BIOL 4803 - Stream Ecology

Fall 2026 Syllabus, Section 01, CRN 44125,

Credit hours: 3

Instructor

Thomas Diggins

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Public Instructor Information

Instructor Title: Professor
Instructor Professional Qualifications: Ph.D., Biology, SUNY at Buffalo, 1997. 29 peer-reviewed publications, including 9 in stream or riparian ecology.
Instructor Office Location: 4037 Ward Beecher Hall
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Course Description

4803. Stream Ecology. A study of the physical, chemical, biological, and ecological structure and function of stream ecosystems, and of their associated riparian zones. Prereq.: 20 s.h. of BIOL and/or GES, or permission of instructor. 3 s.h.

Course Readings

Group	Title	Author	ISBN
	No readings		

1) Allan and Castillo 2007. Stream Ecology: Structure and Function of Running Waters

2) Utz 2022. Field Guide to Rivers & Streams (Falcon Guides), recommended

3) Some primary literature articles will likely be distributed during the semester.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24		River systems of the world	
8/31	Allan and Castillo (AC), ch 1 Utz (U), ch 1 and 2	River systems of the world Stream orders, watersheds, channel morphology	
9/7	AC 1 and 3 U 2 and 3	Hydrology, erosion, transport, channel morphology (cont.)	
9/14	AC 1	Fluviatile lakes and wetlands	
9/21	AC 4 and 5 U 4	Productivity and carbon fluxes	Midterm exam #1
9/28	AC 13, 14	Nutrient dynamics	
10/5	AC 6, 11, 12 U 4	Organic matter processing	
10/12	AC 6, 11, 12 U 5 - 8	Benthic macros and functional groups	
10/19	AC 7-10 (skim)	Food webs and ecology	
10/26		Zoar Valley NY feederbrook case study	
11/2		Riparian zones	Midterm exam #2

11/9	Fluvial geomorphic and biological patterns and processes	
11/16	Floral/faunal succession in riparian zones	
11/23	Riparian zone case studies (Queets WA, Zoar Valley)	
11/30	Riparian zone case studies (Queets WA, Zoar Valley)	
12/7		Final Exam

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.