



Zoology 955
LIMNOLOGY SEMINAR: Classics in Limnology
Official Course Name Seminar-Limnology

Fall Semester 2018
1 credit

Course Designations and Attributes
Graduate 50%

Seminars: Tuesdays 1:30p-2:30p in Hasler Laboratory of Limnology, Room 210

Instructional Mode

All face-to-face.

This course will be seminar-based and focused on developing an understanding of the history of limnology that can be applied in graduate student research.

Credit Hours

This class meets one 50-minute class period each week over the spring semester and carries the expectation that students will work on course learning activities (reading, writing, problem sets, studying, etc) for about 2 hours out of the classroom for every class period. The syllabus includes additional information about meeting times and expectations for student work.

Instructor

Dr. Emily Stanley, Professor, Center for Limnology
Department of Integrative Biology
Office hours by appointment.
ehstanley@wisc.edu

Course Description and Overview

This course will be seminar-based and focused on developing an understanding of the history of limnology that can be applied in graduate student research. Each week one student will lead discussion on 2-3 papers that are considered classics in limnology. All students are expected to have read the papers prior to class. Individual presentation days will be chosen during the first class of the semester.

Requisites

Graduate or professional standing.

Additional Recommendations:

Prior to class students are expected to have read the weekly papers.

Course Aim

To develop an understanding of the history of limnology that can be applied in graduate student research.

Course Learning Outcomes

- Knowledge of important research in early limnology
- Ability to identify new and innovative research ideas in historical manuscripts
- Understand historical influences on modern ideas and methods
- Ability to orally present ideas in a cogent and succinct manner

GRADING

Grades will be based on in class presentation (50%) and participating in class discussion (50%). Numerical grades are assigned as follows: 93-100 (A), 88-92 (AB), 82-87 (B), 78-81 (BC).

SCHEDULE19 Sep

Forbes, S.A. 1887. The lake as a microcosm. Bulletin of the Peoria Scientific Association, pp. 77-87. Reprinted in Bulletin of the Illinois State Natural History Survey 15:537-550.

Birge, E.A. 1904. The thermocline and its biological significance. Transactions of the American Microscopical Society 25:5-33.

10 Oct

Juday, C. 1940. The annual energy budget of an inland lake. Ecology 21:438-450.

Lindeman, R.L. 1942. The trophic-dynamic of ecology. Ecology 23: 399-418.

17 Oct

Redfield, A.C. 1958. The biological control of chemical factors in the environment. American Scientist 46: 205-221.

Smith, V.H. 1983. Low nitrogen to phosphorus ratios favor dominance by blue-green algae in lake phytoplankton. Science 221: 669-671.

31 Oct

Hutchinson, G.E. 1961. The paradox of the plankton. The American Naturalist 95:137-145.

Tilman, D. 1977. Resource competition between plankton algae: An experimental and theoretical approach. Ecology 58:338-348.

Gliwicz, Z.M., W. Lampert, and A. Duncan 1986. The PEG model of seasonal succession of planktonic events in fresh waters. Archiv für Hydrobiologie 106:433-471.

7 Nov

Brylinsky, M. and K.H. Mann. 1973. An analysis of factors governing productivity in lakes and reservoirs. *Limnology and Oceanography* 8:1-14.

Dillon, P.J. and F.H. Rigler. 1974. Phosphorus-chlorophyll relationship in lakes. *Limnology and Oceanography* 19:767-773.

14 Nov

Edmondson, W.T. 1970. Phosphorus, nitrogen, and algae in Lake Washington after diversion of sewage. *Science* 169:690-691.

Schindler, D.W. 1974. Eutrophication and recovery in experimental lakes: Implications for lake management. *Science* 184: 897-899.

Vollenweider, R.A. 1975. Input-output models with special reference to phosphorus loading concept in limnology Schweizerische Zeitschrift fur Hydrologie 37:53-84.

28 Nov

Deevey, E.S. Jr. 1970. In defense of mud. *Bulletin of the Ecological Society of America* 51:5-8.
Rich, P.H. and R.G. Wetzel. 1978. Detritus in lake ecosystems. *American Naturalist* 112:57-71.

Mortimer, C.H. 1941. The exchange of dissolved substances between mud and water in lakes. Journal of Ecology 29:280-329.

5 Dec

Brooks, J.L. and S.I. Dodson. 1965. Predation, body size and composition of plankton. *Science* 150: 28-35.

Carpenter, S.R., J.F. Kitchell, and J.R. Hodgson. 1985. Cascading Trophic Interactions and Lake Productivity. *BioScience*, 35:634-639.

OTHER COURSE INFORMATION

RULES, RIGHTS & RESPONSIBILITIES

Refer to the Guide's [Rules, Rights and Responsibilities](#)

ACADEMIC INTEGRITY

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to studentconduct.wiscweb.wisc.edu/academic-integrity/.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

McBurney Disability Resource Center syllabus statement: "The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity.

The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA." <http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php>

DIVERSITY & INCLUSION

Institutional statement on diversity: "Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world." <https://diversity.wisc.edu/>