

BI 451/551 INVERTEBRATE ZOOLOGY SYLLABUS

Summer 2014, Monday-Wednesday-Friday

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Course Materials: There is no required text. Recommended texts include the following:
Brusca & Brusca. 2003. *Invertebrates*. 2nd Ed.. Sinauer. ISBN 0878930973
or Ruppert et al. 2004. *Invertebrate Zoology*. 7th Ed. Brooks/Cole. ISBN 0-03-025982-7
and Kozloff. 1983. *Seashore Life of the Northern Pacific Coast*, Univ. Washington Press, ISBN 0295960841
and Nybakken, 1995. *Diversity of The Invertebrates: A Laboratory Manual Pacific Coast Version*. William C Brown Pub. ISBN 0697151204

There are required materials, including:

- Drawing materials: (e.g. Strathmore 400 or 500 series, or Blick 60- or 80-weight). If the paper is loose, provide a binder as well. Number 2 HB pencils are acceptable, but you may care for a range of pencil hardness. Colored pencils are optional.

- Field notebook: 5x7" (actual dimensions may vary) waterproof field notebook, plus pencil or oil-based ink pens.

- Dissecting kit

- Boots – see Field Trips and Attendance, below

Optional: hand lens for field observations.

Course Schedule: The following schedule is subject to change as required. Field trips will be arranged as the course progresses, but be prepared for a field trip every day.

June 23-27: Introduction, Porifera, Cnidaria

June 30 – July 4: Minor Phyla – **Lab quiz Wednesday. No class Friday.**

July 7-11: Annelids - **All notebooks due Friday**

July 14-18: Mollusks - **Midterm Friday**

July 21-25: Mollusks, Arthropods

July 21-August 1: Arthropods - **Lab quiz Friday**

August 4-8: Echinoderms, Lophophorates

August 11-15: Chordates - **Final Lab Exam on Wednesday pm**

All Notebooks Due on Wednesday pm

Final Exam on Friday

Undergraduate Scoring: Grading for undergraduate students is broken down as follows.

Lab Quiz 1	4%	
Field Notebook check	1%	<u>Grades</u>
Lab Notebook check	1%	97% = A+
Midterm*	15%	93% = A
Lab Quiz 2	4%	90% = A-
Field Trip Attendance	7%	87% = B+
Final Lab Exam	10%	83% = B
Field Notebook	8%	80% = B-
Lab Notebook	25%	etc.
Final Exam	25%	

Tests: Lab quizzes will focus on specimen identification, anatomy, and habitat. The midterm and final exams will focus on lecture material. The final exam is not comprehensive except for material specifically covered in the midterm exam; any material in the midterm may be used again, possibly re-worded or combined with other questions.

Field Notebooks: Waterproof notebooks will be taken into the field on every trip. Students will note date and time, environmental conditions, and make relevant field observations. The purpose of the field notebook is to develop observational habits, and you will be graded on your effort. Legibility is also important to your grade.

Lab Notebooks: Drawing paper will be used to make 1-3 detailed drawings every day we have lab. As with field notebooks, the purpose is to sharpen your observational skills. Use graphite pencils only for the drawing; colored pencils may be used sparingly only *after* the drawing is made to add useful color details. Artistic skill is not needed, but lack of artistic skill is no excuse for careless drawings. You will be graded on effort more than precision. All drawings should be accompanied by the following information:

- Taxonomy: phylum & other useful taxonomic levels, plus genus & species, if known.
- Habitat from which the specimen was collected, if known. If it is from a collection or culture, note that.
- Scale (e.g. life-size, $\frac{1}{4}$ life size, or magnification). In some instances, a scale bar may be appropriate.
- Specimen preparation. Is it live, anesthetized, or dead? How did you anesthetize or kill it? Is it fresh or preserved? How was it preserved? Is it dissected?
- Specimen orientation. What side are you drawing? Right? Dorsal?
- Label everything you can see. Use lab guides or other texts for information, but do not copy those guides in your drawings.

Field Trips and Attendance: You need rubber boots or neoprene shoes and clothes that can get dirty. Bare feet or open-toed footwear will not be permitted in most field sites. There may be rain and early morning field trips will be chilly. Many sites will involve rugged terrain so, if you have any physical limitations, inform the instructor in advance. There will be one or more trips in a boat and some field sites involve long trips on winding roads, and motion sickness is possible.

Some field trips will begin very early to take advantage of morning tides. Regular attendance and full participation will ensure full credit. Missing more than one field trip without a prior excuse will count against your score, as will lack of full participation in the field. Wet clothes, mud, and slime are not dangerous, and you will be expected to get wet and handle organisms.

Safety: Safety will be discussed for lab and field situations where appropriate. Egregious violations will be reflected in the field grade; repeat violations that endanger yourself or others will result in you being asked to leave the course.

Academic Integrity: Please refer to the University of Oregon website:

<http://uodos.uoregon.edu/StudentConductandCommunityStandards/StudentConductCode/tabid/69/Default.aspx>

Graduate Credit Scoring: For students taking this course for graduate credit, the points outlined above will be prorated to 80% of the total grade, and the remaining 20% will be based upon a special project, which will be discussed in advance with the instructor. This project will involve the following parts: observations, hypothesis, experimental design, project proposal (plan of work), data collection, data analysis & hypothesis testing, and project report. The latter will be written as a scientific manuscript in a standard format with appropriate references. The project proposal, which is due by the third Monday of the course, will not be graded but is required for project approval.

*Material from this syllabus may appear in the midterm exam.