

Marine Invertebrate Zoology – BIOL 5503

Fall 2011

Wednesdays 9:00 – 17:00

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Textbook: *Biology of the Invertebrates*, 6th edition, J. A. Pechenik

Materials: You must obtain a laboratory notebook, with no lines on the pages. The drawings and notes in this notebook will be graded at the end of the course. Please bring rubber boots or sturdy shoes for the days we spend in the field. A dry change of clothing is also a good idea for field days.

Course objectives: This lecture and lab course is designed to familiarize you with the breadth of diversity among the invertebrate fauna, focused primarily on marine species. We will discuss the structure and function of different invertebrate fauna, and discuss the evolutionary relationships among the phyla. You will be introduced to a variety of local invertebrate species from the Massachusetts region, and we will include several trips into the intertidal zone to see these animals in their natural settings. By the end of this course, we hope that you come away with an understanding of the evolutionary relationships between the various phyla, an ability to recognize members from each phylum based on their physical characteristics, and a working knowledge of the common intertidal and shallow subtidal species that inhabit New England.

Grading: Late assignments will not be accepted.

Item	Value (%)
Exams + Practicals (10, 15, 15, 20 %)	60
Lab notebook	15
Abstracts (5% + 5%)	10
Final project/presentation	10
Participation	5
Total=	100

Exams: Exams will consist of written tests based on the lectures and assigned reading materials. There will also be a lab practical associated with each exam. The final exam and lab practical will be cumulative. The lab practicals will constitute 40% of the points on each of the first 3 exams, and 20% of the points on the final exam.

Lab notebook: The function of your lab notebook is to give you practice keeping a record of your scientific activities associated with this course and to serve as a study guide for the exams. Bring your notebook to every class and field trip. Include labeled drawings of all the organisms we observe in lab. Also include additional information presented in lab that is not covered in the lecture. Notebooks will be graded at the end of the semester based on completeness, accuracy, and neatness. You will receive feedback partway through the semester. You may use colored pencils. In my experience, color may help but it doesn't necessarily improve quality.

Climate change project: You will each choose a species of invertebrate and describe the ways it may be susceptible to future climate change and how it might adapt to its changing environment. You will write a short paper (2-3 pages) and give a PowerPoint presentation in class at the end of the semester. The project will be discussed in detail during the course.

Abstract writing project: There will be two abstract writing assignments due during the course, in which you will write an abstract for an assigned paper that has had the original abstract removed. We will discuss the details during the course.

Participation: You are expected to participate fully and actively in all components of this course. Asking questions about the readings, lectures, or species AND working well with your classmates and teammates are strongly encouraged. At the end of the course you are expected to complete the TRACE course evaluation.

Academic Integrity: Northeastern University's academic integrity policy is available at <http://www.northeastern.edu/osccr/academichonesty.html> You are expected to abide by this policy.

Class Schedule:

Date	Reading	Morning	Afternoon
9/7			Course Intro, Classification etc.
9/14	1-4	Protozoa	Porifera
9/21	5-7, 10	Cnidaria + Ctenophores	Smörgåsbord - Rotifers etc.
9/28		Quoddy Head Field Trip	Quoddy Head Field Trip
10/5	8, 11, 13	Platyhelminthes, Nemerteans	Annelids 1
10/12	13	Exam + Practical 1	Annelids 2
10/19	14	Arthropods	Arthropods
10/26	12	Exam + Practical 2	Molluscs
11/2	12	Molluscs	Molluscs
11/9	20	Echinoderms	Echinoderms
11/16	19	Exam + Practical 3	Lophophorates
11/23		No Class – Turkey Day	
11/30	21,23	Hemichordates + Urochordates	Hemichordates + Urochordates
12/7		Presentations	Presentations + Review
TBA	Everything	Final Exam	