

Fall 2008 Syllabus

BIO 5800 Invertebrate Zoology (4 credits)

DESCRIPTION: Invertebrate zoology is the study of the morphology, phylogeny, and ecology of invertebrates.

COURSE GOALS AND OBJECTIVES: By the end of the course the student should have an understanding of the diversity of invertebrate organisms and a framework of current knowledge for the study of invertebrates. In both lecture and laboratory, emphasis is on invertebrates of the marine environment, but freshwater and terrestrial organisms will also be studied. Learning goals include:

- Be able to describe the diversity of invertebrate body plans
- Be able to compare and contrast the major invertebrate groups with respect to osmoregulation, nervous system, feeding, habitat, movement, reproduction, gas exchange and others
- Be able to describe how organisms have adapted to specific environments

These goals support the Department of Biology Education Outcome #1.

PREREQUISITES: Admission into the graduate program or permission of the instructor.

INSTRUCTOR: Dr. Theresa Grove
Office: BC 1099 Lab: BC 2072
Phone: 333-5336
Email: tjgrove@valdosta.edu

OFFICE HOURS: W: 8:30-10:30 a.m. and Th: 11:00 a.m. -12:00 p.m., by appointment or stop by my office

TEXT BOOK: Invertebrate Zoology by Ruppert, Fox and Barnes (2004) published by Brooks/Cole (ISBN0-03-025982-7)

LECTURES: Tuesday and Thursday 9:30-10:45 a.m. (BC room 1024)

LAB: Thursday 1:00 p.m. - 3:50 p.m. (BC room 2073)

ATTENDANCE POLICY: Attendance in lecture is expected by all students, but is not required. Attendance will be recorded so that patterns of attendance may be considered when determining borderline grades. Attendance in lab is required. I reserve the right to determine what constitutes an excused or an unexcused absence. Labs cannot be made up; therefore do not miss a lab. If you have an unexcused absence 10 points will be deducted from the total amount of points you have earned at the end of the semester. If you miss 2 labs you will not be able to earn higher than a C for your final grade.

CONDUCT: Arrive on time to lecture and lab. Turn off cell phones during class and lab; there is no reason you should be texting or calling anyone. Don't talk during lecture; if you don't understand something or didn't hear something ask. Unless it's an emergency (and texting does not constitute an emergency) do not get up in the middle of lecture, leave and come back. Do not to ask to get up and leave the room during an exam, unless it is an emergency.

EXAMS: There will be 3 in-class exams (excluding the final). Types of questions that may be included (but are not limited to) are fill-in-the-blank, essay, short answer, matching, multiple choice, and multiple-multiple choice. Do not miss any in class exams. IF I approve a missed exam, I reserve the right to change the format of the exam (i.e. make it an oral exam).

LAB: Lab exercises will be available on WebCT or will be handed out in class prior to the lab period. It is your responsibility to read them before coming to lab. Short quizzes will be given during the lab and will be based on the previous week's lab and the objectives of the current week's lab. The quizzes will be handout out immediately at the start of the lab and will be collected 15 minutes later. If you arrive late you will have a shorter amount of time to finish the quiz, and if you arrive after the quiz is collected you will receive a zero (0) for that quiz. As mentioned previously, a student will not be able to make up a lab. Attendance will be recorded in lab.

PAPER: You must turn in a 7 page review style paper by Monday, December 1 at 5:00 p.m. This paper will be written on the invertebrate species of your choice, but you cannot write on the same class of organisms as another student. Therefore, if you have a preference let me know early in the semester to "claim" the organism. More details will be handed out in the near future.

FINAL EXAM: The final exam will consist of 2 parts. The first part of the exam will be worth 100 points and will focus on the last section of lecture material that was not covered on a previous exam. The 2nd portion of the exam will be worth 100 points and will cover information that was on the previous 3 exams. The final is **NOT** optional and is scheduled for Wednesday, December 11 at 10:15 a.m. -12:15 p.m. NO EXCEPTIONS!

