Tentative Syllabus: "Ecological and Evolutionary Physiology" (BIOL 174) Winter '14

Professor: Dr. Theodore Garland, Jr., Professor of Biology, University of California, Riverside
Office is 2366 Spieth Hall; Phone 951-827-3524; tgarland@ucr.edu
Office Hours: Tuesdays 8:30-9:30 AM and Wednesdays 10:30-11:30 AM, or by appointment

Teaching Assistant: Mr. Gerald C. Claghorn, Ph.D. candidate, Dept. of Biology, UCR
Office hours in 2346 Spieth Hall, gclag001@ucr.edu
Office Hours: Monday, 11-12 PM and Thursday 1-2 PM, or by appointment

Discussion sections are on Wednesdays at 12:10-1:00, 1:10-2:00, 3:10-4:00, and 4:10-5:00 PM

Catalog Description: Interactions between organisms and their environments, emphasizing coadaptation of physiological, morphological, and behavioral phenotypes. Topics include: allometry and scaling, metabolism and locomotion, heat and water exchange, evolution of endothermy, artificial selection experiments, and phylogenetically based statistical methods.

Lecture (required): Tuesday and Thursday, 2:10 - 3:30 P.M. in 2200 Spieth Hall

Required Readings: All readings as PDF files will be posted online at http://ilearn.ucr.edu/. These should be read before class (and before Discussion). Lectures will be posted only after class.

Grading: Mid-term Exam 1 (50 points), Mid-term Exam 2 (50 points), Final Exam (50 points), Discussion Section (50 points; includes attendance [10 points], 3 quizzes [5 points each], and 1 paper critique [10 points]; Born to Run inquiry-based learning exercise [15 points]. Total = 200 points.

Lecture Schedule and Required Readings for both Lecture and Discussion:

1. Tues., 7 Jan. 2014 - Introduction to Course

8 Jan. 2014 Discussion Reading: NO DISCUSSIONS HELD THIS WEEK!!!


15 Jan. 2014 Discussion Reading and Quiz #1 on this reading and the Mayr one from last week:


5. Tues., 21 Jan. 2014 - finish Allometry; Statistical Tutorial; Thermoregulation & Resting Metabolism

22 Jan. 2014 Discussion Reading (Paper Critique due at start on following paper):


7. 28 Jan. 2014 (Tuesday) - Exam 1

29 Jan. 2014 Discussion Reading:


5 Feb. 2014 Discussion Reading and Quiz #2 on the following reading only:


13. 18 Feb. 2014 (Tuesday) - Exam 2


17. Tues., 4 March 2014 - Measuring Selection in the Wild
5 March 2014 Discussion - Born to Run Exercise: data analysis

18. Thurs., 6 March 2014 - Studying Microevolution in the Wild: Guest lecturer Prof. M. A. Chappell


12 March 2014 Born to Run Exercise: write-up due at start of period; Discussion Reading:

20. Thurs., 13 March 2014 - Optimality Models and Symmorphosis

Wednesday, 19 March 2014 - Final Exam 8:00 - 11:00 AM (emphasizes last third of course)