

BIOL/WATR 361/561 Aquatic Invertebrate Zoology

Spring 2021

Lecture: Online Synchronous T Th 2:00-2:50 PM

Lab Online Asynchronous

Instructor:	Dr. Daniel L. Graf	Course web sites:	Canvas site at
Office:	TNR 435		https://www.uwsp.edu/canvas/
Phone:	715.346.2159 (Biology Office)	Zoom/	http://winvertebrates.uwsp.edu/
email:	dgraf@uwsp.edu	Office Hours:	T Th 2-2:50 PM
	(include "BIOL/WATR 361" in subject)		and by appointment

General Course Description. "Classification, structure, and life history of lotic and lentic freshwater invertebrates (exclusive of insects and parasites) with emphasis on Wisconsin species."

Objectives. The objective of this course is to survey the diversity of the invertebrate animal taxa that occur in freshwater by comparing the body-plans, life histories, and ecologies of representative species.

Learning Outcomes. Upon completion of BIOL/WATR 361, students will be able to:

1. Differentiate and classify animal diversity.
2. Describe the variety of invertebrate animal body-plans, ecologies, life histories, and reproductive modes.
3. Recognize the value of invertebrate zoology to human health and happiness.

Prerequisites. Course in Introductory Biology (BIOL 101 or BIOL 111 or BIOL 160).

Required Materials. *Biology of the Invertebrates*, 7th edition (2015), by Jan A. Pechenik. McGraw-Hill Education, New York (ISBN 978-0-07-352418-4). This book is available for rent at the bookstore.

Access to a computer connected to the Internet. You will need to be able to access Canvas through the Chrome browser. We will be using an online exam proctoring service called Honorlock in this course. You will be required to use Honorlock for exams in this course. Please see the *Honorlock – Student Information module* for additional resources on Canvas. You should take the Honorlock Practice Quiz to familiarize yourself with this process before the first graded exam.

On-campus, computers are available to use in Albertson LRC and various computer labs (although many are closed). The following URL has a directory of campus computer labs:

<https://www.uwsp.edu/infotech/Pages/ComputerLabs/All-Labs.aspx>

The lab exercises will be distributed electronically.

Recommended Materials. A dedicated BIOL/WATR 361 notebook.

Course Organization. The organizing plan for this semester will be to:

1. try, as much as is reasonable, possible, and helpful to support the structure of the typical face-to-face version of the course, while
2. maintaining as much flexibility as necessary.

This course is scheduled to have two synchronous Zoom hours per week to block-out those periods on your schedule. We will actually be observing four levels of synchrony in this course.

1. *Required Synchronous.* There will be three dates throughout the semester for the midterm exams and the final exam that will happen at scheduled times. See the attached schedule.
2. *Enthusiastically Encouraged Synchronous.* Each Tuesday throughout the semester will be designated as a synchronous meeting to answer questions, review material, and get organized for the week — including providing background about the online lab exercises. You are expected to virtually attend these sessions, but they carry no point value.
3. *Optional Synchronous.* The Thursday hour (when there isn't a scheduled exam) will be office hours. If you have questions, comments, issues, etc. with which you need help, you can get it without making an appointment. Otherwise, you can make an appointment for a Zoom session outside those hours.
4. *Asynchronous.* All lectures, lab assignments, quizzes, etc. not described above will be completed asynchronously.

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Exams, Assignments, and Grading. Your final grade for the course will be based upon 295 possible points.

There will be three exams that constitute about 68% of your final grade: two during the term (50 points each) and a comprehensive final (100 points). The exams will be designed to test your mastery of the material as well as your ability to use critical-thinking skills to apply that knowledge. The exams may include matching, multiple choice, short-answer or essay type questions. All three exams will also include a "practical" component, wherein you will need to identify or explain images of taxa, structures, etc. These exams are required synchronous events (Thursday 2–2:50 PM 4 March; Thursday 2–2:50 PM 22 April; and Tuesday 12:30–2:30 PM 18 May). Midterm exams have a 1-hour time limit, the Final exam 2 hours.

	points
Exam 1	50
Exam 2	50
Final Exam	100
Lecture Quizzes	50
Lab Exercises	45
TOTAL	295

In addition to periodic exams, associated with each lecture will be a 2-point quiz (50 total points; 17% of your total grade). To receive credit, each lecture quiz should be completed in Canvas before the next one is assigned (e.g., a Tuesday quiz should be completed before Thursday). All lecture quizzes will have a 5-minute time limit. (There will actually be 56 quiz points offered, so you could still miss 3 quizzes and still get all the quiz points.)

The remainder of the points will come from 5-point laboratory exercises (45 points, 15%). Your two lowest lab scores will be dropped from the final total.

Grades will be based upon the following percentages of the course total:

		100-93%	A	92-89%	A-
88-87%	B+	86-83%	B	82-79%	B-
78-77%	C+	76-73%	C	72-69%	C-
68-67%	D+	66-59%	D	<59%	F

REQUESTS FOR EXTRA POINTS WILL NOT BE HONORED.