ASSESSMENTS: Grades will be based on:

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|------------------------------------|------------|
| Exams (3 at 100 points each) | 300 points |
| Lab Quizzes (10 at 10 points each) | 100 points |
| Library Assignment | 20 points |
| Paper | 100 points |
| Final Exam | 200 points |
| Total: | 720 points |

GRADE SCALE: For all students, grades will be based on all assessments. The grade scale is:

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| A | 90-100% |
| B | 80-89% |
| C | 70-79% |
| D | 60-69% |
| F | <60% |

ACCESS OFFICE FOR STUDENTS WITH DISABILITIES: If you are registered with the Access Office and are eligible for special testing or some other learning process, please be sure to let me know. If you are a student with disabilities and have not registered with the Access office, please do so and notify me if you intend to use their services. Access Office services will not be given retroactively. The Access office is located in 1115 Nevins Hall. The phone numbers are 245-2498 (voice) and 219-1348 (tty). Email: access@valdosta.edu

TENTATIVE LECTURE SCHEDULE

| DATE | TOPIC | READING (pgs) |
|---------|--|--------------------------|
| Aug 19 | Intro and Protozoan body form, function and diversity | Ch 2: 12-19; Ch 3: 23-55 |
| Aug 21 | Protozoan diversity (cont'd) | |
| Aug 26 | Intro to Metazoa and Porifera | Ch 5: 76-93 |
| Aug 28 | Porifera (cont'd) and Intro to Eumetazoa | Ch 6: 98-109 |
| Sept 2 | Intro to Cnidaria and Anthozoa | Ch 7: 111-146 |
| Sept 4 | Medusozoa: Scyphozoa and Hydrozoa | Ch 7: 148-174 |
| Sept 9 | Ctenophora | Ch 8: 181-1944 |
| Sept 11 | Exam 1 | |
| Sept 16 | Platyhelminthes: Turbellaria | Ch 10: 225-251 |
| Sept 18 | Platyhelminthes: Trematoda and Cestoda | Ch 10: 251-263 |
| | Nemertea | Ch 11: 270-279 |
| Sept 23 | Nematoda | Ch 22: 757-770 |
| Sept 25 | Introduction to Annelida; Polychaeta | Ch 13: 413-457 |
| Sept 30 | Annelida: Oligochaeta; Hirudinomorpha | Ch 13: 459-482 |
| Oct 2 | Echiura; Sipuncula | Ch 14: 489-500 |
| Oct 7 | Exam 2 | |
| Oct 9 | Molluscan body plan; Aplacophora through Gastropoda | Ch 12: 283-343 |
| Oct 14 | FALL BREAK NO CLASS | |
| Oct 16 | No Class | |
| Oct 21 | Cephalopoda; Bivalvia and Scaphopoda | Ch 12: 343-408 |
| Oct 23 | Bivalvia and Scaphopoda (cont'd); Onychophora and Tardigrada | Ch 15: 504-515 |
| Oct 28 | Intro to Arthropoda | Ch 16: 517-539 |
| Oct 30 | Arthropoda: Chelicerata | Ch 18: 554-600 |
| Nov 4 | Exam 3 | |
| Nov 6 | Crustacea | Ch 19: 605-691 |
| Nov 11 | Crustacea (cont'd) | |
| Nov 13 | Gnathifera | Ch 23: 784-800 |
| | Lophophorata | Ch 25: 816-855 |
| Nov 18 | Lophophorata (cont'd) | |
| Nov 20 | Echinodermata | Ch 28: 872-924 |
| Nov 25 | Echinodermata (cont'd) | |
| Nov 27 | THANKSGIVING NO CLASS | |
| Dec 2 | Chordata | Ch 29: 930-956 |
| Dec 4 | Chordata (cont'd) and Catch-up | |

TENTATIVE LAB SCHEDULE

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| Aug 21 | Introduction |
| Aug 28 | Protozoan diversity |
| Sept 4 | Protozoan diversity (cont'd) and Porifera diversity |
| Sept 11 | Cnidaria diversity: Including Hydra; Aurelia, Sea Anemone and Corals |
| Sept 18 | Platyhelminthes: Turbellaria--Planaria anatomy, behavior and regeneration set up |
| Sept 25 | Platyhelminthes: Trematoda and Cestoda; Check Planaria regeneration |
| Oct 2 | Check Planaria regeneration; Annelida: Polychaeta and Earthworm monocystis; Oligochaeta and Hirudinea |
| Oct 9 | Gastropod diversity and Cephalopod dissection |
| Oct 16 | No lab; Library assignment |
| Oct 23 | Bivalve diversity and dissection and Tardigrada |
| Oct 30 | Arthropoda diversity |
| Nov 6 | Crustacea diversity and Brine Shrimp experiment |
| Nov 13 | Crustacean diversity (cont'd) |
| Nov 20 | Echinodermata diversity |
| Nov 27 | NO LAB |
| Dec 4 | Chordata |