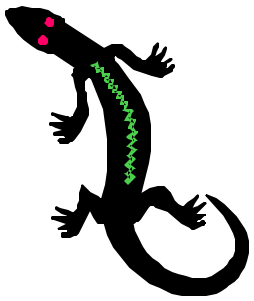


Biology 142

General Biology II with Laboratory-Fall 2002

Steve Baker
Office: Pierce 117
Phone: 784-8446

Course Objectives:

1. Survey of the Kingdoms Fungi, Archaea, Eubacteria, and Protista with emphasis on the form, function, and medical importance of each group.

2. Describe basic developmental processes in invertebrate and vertebrate organisms.

3. Survey of the form and function of the invertebrate animals with emphasis on classification, life histories, ecological adaptations, and medical importance. Describe *connections* between invertebrate phyla based on their development, evolutionary adaptations, and comparative anatomy.

4. Review of basic vertebrate biology and classification (lab) and physiology (lecture).

5. Laboratory includes:

   a. a review of classification and further study of animal architecture through dissection
   b. the examination of demonstration material illustrating representative organisms from each phylum and including information about the classification, ecology, and life history of each.
   c. continued emphasis on the study of biology through investigative means; including three major research investigations and several other smaller

investigations addressing the physiology or behavior of various invertebrate groups.

Tentative Lecture Schedule:

Week	**Date**	**Topic(s)**	**Readings**
Review of Invertebrate Diversity			
1.	8/28-8/30	Monera Group study project: Fungi	Campbell Ch. 25
2.	9/2-9/6	Monera / Protista	Campbell Ch. 25 H Ch. 16
3.	9/9-9/13	Porifera / Cnidaria	H Ch. 17, 18
4.	9/16-9/20	Development, Systematics	H Ch.14 H 353-358
	9/18, Writeup for First Investigation due at start of class		
5.	9/23-9/27	Platyhelminthes, Pseudo-coelomates	H Ch. 19, 20
EXAM 1	**10/1, PIERCE 101, 8 AM, COVERS THROUGH DEVELOPMENT AND SYSTEMATICS**		
6.	9/30-10/4	Pseudocoelomates, Mollusca	H Ch. 20, 21
7.	10/7-10/11	Mollusca, Annelida	H Ch. 21, 22
	FALL BREAK!!, Oct. 14-15		
8.	10/18	Echinoderms	H Ch. 25
9.	10/21-10/25	Echinoderms (cont.), Introduction to Chordates	H Ch. 25 ,26
Review of Vertebrate Physiology			

- ***IN PHYSIOLOGY READINGS, REVIEW AND EMPHASIZE VERTEBRATE MATERIAL ONLY***

10.	10/28-11/1	Chordate Tissues Support, Protection, Movement	H Ch. 6, 141-155 158-164

10/28, Write-up for Second Investigation due at start of class

EXAM 2 10/29, PIERCE 101, 8 AM, COVERS THROUGH ANNELIDA

11.	11/4-11/8	Circulation	H Ch. 8, 193-198
12.	11/11-11/15	Gas Exchange, Intro Digestion	H Ch. 8, 199-208 10:226-238

EXAM 3 11/21, PIERCE 101, 8 AM, COVERS THROUGH GAS EXCHANGE

13.	11/18 - 11/22	Digestion, Intro Excretion	H Ch. 10, 226-238 Ch 7, 168-170 173-179
14.	11/25	Excretion / Immunity	H Ch. 9

NOVEMBER 27-29, THANKSGIVING BREAK!!!

15.	12/2-12/6	Neural Control	H Ch. 11, 241-253

12/3, Write-up for Third Investigation due at start of class

16.	12/9	Chemical Control

Note: I reserve the right to modify this syllabus and course information if I deem it necessary.

Course Information:

I. Text: Biology of Animals, Hickman, Roberts, and Larson. Seventh Edition

Your Campbell text from 141 will be used for some assignments

II. Laboratory: **A. Laboratory Studies in Integrated Principles of Zoology, by Hickman, Hickman, Kats (required)**

B. Dissection Kit (required)

C. Additional Materials-- You may want to buy (share with a friend) a copy of the Rust book for Biology Labs if you didn't last semester. It will be very useful**. In addition, the 141 lab manual will be used for at least two labs in 142.**

D. Lab Format: Lab will include:

1. Demonstrations of representative specimens of major animal groups
2. Observations and dissections of selected specimens, including frog and fetal pig
3. Investigative activities which may require oral presentations and/or written reports.

