

Invertebrate Zoology (BI 410/510)
Spring 2009

Meeting times: Monday, Wednesday 9:00-10:50 a.m., Room 232 SB2
Friday 8:00-10:50 a.m., Room 403 SB1

Field trips:

17 April, 7:45 – 11:00 a.m. Field trip to Columbia River Gorge/Sandy River
1 May, 8:00 a.m. – (Times To be Decided) Field trip to eastern WA and OR
29 May, 7:30 a.m. – 5:00 p.m. Field trip to Oregon coast

Textbook: Biology of the Invertebrates by Jan Pechenik, 6th edition (required)

Instructor: Dr. Susan Masta, email smasta@pdx.edu

Teaching Assistant: Jason Bazzano, email bazzanoj@pdx.edu

Office hours: Wednesday 11:00–12:00, Room 606 SB1, 725-8505

Course Description: In this course you will become familiar with some of the tremendous diversity present in invertebrates. In addition to taxonomic diversity, we will explore the vast differences among invertebrate anatomies, feeding and reproductive behaviors, lifestyles, sexual systems, and physiologies. Throughout the course, we will use an evolutionary perspective to examine traits as varied as parasitic lifestyles, venoms, silk production, dispersal ability, and eyes. The Friday labs and field trips are integral components of the course, where you will have the opportunity to observe both living and preserved specimens.

Grading: 4 quizzes (32%); lab assignments and notebooks (25%); class assignments and presentations (20%); term project report (15%); term project presentation (8%).

Tentative Schedule:

30 Mar What is an Invertebrate?: Diversity, Evolution, and Phylogenetics (Ch. 2, pp. 16-31)

1 April Evolution of Flight / Arthropods: Hexapods part I (Ch. 14)

3 April LAB: Hexapod Diversity

6 April Arthropods: Hexapods part II (Ch. 14)

8 April Silk / Arthropods: Arachnids (Ch. 14)

10 April LAB: Arachnid Diversity

13 April Student Presentations: Focal taxa/venom. / Arthropods: Myriapods (Ch. 14)

15 April QUIZ 1: Hexapods, Arachnids, Myriapods / Arthropods: Crustaceans (Ch. 14)

17 April (7:45-11) FIELD TRIP to Columbia River Gorge Scenic area.

- 20 April** Pycnogonids and Merostomata (Ch. 14) / Tardigrades and Onychophorans (Ch.15)
- 22 April** On Being Small / Rotifers (Ch. 10) / Gastrotrichs (pp. 459-461)
- 24 April** LAB: Crustaceans, Myriapods, Rotifers, and Gastrotrichs
- 27 April** Evolution of Eyes / Molluscs (Ch. 12)
- 29 April** Molluscs (Ch. 12). / Student Presentations: eyes.
- 1 or 2 May** FIELD TRIP to eastside of the Cascade Mts
- 4 May** QUIZ 2: Crustaceans through Molluscs. / Developmental Patterns (Ch. 2, pp. 7-16) / Porifera and Placozoa (Ch. 4)
- 6 May** Cnidarians (Ch. 6). Ctenophores (Ch. 7)
- 8 May** LAB: Molluscs, Poriferans, and Cnidarians
- 11 May** Sexual Systems / Annelids part I (Ch. 13)
- 13 May** Annelids part II / Nemertean (Ch. 11)
- 15 May** LAB: Annelids and Tardigrades
- 18 May** QUIZ 3: Cnidarians through Nemertean. / Getting Around / Echinoderms part I (Ch. 20)
- 20 May** Student Presentations: getting around. / Echinoderms part II (Ch. 20)
- 22 May** LAB: Echinoderms and Parasites
- 25 May** [PSU closed – Memorial Day]
- 27 May** Student Presentations: sexual systems & finding a mate. / Parasitic Lifestyles / Platyhelminthes (Ch. 8)
- 29 May** (7:30 am – 4 pm) FIELD TRIP to Oregon coast.
- 1 June** **Term project due.** / Live Fast, Die Young / Nematodes (Ch. 16)
- 3 June** Overview: Putting it all together
- 5 June** QUIZ 4 / LAB: Biodiversity / **Lab Notebooks due.**
- 10 June** (8:00-9:50 am) Poster presentations of term projects.