Exam and Quiz Rules. The following rules apply to quizzes and exams:

1. All lecture and weekly quizzes will be "open-note," meaning you may use your lecture, lab, and reading notes to help you answer the questions. You may not use your textbook, the Internet, or other sources while you are taking a quiz. All that being said, we will be completely on the honor system. No one will be watching you work.
2. All exams will be "closed note." You may not use your notes or any other materials (textbook, Internet, etc.) during any of the three midterm exams or the final exam. We will be using an online exam proctoring service called Honorlock in this course. You will be required to use Honorlock for exams in this course. There is a lot more information about Honorlock on the course Canvas site.
3. You may use a calculator (not a calculator app on your phone) and scratch paper during quizzes and exams. During exams, a calculator will be provided in using Honorlock.
4. All quizzes and exams will have a time limit.
5. Using unauthorized materials during quizzes or exams will be regarded as academic misconduct and will result in a 0 on the quiz or exam. According to our UW System rules, to take away even a single point for such a violation requires the involvement of the Dean of Students.
6. Collaborating on a quiz or exam with other students in the class is also academic misconduct. Students may be taking quizzes and exams at different times. You should not discuss them or share information with anyone until the due date/time has passed.

Prof. Graf has a lot of experience distinguishing inadvertent or naive mistakes from intentional misconduct. As long as you don't make it an issue, it won't be an issue. More information about the regulations associated with academic misconduct can be found at the following URL:

<https://www.uwsp.edu/dos/Pages/stu-academic.aspx>

Lab Assignment Rules. If we were in-person, we would do our lab exercises in small groups. You should feel free to collaborate on lab assignments, but each person will turn in their own lab assignment.

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Online Attendance and Making-Up Missing Work. Our online format offers a lot of flexibility, but this course is designed for enrolled students making progress toward their degrees. The bi-weekly schedule of lectures, quizzes, and exams is intended to keep you on-track.

However, there are good reasons for not being able participate within the scheduled timeframe: too sick operate a computer, power outage, religious observances, university-related absences, instructor messed up the assignment settings, and others. If you require an accommodation for such a situation, you should contact Prof. Graf ahead of time to discuss alternative arrangements.

Zoom Conduct. Student and instructor behavior should promote an environment favorable to both teaching and learning. Students that choose to disrespect their classmates and their instructor by disrupting Zoom sessions will be asked to leave.

In order to foster a sense of community and engagement (both are demonstrated to improve learning outcomes and course quality), everyone is encouraged to participate in class with their web camera on as much as possible and comfortable. No one will be required to use their camera during Zoom sessions, and not using your camera will have no effect on your grade or standing in the class.

Disabilities. Students with disabilities are welcomed and encouraged in this class. Students with disabilities should contact the Disability and Assistive Technology Center during the first two weeks of the semester if they wish to request specific accommodations.

<https://www.uwsp.edu/datc/Pages/default.aspx>

wk	date	day	#	Lecture	Chapter (pp.)	Lab
1	26-Jan	Tu	0	Welcome to BIOL/WATR 361!		NO LAB
	28-Jan	Th	1	Intro. to Invertebrate Animals	1 (1-6)	
2	2-Feb	Tu	2	Intro. to Freshwater Invertebra	2 (7-20), Pennak (1985)	Animal Diversity & Microscopy
	4-Feb	Th	3	Porifera	4 (77-88)	
3	9-Feb	Tu	4	Cnidaria	5-6 (95-126)	Porifera & Cnidaria
	11-Feb	Th	5	Platyhelminthes (Turbellaria)	8 (147-155)	
4	16-Feb	Tu	6	Nemertea & Gastrotricha	11 (205-214), 18 (459-460)	Platyhelminthes & Nemertea
	18-Feb	Th	7	Rotifera	10 (183-196)	
5	23-Feb	Tu	8	Intro. to Mollusca	12 (215-224, 265, 271)	Gastrotricha & Rotifera
	25-Feb	Th	9	Gastropoda	12 (224-237)	
6	2-Mar	Tu	10	Synthesis & Review		NO LAB
	4-Mar	Th	E1	Exam 1		
7	9-Mar	Tu	11	Bivalvia	12 (237-254)	Mollusca
	11-Mar	Th	12	Intro. to Annelida (Polychaeta)	13 (295-305)	
8	16-Mar	Tu	13	Clitellata	13 (318-328)	Annelida
	18-Mar	Th	14	Intro. to Arthropoda	14 (341-350, 3	
23-26-Mar M-F SPRING BREAK — NO CLASSES						
9	30-Mar	Tu	15	Tardigrada & Onychophora	15 (421-428)	Arthropoda (Arachnida) & Related Phyla
	1-Apr	Th	16	Arachnida	14 (350-354)	
10	6-Apr	Tu	17	Malacostraca (Decapoda)	14 (373-379)	Malacostraca
	8-Apr	Th	18	Isopoda & Amphipoda	14 (373-379)	
11	13-Apr	Tu	19	Branchiopoda	14 (379-381)	Branchiopoda
	15-Apr	Th	20	Cladocera	14 (381)	
12	20-Apr	Tu	21	Synthesis & Review		NO LAB
	22-Apr	Th	E2	Exam 2		
13	27-Apr	Tu	22	Ostracoda	14 (381)	Ostracoda & Copepoda
	29-Apr	Th	23	Copepoda & Branchiura	14 (381-382)	
14	4-May	Tu	24	Nematoda & Nematomorpha	16 (432-444), 17 (451-454)	Nematoda & Bryozoa
	6-May	Th	25	Bryozoa & Entoprocta	19 (473-492)	
15	11-May	Tu	26	Echinodermata	20 (497-521)	Review Activities?
	13-May	Th	27	Synthesis & Review		
16	18-May	Tu		FE FINAL EXAM 12:30-2:30 PM		

Boldfaced items are required synchronous events.