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BIOL 311.01: Survey of Plants I

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BIOL 311 Survey of Plants I Fall, 2001

Instructor: Dr. Kevin J. Murray ; **Office:** HS 112 ; **Phone:** 243-4130 , **email:** kmurray@selway.umt.edu

Course Overview. BIOL 311 is the first semester of a two-semester course exploring the biological diversity of photosynthetic organisms (plants, eukaryotic algae, cyanobacteria). Specifically, BIOL 311 is devoted to the study of the “algae” and the nonvascular plants, or bryophytes. We will also spend some time with the lichens. The central objectives in the course are: 1) understand the relationships of the algae/bryophytes to other photosynthetic organisms, 2) understand the functional biology of the algae/bryophytes including modes of reproduction, physiology and ecology, and 3) understand the taxonomy and diversity of these organisms. In-class exams, laboratory exams, a laboratory notebook, an independent project (optional) and classroom participation will be used to assess your meeting of the above objectives. There will be 2 writing assignments on topics of your choice relevant to the ecology, physiology and/or economic importance of algae and bryophytes.

Required texts: A Biology of the Algae. 3rd ed. 1998. Philip Sze. How to Know the Freshwater Algae. 3rd ed. Prescott.

Optional texts: How to Know the Mosses and Liverworts. 2nd ed. Conrad & Redfearn. Mosses, Lichens & Ferns of the Northwest. Vitt *et al.*

Grading: Your final grade will in part be based on 2 midterms, a final exam. Lecture exams will consist of short answer questions as well as objective questions (fill-in-the-blank, matching). Lab exams will take place on the same day as lecture exams and cover the same material. Lab exams will consist of sight identification of materials studied in lab as well as identification of “unknowns. The laboratory notebook can help you gain extra points based on organization, content and clarity of recorded information. The writing assignments will also contribute to your overall grade.

BIOL 311 Fall 2001 Projected Lecture Schedule

<u>week of</u>	<u>lecture topics</u>
03 Sep	Classifying living things; Overview of plant kingdom Algae in the fossil record
10 Sep	Characteristics of the “algae” Cyanophyta
17 Sep	Cyanophyta Chlorophyta
24 Sep	Chlorophyta Chrysophyta
01 Oct	Fresh water algal ecology Exam I
08 Oct	Origins of “plants” & Introduction to Bryophytes Anthocerotae & Hepaticae
15 Oct	Sphagnidae Sphagnidae
22 Oct	Bryidae Bryidae
29 Oct	Polytrichidae

05 Nov	Bryophyte ecology Exam II
12 Nov	Dinoflagellates Euglenoids
19 Nov	Thanksgiving Holiday
26 Nov	Rhodophyta Phaeophyta
03 Dec	Algal ecology Lichens
10 Dec	Lichens Lichens
18 Dec	Final Exam 1:10 – 3:10 pm