

ECL 290 Phylogenetic Methods and Principles

CRN: 20864

Time: TDB, contact Reed Kenny by 12/1 if you are interested in the course and we will coordinate to find the best time.

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, but 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.

For each meeting, the presenter(s) will be expected to assign one to three readings (Dan is happy to help identify and find appropriate articles) at least a week ahead of time, to give a 30-40 minute presentation of the topic in general and the assigned papers readings in particular, and to lead a discussion. Everyone else should of course read the assignments and come to our meeting prepared to discuss the readings and the topic in general.

Below is a proposed list of topics for the quarter. We encourage participants to propose any topics of particular interest to them.

- Species concepts
- Gene tree vs. species tree issues
- Bayesian approaches
- Divergence time estimations
- Parsimony approaches
- Interspecific hybridizations
- Taxonomic applications
- Coalescence approaches
- Working with polyploidy
- Reconstructing ancestral states