

# Biology of Invertebrates (Lab) – BIOL 337L

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<b>Lab:</b>	F 10:00 am-1:00 pm or 1:35-4:30 pm, GMLM 101
<b>Instructor:</b>	Christine Byrum
<b>Email:</b>	byrumc@cofc.edu
<b>Phone:</b>	843-953-7176
<b>Office:</b>	RITA 233
<b>Office Hours:</b>	By appointment
<b>TA:</b>	Jeffrey Good (goodj@g.cofc.edu)

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## Lab Overview:

In this lab, you'll have the opportunity to see many of the animals described in lecture. Using living and preserved specimens, you'll learn more about the structural organization of different phyla as well as functional modifications that evolved in invertebrates. Additional information will be presented concerning behaviors and habitats of different species.

## Student Learning Objectives:

- 1) Students will master terminology used to describe morphological characters, taxonomy, and other aspects of invertebrate biology.
- 2) Students will describe distinct body plans/features that distinguish major taxons.
- 3) Students will demonstrate familiarity with invertebrate development/life histories.
- 4) Students will become adept at recording laboratory observations and presenting detailed accounts of these findings in an organized and precise manner.
- 5) Students will become adept at using the microscope.

## Lab Materials:

*Biology of the Invertebrates, 7<sup>th</sup> edition.* Jan Pechenik, 2014 (McGraw-Hill).

*Invertebrate Zoology Lab Manual (6th edition).* Wallace and Taylor, 2003 (Pearson)

Dissection kit (optional)

Laboratory Notebook

**Co-requisite:** Biology of Invertebrates (BIOL 690)

**Attire and Lab Etiquette:** Closed toed shoes must be worn in the lab at all times. There is no eating or drinking in the lab. There is no horseplay in the lab (running, throwing, yelling, etc). There are a lot of really cool but fragile specimens, and we want to keep them around for future classes.

## Course Policies

**Attendance:** Students are expected to attend each lab, arrive on time, and to stay for the duration. If the student is unable to attend, he/she is responsible for all information reviewed. If an absence is anticipated, the instructor should be informed ahead of time. Student will fail the course if they miss 3 labs without permission

**Office Hours:** Office hours will be held as scheduled by appointment. To schedule an appointment, contact the instructor by email, telephone, or after class. Students having any questions are highly encouraged to come by and discuss it with the instructor.

**Assignments/Grading:** Laboratory performance will be evaluated based on 2 lab practicals (worth 7% and 8% respectively of final class grade) and performance on assigned lab exercises (18% of final class grade).

**Lab Practicals:** Two practicals will be administered in the laboratory portion of the course. During lab practicals, students will rotate through timed stations containing materials from previous labs. At each station, students will answer questions about materials presented. For example, there may be questions about taxonomy of a species, identity of structures in a dissected specimen, function of a particular structure, or the identity of a microscopic sample.

**Lab Notebook/Exercises:** The remainder of your grade will be determined by performance on lab your lab notebook and assigned exercises. During each lab we will be doing a variety of exercises including observations, dissections, drawings, and questions. During the lab, perform the exercises outlined, carefully addressing any questions presented and including any additional observations, such as labeled drawings of dissected specimens, living organisms, or other materials presented in your laboratory notebook.

Notebooks will be collected three times during the semester and will be evaluated and graded based on (1) level of effort in creating useful, labeled, scaled, informative drawings and (2) thoughtfulness in addressing questions.

**Note:** Missing an assignment, test, or final without permission from the instructor will result in a zero. Make-up assignments/tests/finals will not be given except under extenuating circumstances. If the student cannot be present, they are expected to contact the instructor BEFORE the assignment/test/final. Whether the student is allowed to make-up the assignment/test/final is entirely at the discretion of the instructor.

**Classroom courtesy:** Students are expected to turn off cell phones and any other disruptive devices during class time, tests, and/or final exams (no texting!). Exceptions

will be made in extreme situations such as spouses anticipating the birth of a child or a serious emergency. Permission to leave an electronic device on should be obtained prior to class.

**Accommodation:** Students requiring specific accommodations to complete course requirements should contact the instructor as soon as possible.

**Academic Integrity:** See Lecture Syllabus

**Tentative Schedule** (lab notebooks will be collected on underlined/bolded days)

<b>DATE</b>	<b>TOPIC</b>
Jan. 11	Cladistics
Jan. 18	Poriferans, Cnidarians (Hydrozoa)
<b><u>Jan. 25</u></b>	Cnidarians (Anthozoa, Scyphozoa, Staurozoa, Cubozoa), and Ctenophores
Feb. 1	Platyhelminths and Nemertean, <b>Lecture Test 1</b>
Feb. 8	Annelids
Feb. 15	<b>Lab Practical 1</b>
Feb 22	Molluscs (Bivalvia and minor phyla)
<b><u>March 1</u></b>	Molluscs (Gastropoda and Cephalopoda)
March 8	Marine Arthropods
March 15	Terrestrial Arthropods, Panarthropods, and Meiofauna
March 22	--- <b>Spring Break</b> ---
March 29	Benthic Fauna (Field Trip!)
April 5	Echinoderms and Lophophorates
<b><u>April 12</u></b>	<b>Lab Practical 2</b>
April 19	Hemichordates, Chordates and Plankton Tow

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*\*Schedule may vary subject to scheduling changes and other modifications as needed.*