SYLLABUS
WLF621, Vertebrate Population Dynamics, Spring 2000

Lectures: Mon/ Wed 1030-1130, Irv. 208; Lab: Tues 01030-1130, Irv 208

Professor: David W. Willey
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Office Hours: Mon. 1300-1430
              Wed. 1300-1400
              Thurs. 1000-1100


Philosophy: Exploration of vertebrate population dynamics is a quantitative process that uses theoretical mathematical models (and certain key assumptions). I plan to guide you through the topics outlined in the class meeting list (shown below, and on the following pages). I hope to introduce population management strategies, e.g., Population Viability Analysis (PVA). I have borrowed heavily from various population "gurus", e.g., Hilborn and Walters (fish stock assessments), Gary White and Charles Krebs (terrestrial pop'ns).

Objective: Students will leave this course with the competence: to explore population theory using a PC; to assess the rate of increase/decrease of a population given varied birth, death, immigration, and emigration rates; and perhaps most important, students should have familiarity with the biological and mathematical literature of populations.

Second Half Discussion Sessions: Students will read pertinent material pertaining to class presentation and will review class notes, in order to discuss papers presented by each student during roundtable lab sessions. During this phase, students are encouraged to bring in literature from their area of expertise for discussion by the class, and the further schooling of the instructor.

Grading: Final grades will be based on paper presentation style and content (50 pts); participation in Discussion Meetings (25 pts/meeting), and the Final Exam (100 PTS). Attendance: please let me know if you will miss a meeting (send a brief email or voice mail message).

List of Class Meetings:

Jan. 19 -- Syllabus Review

Jan. 26 -- Lecture 2. Density independent population growth models


Various Papers to be announced.


Reading:


Feb. 9-- Lecture 6. Additive vs. compensatory mortality and MSY.

Reading:


Reading:


Feb. 16 -- Lecture 8. Role of immigration and emigration in populations.

Reading:


Reading:


Optional:


Reading:


Optional:


Reading:


Optional:


Reading:


Reading:


Reading:


March 21, 28; April 4, 11, 18, 25 Papers and Discussions: Topics in Population Dynamics

5 May Final TAKE HOME exam due at 5pm.

Lab Meetings: I plan 3 Lab Exercises (25 pts) on the following dates: Feb 8, 22, & 29; and Mar 7. We will use lab exercises to explore population models and data sets.