

BIO 2241: Invertebrate Biology

Spring 2017

Lecture: Monday, Wednesday, and Friday, 9:00-9:50am, Tuttleman 301AB

Lab: Tuesday, Wednesday, or Thursday 1:00-3:50pm, BIOSCI 121

Lecturer and Coordinator: Prof. Robert M. Jennings, Ph.D.

Contacting me: The best way is to email me at rob.jennings@temple.edu. I am happy to answer questions, schedule times to meet, and try to resolve any issues, as time permits.

Office Hours: Mondays 11am-12pm in my office, BIOSCI 248-G, or by appointment.

Material:

1. **Required for lecture:** “Biology of the Invertebrates” by Jan Pechenik, 7th edition. ISBN: 978-0073524184. The 6th edition should work, as long as you are willing to do a little “translating” of page numbers and minor content differences.
2. **Recommended for lab:** “Invertebrate Zoology Lab Manual” by Wallace, 6th edition. ISBN 978-0130429377.

Blackboard: I will maintain a Blackboard site for the class. On the website you will find this Syllabus document, lecture & lab schedules, PDFs of the lecture slides, reminders of upcoming assignments/events, review documents for exams... and more. Check Blackboard often—content will be updated constantly!

Lectures: I will be using PowerPoint slides, including images from your textbook, as well as some material and images from other sources. The slides will be available as PDFs on Blackboard, **no later than the night before each class**. You can print these PDFs out and use them as a starting place to take notes ... but **BE WARNED!** These slides are a poor substitute for actually being in class. The PDFs are “bare bones” images with minimal text. Class time is invaluable for you to ask questions big and small, and you will gain the greatest understanding by listening to the material actually being presented, not just skimming the images on the slides.

Exams: Two in-class exams will be given, as well as one (non-cumulative) final exam during the finals period. There will be **no make-up exams** unless you can **document** that the absence was for legitimate and serious reasons, e.g. medical emergency, bereavement, family emergency. If you know of an exam conflict **in advance**, we can try to schedule a date for you to take the exam **before the exam date**.

Blackboard Quizzes: To reinforce the lecture material, a brief quiz will be posted each week on Blackboard, to be completed on Blackboard. These brief (3-4 question) quizzes are open-book and -notes. and will cover the major topics from the previous week’s lecture. Announcements of each quiz will go out automatically when posted. More details will be presented in class once the quizzes start.

Lab: Lab is a critical component of Invertebrate Biology. The labs will consist of a variety of live and preserved organisms, as well as models prepared microscope slides. Lab assignments may consist of morphological drawings, live experiments/observations (including data analysis), dissections, and other activities. All materials required for lab will be supplied in the lab; you are not required to purchase any materials for lab. In general, assignments will be turned in at the

conclusion of each lab, although some write-up or analyses may be due at the start of the following week's lab.

Grades (your grades will be posted to you on Blackboard):

- 20% In-class Exam I
- 20% In-class Exam II
- 20% Final Exam
- 30% Lab grade
- 10% Blackboard quizzes (**short** quizzes for you to complete on Blackboard each week—these _____ will be described in lecture)
- 100%

Course Schedule:

Month	Date	Topic	Chapter
Jan	16 Mon	MLK Holiday	
	18 Weds	Introduction	1
	20 Fri	Environments	1
	LAB	NO LAB	
	23 Mon	Protists & Relevance to Metazoans	3
	25 Weds	Phylogenetic Trees, Fossil Record	2
	27 Fri	Porifera: Phylogeny and Anatomy	4
	LAB	Protists	
	30 Mon	Porifera: Ecology and Immunity	4
Feb	1 Weds	Introduction to the hydrostatic skeleton and "Cnidarian 101"	5
	3 Fri	Cnidaria: Scyphozoa and Cubozoa	6
	LAB	Porifera	
	6 Mon	Cnidaria: Other Medusozoa, and Anthozoa	6
	8 Weds	Ctenophora: Overview	7
	10 Fri	Ctenophora: Physiology, Ecology	
	LAB	Cnidaria I	
	13 Mon	Phylogeny of Basal Metazoans	
	15 Weds	Review	
	17 Fri	EXAM 1	
	LAB	Cnidaria II, Ctenophora	
	20 Mon	Platyhelminthes	8
	22 Weds	Mesozoa and Rotifers	9
	24 Fri	Three Phyla in a Day: Acanthocephala, Gnathostomulida, Micrognathozoa	10
	LAB	Platyhelminthes	
	27 Mon	Nemertea	11

Mar	1 Weds	Mollusca: Overview; Polyplacophora & Monoplacophora	12
	3 Fri	Mollusca: Aplacophora, Scaphopods, Cephalopods	
	LAB	Virtual Lab	
	6 Mon	Mollusca: Bivalves	12
	8 Weds	Mollusca: Gastropods	
	10 Fri	Annelida: Overview; Clitellata	13
	LAB	Mollusca	
	13 Mon		
	15 Weds	SPRING BREAK	
	17 Fri		
	20 Mon	Annelida: Polychaetes I	13
	22 Weds	Annelida: Polychaetes II	
	24 Fri	"Rob Talk" OR Sampling Talk	
	LAB	Annelida	
	27 Mon	Review	
	29 Weds	EXAM 2	
	31 Fri	Arthropoda: Overview	14
	LAB	TBA	
Apr	3 Mon	Arthropoda: Trilobita, Chelicerata	14
	5 Weds	Arthropoda: Myriapoda, Hexapoda I	
	7 Fri	Arthropoda: Hexapoda II	
	LAB	Arthropoda I	
	10 Mon	Arthropoda: Hexapoda III	14
	12 Weds	Nematoda	16
	14 Fri	Lophophorates	19
	LAB	Arthropoda II	
	17 Mon	Intro to Deuterostomes, Echinoderm Overview	20
	19 Weds	Echinodermata: crinoids, holothuroids (echinoids?)	
	21 Fri	Echinodermata: ophiuroids, asteroids (echinoids?)	
	LAB	Sea Urchin Fertilization	
	24 Mon	Hemichordata	21
	26 Weds	Cephalochordata	23
	28 Fri	Urochordata	
	LAB	Echinodermata	
	1 Mon	Review	
	26 Tues	STUDY DAYS	
	28 Weds		