<table>
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<th>Week</th>
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| 1 | I. Introduction  
Historical Development, Hypothesis Testing  
Taxonomy vs. Systematics |
| 2 | II. Schools of Macrotaxonomy  
Evolutionary, Numerical, Phylogenetic  
Introduction to “tree thinking” and taxa  
Outline of Phylogeny Projects |
| 3-4 | III. Phylogenetic Analysis  
Construction of Dataset (Intro to Genbank, Nexus files)  
Sources of Data, Characters, Optimality Criteria  
Using Phylogenetic Software  
Project Approval |
| 5-6 | IV. Parsimony Approaches  
Distance  
Likelihood  
Assessing Reliability of Phylogenetic Trees |
| 7 | V. Consensus, Congruence, Combining Data  
Special Problems in Phylogeny Reconstruction |
| 8 | VI. Character Evolution, Adaptation  
Progress Report-Projects |
| 9 | VII. Species Concepts-Biological, Evolutionary, other  
**Debate** |
| 10-11 | VIII. Speciation, Lineage Sorting  
Phylogenies and Temporal Diversity Patterns |
| 12-13 | IX. Phylogenies in Biogeography, Coevolution, and Conservation |
| 14-15 | X Wrap-up and Project Presentations |
Spring 2000; Biology 615
MWF 1-2pm; Irving 208
Instructor: Joe Cook
Office Hours: Wednesday 2-4
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phone 6946

Systematic and Comparative Biology

Grading
Attendance, Participation, 30 points
Project 120 points
Debate 20 points
Presentation 30 points

Total 200 points (with standard 90-100% = A; etc)

Textbooks:
Required:

Recommended as references:


Phylogeny project: Your course project will be done in groups of two and consist of a molecular phylogenetic analysis of an issue of interest to you, or an experimental study of a theoretical issue in molecular phylogenetic analysis. You may work with data from the literature or Genbank, but all analyses should be your own.