WILD 3810 – 3 credits
Plant and Animal Populations
Spring 2018

Instructor
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Prerequisites
WATS 2220 or BIOL 2220; MATH 1100 or higher (C- grade or better); STAT 2000 or STAT 3000 (C- grade or better).

Text Book
Blackwell Publishing, Malden, MA

Course Description
This course is designed to demonstrate the relevance of population ecology to conservation and management problems, as well as ecology and evolutionary questions. We will learn about the biotic and abiotic factors that regulate and cause plant and animal populations to change over space and time. We will first examine the factors (e.g. climate, habitat, harvest) and mechanisms (density-dependence and independence) that drive population change (i.e. population growth, abundance, survival). We will then move on to age-structured and spatial models of population dynamics and how their mathematical properties apply to conservation, management, ecology and evolution. In addition to ecological concepts, students will be introduced to mathematical and statistical techniques, as well as computer software that will allow them to examine plant and animal population dynamics.

Course Objectives (in line with IDEA objectives)
These quantitative skills underpin modern conservation biology, natural resource management,
population ecology and related fields, and will increase competitiveness for those seeking careers in these fields. Individuals that have great difficulty with basic mathematics and statistics should not be discouraged, but will have to spend a little more time working on the course material.

Overall, my three main objectives are for you to:

1. Gain factual knowledge (terminology, methods, and trends) in plant and animal population ecology.
2. Learn to apply course material to conservation, management, and ecological problems (to improve thinking, problem solving, and decisions) using mathematics and computer software.
3. Develop specific skills and competencies in problem solving, ecological hypotheses development related to population ecology of plants and animals.

Course Resources

Canvas
Canvas is the Learning Management System that we will use for our course. You can log into Canvas at https://canvas.usu.edu/. Enter your username, which is your A#, and strong password (the same one you use for Banner or Aggiemail). For a list of tutorials relating to Canvas, go to your canvas page, select support and “Canvas orientation for students”. We will be using Canvas’s Quiz, Assignment, and Announcement tools. The Discussion and Quiz tools can be used amongst students to discuss labs and lectures, but should not be used to exchange results pertaining to lab assignments, quizzes, or final assignments.

Software
You will mainly need Microsoft Office to complete your lab assignments. Additional, freely available software will be required and I will help you download these programs when the time comes (for specific labs). You will need access to the internet to navigate the Canvas page, as well as a video software that will allow you to read mp4 format.

Course Activities (in order)

Each week:
1. Lectures: will be posted on Canvas (one or twice a week) and will be 30-60 minutes long depending on the topic.
2. Guided Labs and Assignments: will consist of computer oriented sessions designed to help solidify topics presented in the lecture. A guided lab is a short visual demonstration (with sound) walking you through an ecological problem. Most labs will be conducted in Excel and will be completed on your own as part of your assignment each week.
3. Readings: will be posted each week to deepen your understanding of topics presented in the lectures and labs. Reading materials should not be neglected since they will be used to design questions pertaining to exams and quizzes.

Throughout the semester:
You will be required to complete multiple online quizzes throughout the semester. These quizzes will consist of approximately ten to twenty multiple-choice, fill-in-the-blank, matching
and (or) true/false questions based on lectures and labs. You will have one week to complete each quiz.

Exams:
There will be one final exam which will consist of problem solving, short answers, and essays to be completed electronically at your regional campus or at home. You will have 10 days to complete the final exam at the end of the semester.

Submitting electronic files:
Please name your assignment file using the following convention: labnumber_yourname.doc. e.g. ‘lab1_chung.doc’ or ‘lab1_chung.xls’ (the file extensions / format might change depending on the assignment).

Course Policies

• Please use the Discussion Board as much as possible. I will view the discussion board once a day and will answer questions as needed. I will use the Announcements page in Canvas to communicate changes to the course and other information each week.
• I strongly encourage the use of the Chat device available in Canvas to interact with your fellow students and create the classroom atmosphere that often lacks online.
• I will answer all questions you may have regarding course materials by e-mail (vyachung@usu.edu) and will do my best to answer within 24 hours on weekdays.
• You will receive specific feedback on your Assignments in the form of text comments appended to your electronic submissions.
• If you experience a legitimate emergency that prevents you from completing required coursework on time, please let me know ASAP. Make sure you state the nature of the emergency when making such inquiries.
• This syllabus is subject to change. I will notify the class regarding all changes via the Announcement page on Canvas.

Honors Students
This class is offered as an Honors Class on a contract basis. Those students wishing to take this class for Honors should contact the instructor during the FIRST week of class.

University Policy on Academic Integrity
The Honor System is designed to establish the higher level of conduct expected and required of all USU students. Infractions (cheating, falsification, and plagiarism) and their associated penalties are described in the USU Academic Policies and Procedures Manual Academic Dishonesty: The Instructor of this course will take appropriate actions in response to Academic Dishonesty, specifically cheating, falsification, and plagiarism. Full text of the Student Code can be found here: http://www.usu.edu/studentservices/studentcode/

Accommodations for disabilities
Students with physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. All accommodations are coordinated through the Disabilities Resource Center (DRC) in Room 101 of the University Inn, 797-2444 voice, 797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

Grading

You will be graded on multiple lab assignments (40%), quizzes spread throughout the semester (30%), and one final exam (30). However, the grading scale may be changed at the discretion of the instructor depending on class performance. All lab assignments must be turned in on time. Late assignments are docked 25% of the grade for each day late.

Grading scale

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