

Outline for Introductory Limnology--Biol. 326, 526 Fall 2013  
We will meet in HS 56 for both lab and lecture.

Instructor: Dr Robert Pillsbury

Office: HS 41

Office Hours: Monday 10:30-13:30pm, Thursday 9:00-11:00 am, or by appointment.

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Tentative Schedule:

Week 1

Sept 4 Lec. Introduction, Aquatic habitats

Sept 4 Lab. Introduction to limnology equipment and aquatic research center

Week 2

Sept 9 Lec. Bacteria/ blue-green algae

Sept 11 Lec. Phytoplankton

Sept 11 Lab- Look at algae!

Week 3

Sept 16 Zooplankton

Sept 18 Lec. Field Trip

Sept 18 Lab Sampling aquatic habitats.

Week 4

Sept 23 Lec. Benthic/Fish

Sept 25 Lec. Trophic Levels

Sept 25 Lab Sampling Green Lake

Week 5

Sept 30 Lec. River Continuum

Oct 2 Lake Formation

Oct 2 Lab. 24 hour sampling experiment

Week 6

Oct 7 Hydrologic cycle

Oct. 9 Lec. Exam 1

Oct. 9 Lab. Examine aquatic plants collected and zooplankton.

Oct 12 Over night field trip to Trout Lake Biological Station.  
-Lake profiles.

Week 7

Oct. 14 Lec. Properties of Water (heat and light)

Oct. 16 Lec. video

Oct. 16 Lab. Preserving samples, measuring stream flow.

Week 8

Oct 21 Lec. pH and the carbonate cycle

Oct 23 Lec. Phosphorus

Oct 23 Lab. Examining algae samples.

Week 9  
Oct 28           Lec. Nitrogen  
Oct 30           Lec. Other nutrients  
Oct 30           Lab. examine macroinvertebrates.

Week 10  
Nov 4            Lec. Dissolved Organic Carbon  
Nov 6            Lec. Paleolimnology  
Nov 6            Lab. Open lab

Week 11  
Nov 11          Lec. Wetlands and marine systems  
Nov 13          Lec. Pollution  
Nov 13          Lab Exam

Week 12  
Nov 18          Lec. Pollution  
Nov 20          Lec. Wastewater Treatment  
Nov 20          Lab Lake metrics

Week 13  
Nov 25          Lec. Exotics

Thanksgiving Break!

Week 14  
Dec 2            Lec. Management of Lake systems  
Dec 4            Lec. Lab presentations  
Dec 4            Lab. Lab presentations.

Week 15  
Dec 19          Lec. Artificial Lakes and wetlands  
Dec 12          Final exam

**Objectives:**

**For Undergraduate and Graduate students**

- Learn sample techniques for aquatic environments
- Learn the physical, chemical, and biological characteristics of aquatic systems and how they interact.
- Learn about issues concerning Great Lakes ecology.

**For Graduate students:**

(In addition to the objectives listed above)

- Become familiar with current topics found in the primary literature for aquatic biology.
- Gain experience researching and writing a term paper that explores an aspect of aquatic ecology in greater detail.
- Gain experience giving a presentation to the rest of the class.

**Class evaluation**

Exam I	100
Lab exam	50
presentations	100 group presentations
Final exam	100
Class participation	30 --includes a problem set or two.
Total	380

For Graduate students: An 10 page term paper on an approved limnology topic is required for an additional 50 points. These reports will be presented to the class.

% Point total	Grades
90-100%	A
88-89%	A-
87-88%	B+
80-86%	B
78-79%	B-
77-78%	C+
70-76%	C
68-69%	C-
67-88%	D+
60-66%	D
58-69%	D-
<58%	F