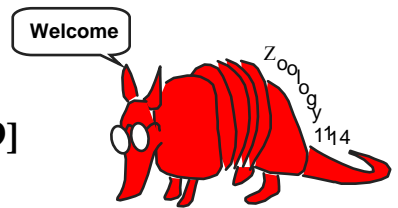


ZOO 1114 - Introductory Zoology [Fall 09]



Purpose:

Ponder these questions:

- Is it true that birds are dinosaurs?
- Why are infectious diseases becoming more dangerous?
- Why do we like puppies more than scorpions?
- Why do I urinate more when I drink a cup of coffee vs. a cup of water?
- How did scientists produce flies with legs growing out of their heads?
- Why do cattle egrets murder their brothers and sisters?
- What is life and how would we know it elsewhere in the universe?
- Grasshoppers like grass, why don't we?
- Could cloning really make a mini-me? Usain Bolt just ran 100 meters in Berlin in 9.58 seconds. So, why can't a human run 1000 meters in 95.8 seconds, 10,000 meters in 958 seconds and all the way to Dallas in 9 hours?

All of these questions have biological answers. This course will help you consider these questions (and many more) and to help you think like a scientist. Beyond this, we hope you get a sense of awe about life's complexity. We expect you to lay awake one night thinking – "Wow, life is amazing!" Welcome to Introductory Zoology!

Instructors:

Dr. Doug Gaffin, Associate Professor of Zoology, Wagner Hall room 180. I am available for consultation throughout the semester. To schedule an appointment, please contact Ms. Melissa Shelton (325-3953) and leave a brief description of the problem.

Shivani Mann, Richards Hall room 100B; Shivani handles the administrative duties for the course. You can direct questions related to the course to Shivani at the course's email, which is zoo1114@ou.edu

Timetable:

The course consists of three lectures a week distributed between Tuesday, Wednesday, and Thursday. The following are the scheduled sections for the course; check your course schedule for your specific time commitment.

Section 1: T,R 10:30-11:45; W 10:30-11:20

Section 3: T,R 1:30-2:45; W 10:30-11:20

Section 2: T,R 10:30-11:45; W 2:30-3:20

Section 4: T,R 1:30-2:45; W 2:30-3:20

Required Materials:

1. Textbook (choice of the following options):

- Biology: Concepts and Investigations*. 1st edition. Marielle Hoefnagels. McGraw-Hill. Cost approximately \$153 (ISBN 0-07-334252-1). You can find a used book at the OU bookstore for around \$115.
- Electronic textbook – *Biology: Concepts and Investigations*. 1st edition. Marielle Hoefnagels. McGraw-Hill. Available through *Vital Source* online at <http://textbooks.vitalsource.com>. Cost approximately \$75 (ISBN 978-0-07-291690-4)
- Biology: Concepts and Investigations* + Selected Lecture Figures Combo Package. 1st edition. Marielle Hoefnagels. McGraw Hill. Cost approximately \$156 (ISBN 0-07-805621-7). Note: You only need one copy of the selected lecture figures; these may be obtained free on the course webpage (see below).

2. Interwrite PRS Radio-frequency (RF) wand:

The OU bookstore sells new wands for just over \$50 and used wands for around \$38.

3. Packet of selected lecture figures:

Available at the OU bookstore for \$16.50 (ISBN 0-07-812228-7): Note: this is also available free as a download from the ZOO 1114 *D2L* site.

Grading:

We will base your course grade on your performance across 1000 total points. These points are distributed between three mid-term exams (150 points each), weekly homework sets (150 points total), in-class "pop" quizzes (100 points total), and a comprehensive final exam (300 points). We summarize these distributions below:

Grade Component	Point Value
Midterm Exams (3 * 150 pts.)	450
Homework Sets	150
Pop Quizzes / Participation	100
Final Exam	300
Total	1000

We will assign semester grades based on the following scale: A = 90% and above; B = 80-89%; C = 70-79%; D = 60-69%; F = 59% and below. Please note that these cut-offs are guidelines and are subject to adjustment if necessary.

Exam Structure: Each of the exams will be composed of scantron-graded (multiple choice, matching, true/false) types of questions. Each midterm exam will have 50 questions worth three points each. The final exam will be composed of 100 questions. Three groups of 25 questions (three points each) will cover material relevant to the midterm exams. The remaining 25 questions (also three points each) will cover material after the third exam.

