



BIOSPHERE

The Weekly Bulletin of Biology

Biology Colloquium: Friday, 1 November 2013, 2:00 pm in CR 5125

“Asthma: A Model for Understanding Inflammatory Processes”

Christopher Allen, Ph.D.
Cardiovascular Research Institute
UC San Francisco

GE Critical Thinking Requirement: PHIL 225 Evolutionary Reasoning

Ever found yourself fumbling to explain evolution to your family or your friends or people in your congregation? Ever hear an evolutionary argument and think, “*That’s not quite right ... but I don’t really know why.*”



Now, finally, we have a course on the broad impact of evolution. It is great preparation for the Biology major and a fantastic opportunity to put your major into context.

The course, PHIL 225 Evolutionary Reasoning, to be offered MW 12:30–1:45 pm, shall be structured around guest lectures, many from Biology professors. In the session after a guest lecture, students are to dissect what the guest said.

The course is ideal for freshmen and sophomores needing to fulfill the GE requirement for Critical Thinking.

Rush to sign up. Seats are limited!

More-Statistics Seminar

“More stuff ecologists really need to know” is how Dr. **Steve Dudgeon** describes a seminar to be offered next semester as Seminar in Ecology (BIOL 615C) on Tuesdays 5:00–7:45 pm.

The subject will be on advanced techniques of data analysis that are not covered in Biometry or Bioinformatics, but are becoming increasingly important in the literature. These are methods that recent graduate students have discovered they

need to know how to do for their thesis research.

The course will be a seminar format in which students will take the lead in researching and presenting analytical techniques. Participants will explain the underlying theory, assumptions, details of application, and then present examples performed in class with sample data sets coded in software like SAS or R.

The goal is for each student to learn by focusing on a few techniques. By presenting them to the class and exchanging program codes plus documentation on the techniques, students will build the capacity to analyze data using all of the techniques covered during the semester.

The techniques covered will be tailored to student interests, but suggested themes include permutation methods (i.e., PERMANOVA), multivariate statistics (e.g., dealing with resemblance matrices, discriminant analysis/MANOVA, nMDS, PCA, PCoA, ANOSIM, SIMPER, k-means clustering [Structure, Instruct, for genetic data]), Information-theoretic approaches (Model Selection and multimodel inference), generalized linear mixed modeling, path analysis/structural equation modeling, meta-analysis and effect size estimation, non-linear regression, and Bayesian approaches to data analysis.

Students should have completed the graduate requirement for quantitative analysis before signing up for this seminar.

Pharmacogenomics Seminar

Dr. **Rheem Medh** will be teaching a Seminar in Genetics (BIOL 655D) from 2:00–4:50 pm on Thursdays. The specific topic will be pharmacogenomics, which will be of interest for all med-school, Ph.D., and pharmacy-school aspirants.

Behavior with a Special Emphasis on Fishes

Dr. **Larry Allen** will be teaching a Seminar in Ethology (BIOL 615D) on Wednesdays 5:00–7:45 pm. One might expect topics on fishes, perhaps also the descendants of fishes, organisms affected by fishes, or that affect fishes.

New Publications

The amazingly prolific Dr. **Peter Edmunds** is the proud author of, “Decadal-scale changes in the community structure of coral reefs in St. John, US Virgin Islands,” which was published in the *Marine Ecology Progress Series*.

Alumni News

Michael Silva is now at USC Medical School.

New Funding

Drs. **Janet Kübler** and **Steve Dudgeon** were recently awarded funding (\$690,000, June 2013–May 2016) from the National Science Foundation to study the “Scope for Resilience to Ocean Acidification in Macroalgae.” They wish to recruit students to join the research program.

Related to that research initiative, Kübler presented a poster at the National Ocean Acidification Principle Investigator’s Meeting in Washington DC. Drs. **Robert Carpenter** and **Pete Edmunds** also attended the meeting. CSUN is a research powerhouse on how climate change affects marine systems.

Biosphere: The Weekly Bulletin of Biology

Department of Biology
California State University, Northridge
Editors: Paul Wilson and Robert Espinoza
For past issues: www.csun.edu/biosphere
For job opportunities: csunbio.wordpress.com