# BIOLOGY 806P

Plant Ecology
Spring 2017

Professor **Bryan Drew** (344 Bruner Hall of Science). Molecular systematics; biogeography; speciation; phylogenetics of Lamiaceae; • 308-865-8883 • drewbt@unk.edu

Contact: By email or phone M-F: 9:00 am to 6:00 pm central standard time (CST)

## Course Materials:

- Readings: Terrestrial Plant Ecology & Select Primary Literature
- Announcements, quizzes, test, discussion boards, and research project: All information for this class will be available on blackboard (http://bb.unk.edu).
- E-mail: All students must use their UNK email account so that I can reach them.

## Schedule:

This class is a graduate level class, therefore I assume that all of you have had a Biology course that covered introductory material at some point in your career. This schedule is subject to change.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignment/Reading*</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>Jan. 9-13</td>
<td>Introduction/Overview of NE plant communities Plant physiology and function 1</td>
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<tr>
<td>Week 2</td>
<td>Jan. 16-20</td>
<td>Plant physiology and function 2/Vegetation Survey Methods</td>
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<td>Week 3</td>
<td>Jan. 23-27</td>
<td>History of Plant Ecology</td>
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<td>Week 4</td>
<td>Jan 30-Feb. 3</td>
<td>Species in an Ecological context Populations</td>
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<td>Week 5</td>
<td>Feb. 6-10</td>
<td>Plant succession: Primary vs secondary Life history strategies of plants/Species interactions</td>
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<td>Week 6</td>
<td>Feb. 13-17</td>
<td>MIDTERM EXAM 1 Climate, Precipitation…</td>
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<td>Week 7</td>
<td>Feb. 20-24</td>
<td>…Elevation, and Latitude Fire</td>
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Week 8 | Feb. 27th-March 3 | Vegetation Survey Methods Soils | Chapters 9 & 17
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Week 9 | March 6-10 | Vegetation Survey Methods | Chapter 13
Week 10 | March 13-17 | Nutrient Cycling Wrap up: Soils & Nutrient Cycling | Chapters 13 & 17
Week 11 | March 20-24 | Spring Break-No Class | ---
Week 12 | March 27-31 | Major Vegetation Types of N.A. Major Vegetation Types of N.A. (cont.) | Chapters 11 & 20; Paper Outline Due
Week 13 | April 3-7 | **MIDTERM EXAM 2** Plant Associations/Effects of Disturbance | Hobbs & Huenneke 1992; Turner et al. 1998; Tilman 2000
Week 14 | April 10-14 | Plant Biogeography Plant Ecology: Lessons from the past | Zachos et al. 2001; Parmesan 2006
Week 15 | April 17-21 | Plant Ecology: Lessons from the past (cont.) | ---
Week 16 | April 24-28 | CO2, climate change, and Plant Ecology Invasive species, humans, and Plant Ecology | Research Paper Due
Week 17 | May 1-5 | **Final Exam** | ---

* Readings from Barbour et al. (Terrestrial Plant Ecology) unless otherwise noted. Note that these readings will generally be more useful if done before lecture/lab of that week.

**Course Description:** Plants are essential for virtually all other life forms on Earth. This course will examine the factors that influence plant ecology, how Earths plant communities looked in the past, what they look like now, and what they might look in the future.

**Course Objectives:**

-- Understand mechanisms behind plant ecology

-- Learn how the Earths vegetation has changed over time
Write a literature review research paper demonstrating an understanding of plant ecology; Also, prepare 15 minute voicethread or Audio Powerpoint summarizing your research paper.

**QUIZZES:** Timed quizzes will be given weekly. The purpose of these quizzes is that people keep up on readings.

**GRADES:**

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<th>Component</th>
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<tr>
<td>Midterm Exams</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
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<tr>
<td>Discussion Board</td>
<td>40%</td>
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<tr>
<td>Research Project</td>
<td>30%</td>
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**Research Paper:** As part of this course you will be required to write a scientific paper in a scientific format.

The grading scale used for this class is as follows:

A (91-100%), A- (89-90%), B+ (87-88%), B (82-86%), B- (80-81%), C+ (78-79%), C (73-77%), C- (70-72%), D+ (68-69%), D (63-67%), D- (60-62%), and F (below 60%).

**STUDENTS WITH DISABILITIES OR THOSE WHO ARE PREGNANT**

Students with disabilities or those who are pregnant are encouraged to contact me for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students with documented disabilities or those who are pregnant. To receive accommodation services for a disability, students must be registered with UNK Disabilities Services Coordinator, David Brandt, in the Academic Success Office, 163 Memorial Student Affairs Building, 308-865-8214 or by email brandtdl@unk.edu. For those needing accommodation due to pregnancy, you need to visit with Student Health. The following link provides information for students and faculty regarding pregnancy rights. [http://www.nwlc.org/resource/pregnant-and-parenting-students-rights-faqs-college-and-graduate-students](http://www.nwlc.org/resource/pregnant-and-parenting-students-rights-faqs-college-and-graduate-students)

Attached is the link to the above statement for your convenience. [http://unkcms.unk.edu/offices/disability_services/](http://unkcms.unk.edu/offices/disability_services/)

**Plagiarism and cheating:** Anyone found plagiarizing or cheating will receive a 0 for that assignment; subsequent violations will result in referral to the Vice Chancellor for Academic Affairs for dismissal from the university.