BSC 436 Plant Diversity and Conservation
Course Syllabus

Instructor: Audrey Whaley, MS
Office hours: Monday 5:00 pm-7:40 pm STC 123
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Course Objectives
This course is a survey of concepts in plant community diversity, reserve design and conservation practice. Expected outcomes will be a basic familiarity with nomenclature, concepts and approaches to conservation of plant populations, communities and ecological systems. Emphasis will be on grasslands though other habitats will be considered. The course will be primarily lecture with several local field trips (to be negotiated). The following course outline may be amended as opportunities arise.

Text Optional

If you have not had a basic ecology course, this will be helpful. Selected chapters will be recommended. Handouts, lecture notes and assigned resources will be the basis for examination.

Grades
Tests will be based on a combination of lecture notes, handouts and assigned reading. Grade will be based on: 1) Two tests and a final comprehensive examination (300 points) and 2) a preserve design project (200 points).

Expectations
Because BSC 436 meets once per week, a great deal of material will be covered each class session. It will be impossible for you to perform well in this course without attending all classes. However, if you must miss a class, you should exercise all due diligence to acquire lecture notes, handouts and related material. This is your responsibility. It is the responsibility of the student to inform me of any problems you may have affecting your performance in class, be it due to professionally diagnosed disability, personal or work-related problems, etc., so that appropriate adjustments can be made.

Please:
- No cell phone use; Phones may be on silent mode
- No talking during lectures and presentations
- No headphones, disk players, etc.

However, you may use recording devices in the lecture – audio recorders are fine, but talk to me first about video.

Students with Disabilities:
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation for their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services  
Texas A&M University-Commerce,  
Halladay Student Services Building,  
Room 303A/D  
(903) 886-5835, or (903) 886-5150  
Fax (903) 468-8148  
StudentDisabilityServices@tamu-commerce.edu

**Class Schedule:**

**Class 1  8/31**  
Introduction to the class. And: The natural and cultural history of the Grand and Blackland Prairies and the Eastern Crosstimbers. Changes in the ecosystem from the end of the Pleistocene to modern times. (Optional: Read Chapters 1 and 2)

**September 7, Labor Day Holiday** Concepts and Vocabulary Sheet before next class date.

**Class 2  9/14**  
**Field Trip: Clymer Meadow Preserve, Celeste.** Class will tour a Tallgrass Prairie Preserve and discuss relationship of soil, land use history and diversity. Carpooling is recommended. Early departure? (Optional: Read Chapters 7, 8, 9, 11 and Chapter 12 sections on Population Viability Analysis and Metapopulation only).

**Class 3  9/21**  
Concepts and nomenclature in diversity. Reserve design concepts and terminology. (Large patch vs small patch, edge effect, landscape concepts, metapopulation and fragmentation, buffering, corridors, viability etc….) (Optional Read Chapter 15, and 16)

**Class 4  9/28**  
Introduction to conservation planning methodologies (Threats assessments, conservation area planning, ecoregional planning)

**Field Trip: Saturday, October 3rd. 9am-3pm. This will be an introduction to your semester project sites.**

**Class 5  10/5**  
Measurements of plant community diversity. Introduction to diversity indices, FQI.
Class 6 10/12
Exam 1 on nomenclature, concepts and measurements

Class 7 10/19
Disturbance effects on diversity and richness—Fire and grazing effects
Read Chapter 17

Class 8 10/26
In-class workshop on Preserve Design projects—5S approach to threats assessment

Class 9 11/2
Natural Heritage Programs, history and use, application of global, national and subnational ranks.

Class 10 11/9
Edaphic effects on diversity and richness

Class 11 11/16
Exam 2 on edaphic and disturbance effects, elements and terminology of natural heritage programs.

Class 12 11/23
TBD

Class 13 11/30
Presentation of Preserve Design Projects

Class 14 12/7
Presentation of Preserve Design Projects, final review.

Class 16 12/14
FINAL EXAM - Comprehensive

“All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.” See Student’s Guide Handbook, Policies and Procedures, Conduct.

Note: Plagiarism is a criminal activity. You must cite all sources of information!