

point lectures on Blackboard the evening before each class. It is your responsibility to download the lectures and print them for your use in the classroom, so that those of you who are slow note-takers or abysmal artists will not be struggling to keep up, and all of you can attend more carefully to what I say. Please note that the power point slides will not contain everything I say--you will have to add the details if you are to have an effective study aid. THUS, tempting though it may be, you cannot sleep in and skip the lectures without penalty. If I see that attendance is dropping, I will stop posting the lectures. Students may miss class twice with no penalty (this includes illness, athletic activities, field trips, etc.). If you anticipate missing more than two classes, contact me as soon as possible.

Policy on electronic devices: Cell phones must be turned off during lecture (this means you cannot text your friends). I do not encourage the use of laptops in class, as the temptation to play games, converse with friends, etc., appears to be irresistible, and is disruptive for those around you. If you feel it is vital to bring a laptop to take notes, you must: 1. Convince me it is necessary. 2. Sit in the front of the class. 3. Take notes.

Study questions: I will post study questions every Friday afternoon covering the previous week's lectures. I will not grade your answers, but because many of the essay questions on exams are taken from these study questions, I strongly suggest that you take the time to *write* the answers to these questions every weekend (but do not try to answer them all the night before the exam).

Lab attendance: Don't even consider missing a lab except in cases of dire emergency. IT IS THE STUDENT'S RESPONSIBILITY to arrange to make up a missed lab before the next lab practical. Be aware that it may not be possible to make up exercises involving live material, and I may not be available to guide you as I would during the scheduled lab period. Make-up labs will be offered at the discretion of the instructor.

You are expected to read the assigned lab exercises BEFORE coming to lab (this includes both the assigned sections of the lab manual and the lab handouts, which will be distributed in the previous lab and posted on Blackboard). Please bring your lab manual and lab notebook to every lab. There will be a 5-point quiz toward the end of each lab covering the lab exercises for that day. The lowest two lab quiz scores will be dropped.

Lab notebook: Critical observation is absolutely essential to science. Therefore, I ask that you bring a loose-leaf binder with blank lined and unlined paper to lab. This binder will hold all lab handouts, plus your notes and drawings. The goal of this exercise is to hone your powers of observation and provide you with a useful study tool. The lab handouts will tell you what information must be included in your lab notebook, but you will receive extra credit for any extra drawings, notes, etc. that you include. Your lab notebooks will be handed in at the beginning of the second and fourth lab practicals (i.e., once in the middle of the semester, and again at the end), graded, and returned by the next lab period.

Lecture quizzes: At the beginning of class on Fridays, there will be a short quiz (10 points) covering all lectures since the previous quiz. This is not done to make your life miserable, but to encourage you to keep up with the class by reviewing the lectures each week. Plan to arrive for class on time, as late arrivals will not be allowed to take the quiz, and missed quizzes cannot be made up. You are allowed to miss 2 quizzes without penalty, but you must contact me to explain your absence. At least one quiz will be dropped when computing your final grade.

Exams: Please see the lecture and lab calendars below for the exam schedule. Make-up exams will be given at the discretion of the instructor. **IT IS THE STUDENT’S RESPONSIBILITY** to contact the instructor **BEFORE** the missed exam, provide an appropriate excuse, and make arrangements to take the exam at another time. **LAB PRACTICALS CANNOT BE MADE UP.** If your absence is not excused, you will receive a 0 for the missed exam. ***Absolutely no activated electronic devices will be allowed during exams (this includes cell phones and ipods).*** If you are seen using one of these devices for any reason during an exam, you will receive a “0.”

The final lecture exam is cumulative, but weighted toward the last quarter of the course (100 points drawn from the period since the third lecture exam; 100 points drawn from the entire semester).