III. Additional Course Information

- This class has a learnlink conference in which you may post questions or discuss with the instructor or other class members. Look here for class news and study hints. I will check it regularly, and I will encourage you to do the same.

- In Biology 142, you are responsible for all lecture material AND material covered in your text readings. Pay particular attention to assigned reading topics and to broad topics not covered in lecture.

- I use the (+/-) scale for grading.

- Tentative point totals for grading are as follows:

Exams 3 @ 100	300
Lab Exams 3@50	150
Lab Write-ups and Additional Writing	75
Final Exam	175
Total	700

- Your attendance will definitely influence your grade. Roll will be taken frequently, and frequent absences will lower your course grade, particularly in students with borderline averages. Conversely, excellent attendance will likely improve your grade. Please read the departmental attendance policy and see me if you have questions.

- Tardiness is exceptionally rude and a history of regular tardiness will also have a negative impact on your grade.

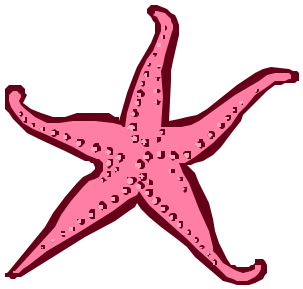
- Exams generally are not made up, unless you have a family emergency or severe illness. If you must miss the exam, you need to let me know ASAP. Exams are typically not rescheduled due to class conflicts or "rough weeks"-- it is part of your job to plan ahead for such contingencies.

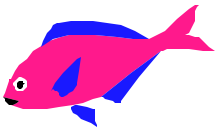
IV. Honor Code:

I adhere strictly to the Honor Code and will advise you as the course proceeds regarding rules for citation, group work, etc.

V. Miscellaneous/Office Hours

I am generally in the office from 8-9 MWF, 9-11 Tu Th, or you can make an appointment at other times. I am generally available at any time, however, and I welcome the chance to talk to you, whether it involves class work or is just to visit!





Biology 142
Laboratory - Fall 2002

Date	**Topic**	**Reading**
8/29	No lab	
9/5	Kingdom Fungi	Morgan and Carter 372-385
	Bacteriology - Kingdom Monera	Morgan and Carter,
	Investigation #1	Ex. #13
9/12	Protista and Porifera	Lytle, 5-6
	Dissection: *Grantia*	
9/19	Cnidaria	Lytle, 7
	Dissection: *Metridium, Aurelia, Gonionemus*	
9/24	**LAB EXAM 1, PIERCE 119, 8 AM, THROUGH CNIDARIA**	
9/26	Development	Morgan and Carter, Ex. #24, Lytle, 4
10/3	Platyhelminthes and Pseudo-coelomates	Lytle, 9-10
	Dissection: *Ascaris*	
	Investigation #2	
10/10	Mollusca	Lytle, 11
	Dissection: *Venus, Loligo*	
10/17	Adaptations; Stream Sampling at Bear Creek	
10/24	**LAB EXAM 2, PIERCE 119, 8 AM, THROUGH ADAPTATIONS**	
10/24	Annelida	Lytle, 12
	Dissection: *Lumbricus*	
10/31	Arthropoda	Lytle, 13
	Dissection: *Procambarus*	
	Investigation #3	

11/7	Echinoderms, *Amphioxus*, Demos: Echinoderms, prechordates, primative fishes	Lytle, 14, 15
11/14	**LAB EXAM 3, PIERCE 119, 8 AM, THROUGH PRIMATIVE FISHES**	
11/14	Vertebrate Tissues Dogfish, *Rana* (bones, skin frog) Demos: Teleost fishes, amphibians	Lytle, 16, 18, 2
11/21	*Rana* (musculature, cow heart) Demos: reptiles, birds	Lytle, 18; 319-320.
12/5	*Sus*, sheep brain Demos: mammals	Lytle, 19
12/9	Lab closed at 12 noon	
12/10	**LAB EXAM 4, PIERCE 119, 8 AM, THROUGH *SUS***