BIOLOGY 451/551
MARINE INVERTEBRATE ZOOLOGY

Oregon Institute of Marine Biology
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CONTENT: This course is an introduction to invertebrate animals, which constitute 98% of the animal kingdom. A one-semester course allows only for brief coverage of the major invertebrate taxa but still presents you with the great diversity of body plans among invertebrates and the evolution, cladistics, ecology, and behavior of these animals. The goal, however, is not to generate a "laundry list" of characters, but to identify the variety of solutions that have evolved in response to biological challenges common to all animals. The laboratory portion is designed to provide you with the opportunity to observe living and preserved specimens and to introduce them to the natural history of invertebrate animals of the Pacific Northwest. The course will also include many field trips to examine and collect invertebrates in their natural habitat. Discussions of current literature in the field of invertebrate zoology and independent research projects will also be included.

COURSE GOALS: Upon completion of this course, you will…

1. know the major taxa of invertebrates and their phylogenetic relationships to each other,
2. understand the morphology and physiology of the major invertebrate taxa,
3. know techniques for the collection, manipulation, and dissection of invertebrate animals,
4. be able to identify several species of invertebrates from the Pacific Northwest,
5. have gained skills in observation, illustration, macrophotography, and digital photo editing.

MATERIALS:

- Basic dissecting kit
- Lab notebook with unlined white paper
- Rubber boots/hip waders
- Rain gear
- 5x7(ish) Rite-in-Rain notebook and pencil
- Colored pencils will be useful
- Digital camera (recommended)

GRADING: Grades will be determined by several factors, including lecture tests, projects, laboratory practicals, laboratory notebook preparation, and class/lab participation. The relative point value of each assignment is as follows:

Lecture Activities and Quizzes*	=	50%
Projects/Presentations	=	20%
Laboratory Portfolio	=	20%
Theta**	=	10%

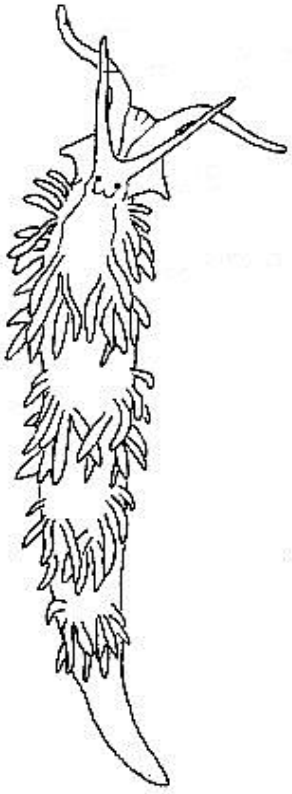
* Quizzes will generally be given on Wednesday of each week and will cover all material in the course up to that point.

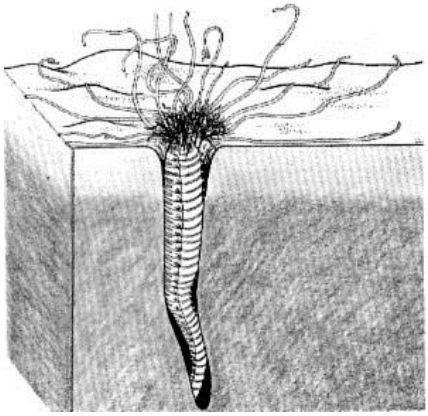
** This is basically a participation grade. Points may be deducted for the following: disrupting class, sleeping in class, non-participation of class discussion, cell phone/electronics usage, missing or not participating in field activities.

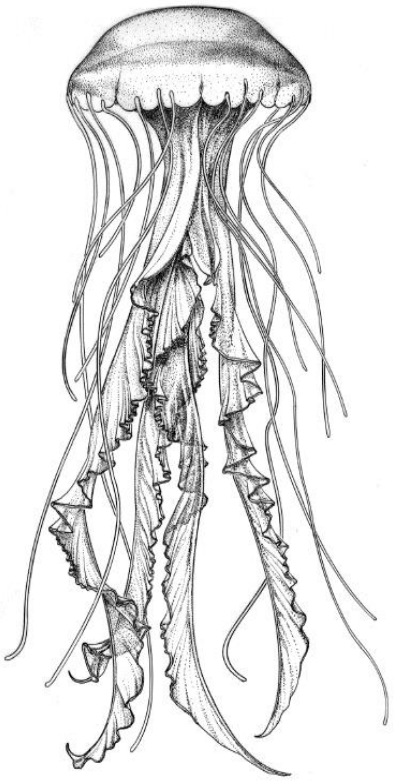
While bonus questions may be given on quizzes, there is no provision for extra credit assignments. Your grade will be determined solely by the factors listed above; therefore you need to make the most of every opportunity to earn points.

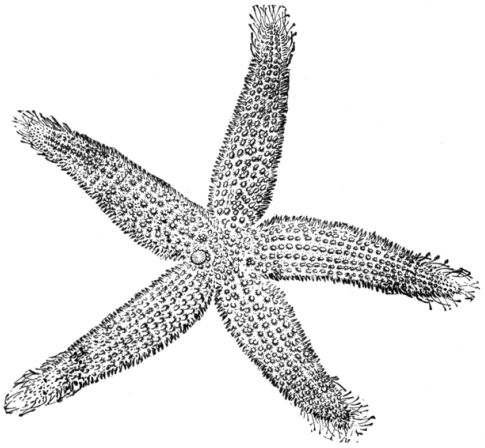
Grading scale is as follows:

90 – 100% = A	72 – 77% = C
88 – 89% = B+	70 – 71% = C-
82 – 87% = B	68 – 69% = D+
80 – 81% = B-	60 – 67% = D
78 – 79% = C+	<60% = F









Schedule

(Very subject to change)

Week of:	**Monday**	**Wednesday**	**Friday**
24 Jun 19	M: Intro, Cladistics, Lab Setup A: Cladistics, Porifera	M: Docks, Porifera A: Cnidaria	M: Cnidaria, Docks/Boat Trip A: Cnidaria
1 Jul 19	M: Ctenophora A: Platyhelminthes, Docks	M: Middle Cove (-2.2 @ 7:26), Protostomes A: Nemertea, Sipuncula	M: South Cove (-2.1 @ 8:56) A: Annelida, Docks
8 Jul 19	M: Portside Mudflats (-0.3 @ 11:21) A: Annelida	M: Mollusca, Docks/OIMB Beach A: Mollusca, Dome House Mudflats (1.2 @ 1:11)	F: Mollusca A: Mollusca
15 Jul 19	M: Mollusca, Docks A: Mollusca	M: Lophophorata; Tide Pools (-1.2 @ 7:26) A: Lophophorata, Docks	M: Tide Pools (-0.9 @ 8:37) A: Intro to Ecdysozoa, Arthropoda
22 Jul 19	M: Tide Pools (0.4 @ 10:19) A: Arthropoda	M: Arthropoda, Boat A: Arthropoda	M: Arthropoda A: Arthropoda

29 Jul 19	M: Deuterostomes A: Echinodermata	M: Echinodermata Tide Pools (-1.9 @ 6:22) A: Echinodermata	M: Tide Pools (-2.1 @ 7:51) A: Hemichordata
5 Aug 19	M: Tide Pools (-0.5 @ 10:04) A: Chordata, Docks	M: Chordata A: Chordata	M: Chordata A: Chordata
12 Aug 19	M: Research wrap up A: Research wrap up	M: Research presentations	M: Tide Pools (-0.6 @ 7:36) A: Lab clean up

M: Morning Activities
A: Afternoon Activities
Underlined: Field Activities