
- Irradiance (low and highlight stress)
- Temperature
- Carbon metabolism
- Plant water relations & drought stress

**Ecosystem ecology topics**
- Plant Distributions
- Disturbance (i.e., Invasive species)
- Biogeochemical cycling (Ecosystem productivity & C cycling)

**Attendance Policy**
Because of the nature of the course, attendance is MANDATORY. Please be on time as I will distribute quizzes, tests, etc. at the beginning of class. You will not receive extra time to complete these assignments if you are late. Habitual tardiness will result in loss of points.

**A Message from the IUP Writing Center**
The IUP Writing Center is open to all students for help with writing assignments. Peer tutors are available to review your writing assignment with you and to help you compose or revise your drafts. The Writing Center is located in 218 Eicher Hall. Hours are Monday through Thursday 9:00 am to 5:00 pm and 6:00 pm to 9:00 pm; Friday 9:00 am to 3:00 pm. No appointment is needed. For more information, visit www.iup.edu/writingcenter or call 724-357-3029.

**Students with disabilities**
Disability Support Services, located in 216 Pratt Hall, provides services to students with disabilities of all kinds, including learning, physical, hearing, vision, or psychological. IUP is committed to ensuring equal access to education as intended by Section 504 of the Rehabilitation Act of 1973 and the Americans With Disabilities Act. If you have any concerns please come see me after class or during office hours.

**Academic dishonesty**
Plagiarism will not be tolerated. Academic dishonesty (plagiarism, falsification of information, cutting and pasting from web-based resources without acknowledgement, etc.) is a serious violation and will result in consequences that affect grades and/or may result in disciplinary charges. Plagiarism is defined as “copying another’s work or portions thereof and/or using ideas or concepts of another and presenting them as one’s own without giving proper credit.”

**Reporting of sexual violence**
Indiana University of Pennsylvania and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment and to comply with Title IX of the Education Amendments of 1972 and guidance from the Office for Civil Rights, the University requires faculty members to report incidents of sexual violence shared by students to the University’s Title IX Coordinator. The only exceptions to the faculty member’s reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project.

Faculty members are obligated to report sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred to the Department of Human Services (1-800-932-0313) and University Police (724-357-2141).