PLANT ECOLOGY

Dr. John Bryant
Office: Room 414 Irving
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Office Hours:

Tuesday: 3:00-5:00
Wednesday: 3:00-5:00
Thursday: 1:00-1:30
Friday: 2:00-3:15

Lab: The Alaskan winter is not a great time to try and study plants in the real world, so most of the lab time will be spent indoors either discussing papers or in the greenhouse. However, this winter we will spend some time in the field taking a look at browsing by mammals. If spring comes early, we will look at local plant communities and visit long-term ecological research experiments in the Bonanza Creek Experimental forest.

Grades: Your grade will be based on 3 examinations worth 100 points each, and your participation labs will be valued at 100 points. Thus, the grade for this class will be based on a total of 400 points.

Grades will be determined as follows:

A = 90% +
B = 80%-89%
C = 70%-79%
D = 60%-79%
F < 60%
COURSE OUTLINE
(BIOLOGY 474)

Text: Terrestrial Plant Ecology by Barbour, Burk and Pitts

Week 1:

Jan. 16: Text - Chapters 1 and 2

Week 2: Jan. 19 - Jan. 23.

Jan. 19: Text - Chapter 3: The Species in the Environmental Complex

Jan. 21: Journal Papers


Jan. 23: Text - Chapter 4: Population Structure and Plant Demography


Jan. 26: Journal Papers


Jan. 28: Text - Chapter 5: Life History Patterns and Resource Allocation.

Jan 30: Journal Papers


Week 4: Feb. 2 - Feb. 6.

Feb. 2: Text - Chapter 6: Species Interactions (Competition)

Feb. 4: Journal Papers

Something of Tilman’s


Feb. 6: Text - Chapter 7: Species Interactions (Herbivory and Mutualism)


Feb. 9: Journal Papers


Feb. 11: Journal Papers:


FRIDAY FEBRUARY 13
REVIEW FOR FIRST EXAMINATION
Week 6: Feb. 16 - Feb. 20.

Monday February 16
First Examination

Feb. 18: Text - Chapter 8: Community Concepts and Attributes

Feb. 20: Crawley, M.J. The structure of plant communities.

Week 7: Feb. 23 - Feb. 27

Feb. 23: Text - Chapter 9: Methods of Sampling the Plant Community
Text - Feb. 25: Chapter 10: Classification and Ordination of Plant Communities
Feb. 27: Methods of Vegetation Study by Edwin A. Philips

Week 8: March 2 - March 6

March 2: Methods of Vegetation Study by Edwin A. Philips

March 4: Journal Papers

tundra plant species to environmental manipulations in the field. Ecology
A Paleo paper: Either Schwager, Brubaker or Edwards.

March 6: Text - Chapter 11: Succession

Week 9: March 9 - March 13

March 9: Journal Papers

Rev. 45:230-287.

March 10: Journal Papers

Viereck, L.A. 1983. The effects of fire in black spruce ecosystems of Alaska
and northern Canada. Pages 201-220 in R. W. Wein and D.A. Maclean
eds., The Role of Fire in Northern Circumpolar Ecosystems, John Wiley &
Sons, New York.
March 11: Journal Papers


March 13: Journal Papers


Week 10: March 16 - March 20

SPRING BREAK

Week 11: March 23 - March 27

March 23: Journal Papers


MARCH 25
REVIEW FOR THE SECOND EXAMINATION

FRIDAY MARCH 27
SECOND EXAMINATION
March 11: Journal Papers


March 13: Journal Papers


Week 10: March 16 - March 20

SPRING BREAK

Week 11: March 23 - March 27

March 23: Journal Papers


MARCH 25
REVIEW FOR THE SECOND EXAMINATION

FRIDAY MARCH 27
SECOND EXAMINATION
Week 12: March 30-April 3

March 30: Text - Chapter 12: Productivity and the Global Carbon Cycle
April 1: Text - Mineral Cycles

April 3: Journal Papers


Week 13: April 6- April 10

April 10: Journal Papers

Something on N-Fixation
Something on Mycorrhizae

Week 14: April 13-April 17

April 13: Text - Chapter 14: Light and Temperature
April 15: Text - Photosynthesis
April 17: Journal Papers

Pearcy


Week 15: April 20- April 24

April 20: Text - Chapter 17: Soil
April 22: Text - Chapter 18: The Soil-Plant-Atmosphere System
April 24: Text - Chapter 19: Water: Environment and Adaptations
Week 16: April 27-May 1

April 27: Text - Chapter 16: Fire
April 29: Text - Chapter 20: Major Vegetation Types

April 24: Review for Last Examination

Week 17: May 4-May 8: Final Exams

LAST EXAMINATION
WEDNESDAY MAY 6