Reading assignments: You have a well-written, up-to-date textbook; unfortunately, we will not have time to discuss everything in it. The pages that are relevant to each lecture are indicated on the lecture schedule. I expect you to scan the relevant pages **BEFORE** each lecture to get a feel for the material I will be covering. After class, read the sections covered in the lecture more carefully, and amplify your lecture notes in areas you don’t understand. There is an excellent summary at the end of each chapter, and useful questions to test your understanding. Though these are not included in the reading assignments, I suggest that you take advantage of them. I recommend that you also use the on-line study materials provided for the textbook (these include flashcards that are quite helpful for learning the vocabulary). The link is posted on Blackboard; just click on the link to go to the textbook website.

Grading: Your scores for all assignments and exams will be posted on Blackboard, so you can see how you are doing at any time (check the percentage in the “total points” column). The grading scale will be posted following the first lecture exam. There will be no extra credit options beyond the occasional extra question on exams and lab practicals, so please focus your energy on what we are doing in class and lab. If you find yourself falling behind, or you are struggling to learn the material, *please contact me right away.* I am here to help you.

3 lecture exams (100 points each)	300 points	
Final lecture exam (cumulative)	200 points	
<u>10 lecture quizzes (10 points each)</u>	<u>100 points</u>	<u>Lecture: 600 points</u>
3 lab practicals	250 points	
Final lab practical	150 points	
10 Lab quizzes (5 points each)	50 points	
<u>Lab notebook</u>	<u>100 points</u>	<u>Lab: 550 points</u>
Attendance & participation*	<u>20 points</u>	
Final grade 1170 points		

*This grade includes attendance, preparation, participation in discussions, and completion of all assignments. Please note that the instructor may exercise qualitative judgment in determining your final grade.

Policy on honesty: Students are expected to abide by the college policy on intellectual honesty (see Student Handbook).

Disability support: Students who wish to request accommodations in this class for a disability should contact Mr. Joe Kempfer, Assistant Director of Learning Services for Disability Support, 1307 Main Street (extension 1510). Accommodations cannot be provided until authorization is received from the office of Learning Services.

TIPS FOR DOING WELL IN THIS COURSE:

Lecture exams:

1. Scan the assigned pages in the textbook before coming to class.
2. Download the lectures, print them out, and scan the material for each lecture before coming to class.
3. ***Come to class***
4. Do not fall behind---review and annotate your lecture notes, using the text to clarify things you do not understand. If the text cannot help you, please ask me. My opinion of you will not plummet if you ask a question, so don't be shy.
5. Review for each Friday quiz.
6. *Write out* the answers to the study questions posted each weekend. *Think* about these questions as you answer them.
7. You are responsible for knowing the material I present *in lecture*---I encourage you to read relevant sections of the textbook, but *do not try to memorize the textbook*.

Lab practicals:

1. Attend all labs.
2. Prepare for each lab by reading the lab exercise *before* you walk into the lab.
3. Do not try to race through the lab exercises---be sure you understand what you are supposed to see, and be sure you actually see it before you leave. If you are confused, ask questions---the instructor is there to help you!
4. Come to the "open lab" review sessions before the lab practicals, and prepare by making a list of the things you need to review. Listen to the other students---they may ask things you didn't think about.

Vocabulary:

1. The single greatest barrier to learning zoology is the vocabulary, which may seem like a foreign language. Do whatever you need to do to learn the terminology---flashcards, glossaries, diagrams, study groups, etc.

