

ECL 290 Phylogenetic Methods and Principles

Proposed topics:

Cladistics: past and future

Species concepts

Parsimony vs. Model based approaches

Gene tree vs. species tree issues (Coalescence approaches)

Dating Phylogenies

Hybridization and Reticulation

Reconstructing ancestral states

Ecological correlations in a
Phylogenetic context –
Phylogenetic independent contrasts etc.

Biogeography/Phylogenetics in action!

Phylogenomics

Time: Tuesday afternoon, exact time TBD, contact Reed Kenny if you are interested and we will find the time that works best.

Student Organizer: Reed Kenny (rjkenny@ucdavis.edu)

Faculty Speaker: Daniel Potter (dpotter@ucdavis.edu)

The goal of this course is to explore current topics in the principles and methods of phylogenetics in a participatory seminar format. This seminar should give students a good grounding in the most current methodologies in phylogenetics as well as the core principles upon which these are based. It is unlikely that we will dig into the minutiae of applying any particular method. Rather this should enable students to choose the most appropriate methods for a variety of applications. This is a 2 unit seminar and we will meet for 2 hours each week. We will tailor the readings to meet the goals of the participants and we invite students with all backgrounds to participate. To facilitate this, here is a one question survey that will help us design the course:

https://docs.google.com/forms/d/e/1FAIpQLSf5_Kgk3xJjZb8DM03TzMT_E7ELZOpw6TahMdY4H2GN6bVh7w/viewform?usp=sf_link