EVPP 645 – Freshwater Ecology
Spring 2004

Course Description and Goals: This course focuses on biological communities and processes occurring in lakes, streams, and other inland water bodies. This course builds on EVPP 550: Waterscape Ecology and Management. This course assumes a basic knowledge of ecology, chemistry, and aquatic science. Students will review the basic concepts of ecology and evolution and apply them to the study of freshwater populations, communities, and ecosystems using research studies. The course also includes a review of the diversity of animals found in freshwater systems, their life histories, and their trophic strategies. After completion of the course students will be competent to apply ecological concepts to freshwater systems, to critically evaluate data on freshwater populations and communities, and to conduct research in freshwater ecology.

Course Content and Instructional Methods: The subject matter of this course is delivered in the form of lectures, lecture outlines, and assigned readings.

Date	Topic and Reading
Jan 20	Ecology and Evolution, Methods of Ecological Research, Special Features of Aquatic Habitats (L&S, Chap 1-3)
Jan 27	The Individual in its Habitat (L&S, Chap 4)*
Feb 3	The Individual in its Habitat (L&S, Chap 4)*
Feb 10	Aquatic Populations (L&S, Chap 5)*
Feb 17	Interactions: Competition & Predation (L&S, Chap 5)* Topic, outline, and initial reference list for term paper due.
Feb 24	Interactions: Predation, Parasitism, & Symbiosis (L&S, Chap 5)* Topic, outline, and initial reference list returned with comments
Mar 2	Taxa and life histories of Freshwater Organisms
Mar 9	No Class – Spring Break
Mar 16	MIDTERM
Mar 23	Taxa and life histories of Freshwater Organisms
Mar 30	Taxa and life histories of Freshwater Organisms
Apr 6	Aquatic Communties (L&S, Chap. 7)*
Apr 13	Energy flow and nutrient cycling in aquatic ecosystems (L&S, Chap. 8)*
Apr 20	Energy flow and nutrient cycling in aquatic ecosystems (L&S, Chap. 8)*
Apr 27	Management of freshwater ecosystems (Readings to be assigned)
May 4	No Class. Reading Day. TERM PAPERS ARE DUE.
May 11	FINAL EXAM: 7:30 pm, regular classroom.

Reading: The required text for this course is Limnoecology: The Ecology of Lakes and Streams by Winifried Lampert and Ulrich Sommer. In addition there will be a series of required readings from journal articles. A list of these will be provided on the web site with links to the articles online. Each student will be responsible for making a 20 minute presentation on one of the articles to the class (*indicates journal article presentation dates). An outline of the biosystematics of freshwater organisms as well as diagrams

of representative organisms including all of the overheads to be used during the "Taxa and Life Histories of Freshwater Organisms" lectures will be available for photocopying.

Methods of Evaluation: There will be two exams each worth 150 points. The midterm will cover the material through February 24. The final will cover the material in the second half of the semester. The in-class journal article presentation is worth 50 points. A term paper worth 150 points is also required. A separate handout will be provided for term paper guidelines. Any exams that are scheduled on a day when the university is closed for inclement weather (or any other unanticipated closure) are automatically rescheduled for the next class day.

Instructor and Contact Information:

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