LECTURE SCHEDULE

Week	Lecture topic	Relevant reading
January 16	Introduction: The big questions Chemistry of life Origin & early evolution of living systems	p. 1-9 p. 10-13; 20-26 p. 27-33
January 23	The cell & mitosis Meiosis & development Development & body architecture	p. 36-45; 50-54 p. 72-75; 134-139; 160-167; 170-172 p. 167-170; 175-177; 185-186
January 30	Body architecture & Protozoa Protozoa Systematics	p. 186-190; 216-227 p. 227-245 p. 198-206
February 6	LECTURE EXAM 1 (100 points) Porifera Cnidaria	p. 247-259 p. 261-283
February 13	Platyhelminthes Platyhelminthes: tapeworms Mollusca	p. 293-303 p. 304-308 p. 333-338; 352-358
February 20	Mollusca & Annelida Annelida Rotifera & Nematoda	p. 341-352; 364-366 p. 366-381 p. 318-320; 387-395
February 27	LECTURE EXAM 2 (100 points) Arthropoda: chelicerates, myriapods Arthropoda: crustaceans	p. 405-419 p. 423-442
March 5	<i>NO CLASSES—SPRING BREAK</i>	
March 12	Arthropoda: Hexapoda (Insecta) Echinodermata Introduction to chordates	p. 444-464 p. 475-490 p. 493-494; 500-508
March 19	Vertebrate origins Gnathostome Fishes Amphibians & non-avian reptiles	p. 509-525 p. 525-534; 547-552 p. 552-564; 567-573
March 26	Non-avian reptiles & birds Birds & Mammals Mammals & Evolution	p. 573-582; 590-592 p. 593-603; 606-608; 617-622 p. 622-628; 100-111

April 2	LECTURE EXAM 3 (100 points) Evolution & Integument <i>NO FRIDAY LECTURE---EASTER RECESS</i>	p. 117-123; 647-651
April 9	<i>NO MONDAY LECTURE---EASTER RECESS</i> Support, protection, & movement Homeostasis	p. 651-662 p. 662-666; 668-675
April 16	Homeostasis & Internal fluids Internal fluids & respiration Respiratory & Digestive systems	p. 675-686; 689-691 p. 691-699 p. 700-708; 710-714
April 25	Digestive & Nervous systems Nervous system & Sense organs Sense organs	p. 714-722; 728-736 p. 736-744 p. 745-752

MONDAY, APRIL 30TH, 8:30 a.m.-----FINAL LECTURE EXAM

Please note: Lecture and lab syllabi outline the topics I hope to cover in the order I hope to cover them, but I may make changes as we progress through the semester.

EXAM SCHEDULE

Jan 31, Feb 2	Lab practical 1 (50 points)
February 6	Lecture exam 1 (100 points)
February 21, 23	Lab practical 2 (100 points)---Lab notebooks due
February 27	Lecture exam 2 (100 points)
March 27, 29	Lab practical 3 (100 points)
April 2	Lecture exam 3 (100 points)
April 24, 26	Final lab practical (150 points)---Lab notebooks due
April 30	Final exam (200 points)

LABORATORY SCHEDULE

Week	Laboratory topic	Laboratory exercise
January 17, 19	Introduction, Safety Microscopy, the cell, mitosis	Handout Exercises 1, 2
January 24, 26	Meiosis, Development	Exercise 3
Jan 31, Feb 2	LAB PRACTICAL (50 points) Protozoans	Exercise 6
February 7, 9	Sponges Cnidarians	Exercises 7, 8
February 14, 16	Flatworms Molluscs	Exercises 9, 11
February 21, 23	LAB PRACTICAL (100 points), lab notebook due (50 pts.) Nematodes, Rotifers	Exercise 10
Feb 28, Mar 1	Annelids, Myriapods, Chelicerates	Exercise 12, 13, 15A
March 6, 8	<i>NO LABS---SPRING BREAK</i>	
March 13, 15	Crustaceans, Insects	Exercises 14, 15B, C
March 20, 22	Echinoderms, protochordates	Exercises 16, 17
March 27, 29	LAB PRACTICAL (100 points) Vertebrate skeletal diversity	Handout in lab, Exercise 22A
April 3, 5	Vertebrate tissues Begin skinning fetal pig	Exercise 4 Exercise 22B
April 10, 12	Fetal pig: finish skinning, identify muscles	Exercise 22B
April 17, 19	Fetal pig: digestive, circulatory, urogenital systems	Exercises 22C-E, G
April 24, 26	FINAL LAB PRACTICAL (150 pts.), lab notebook due (50 pts.) Lab clean-up (clean & dry dissection instruments)	