Improvement: Because everyone has a bad day, and because some concepts take some of us longer to grasp than others, we have built into the grading system a way to “redeem” you for a low midterm exam score. The final exam will include material covered after the third midterm as well as material comprehensive to the course. We will divide the comprehensive portion into three equal sections, representing material relevant to each of the midterm exams (see above). Should your percentage score on any of these sections be higher than your percentage score on the corresponding midterm, we will adjust your midterm grade up to the higher percentage. We will, however, only grant you one improvement -- your highest. [**Note:** If you miss an exam, this offer is null and void (see make-up policy)].

Make-up Policy: **No make-up examinations or extra credit will be given.** It is therefore crucial that you attend all scheduled examinations. If for some unforeseen reason you are unable to attend a midterm exam, an “a” (for absent) will be marked in the grade book for that exam. Your grade for the missed exam will then be determined based on your performance on the relevant material in the comprehensive portion of the final exam. This policy applies for only one missed exam; we will record a grade of zero for any additional missed exams. [**Note:** If you miss an exam, you cannot take advantage of the improvement policy described above.]

Exam re-grades: If you believe that a question on an exam was incorrectly graded, you must bring it to our attention before the date of the next exam.

Pop Quizzes: As indicated above, there will be many informal “pop” quizzes given during lectures this semester. These will be unannounced, but are of very low pressure; we designed these to help you keep up with the course material. We will give answers to the quizzes in class so you can keep track of your performance. We will take these quizzes using the Interwrite in-class voting system (a.k.a. “clickers”). We will present more information on the format of these quizzes and the Interwrite system on the first few days of class. You are responsible for purchasing and bringing your Interwrite remote control to each class.

Homework Sets: Typically, there will be homework sets due twice each week – every Monday and Wednesday evening. Specific due dates are listed on the schedule at the end of this syllabus. You will access and answer questions through our *D2L* & *LON-CAPA* web sites (see below). Since 15% of your grade comes from these assignments, you will want to be sure to have available an internet-ready computer throughout the semester. There are many computer labs on campus with reliable connections and the proper internet browsers to use *D2L* & *LON-CAPA*.

LON-CAPA This is an exciting new system this semester that we will use for our homework sets. We will give details the first week of class.

Grade Checks: We will post point totals and approximate grade cut-offs weekly on the *D2L* web-based course management system (discussed below). However, because of security concerns and class size, we cannot accommodate informal grade checks (other than those officially sanctioned by the university). We will discuss how to access and use *D2L* during the first week of class.

ZAP: The **Zoology Aide Program (ZAP)** is a free tutoring service offered by the Department of Zoology and staffed by talented undergraduate teaching assistants and volunteers. We will announce the tutors' hours once their own schedules are determined (during the second week of the semester). The schedules will be displayed in class and will be posted outside the ZAP Room (Richards, room 207), and on the web.

Desire to Learn: We will use the course management package *D2L* to post various course materials such as point totals, sample test questions, ZAP tutor schedules, and useful links to other sites. You will also find a bulletin board and email access to the course staff. The web site address for *D2L* is: <http://learn.ou.edu>

Log in using your 4+4 OUNet ID and the default password. Your default password for this site will be your university ID number. You must change your password upon initial login. If you need help, please try calling *D2L* support at 325-INFO or visit <http://support.ou.edu>.

Academic Misconduct: Academic misconduct includes cheating, plagiarism, falsification of records, unauthorized possession of examinations, intimidation, and any other action that may improperly affect the evaluation of your performance. It also includes assisting others in any such act or attempts to engage in such acts. Penalties may include grade penalties and disciplinary action from the University's Academic Misconduct Board. For more on academic misconduct, visit the following website: <http://www.ou.edu/provost/integrity/>. In addition, the OU Honor Council was established in spring 2004 to promote academic integrity at OU. The Council maintains a web presence at <http://www.ou.edu/honorcouncil/>.

Reasonable Accommodation: "The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the professor as early in the semester as possible. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166, phone 325-3852 or TDD only 325-4173."

Important Dates: Exam #1 -- Tuesday, September 22, 2009
Exam #2 -- Tuesday, October 20, 2009
Exam #3 -- Tuesday, November 17, 2009
[Final Exam \(Sections 1 & 2\)](#) -- Tuesday, December 15, 2009 (8:00-10:00 AM)
[Final Exam \(Sections 3 & 4\)](#) -- Friday, December 18, 2009 (1:30-3:30 PM)

ADD/DROP

No Refund on Dropped Courses after this date	September 4
No Record of Grade on Dropped Courses	August 24-September 4
Final Day to Register or Add a Class	August 28
Automatic Grade of W for Dropped Course(s)	September 8-October 2
Grade of W or F for Dropped Course(s)	October 5-December 11
Petition to College Dean to Drop Course(s)	November 2-December 11

Please note that if you withdraw after the date for an automatic W, we will assign you a W for the class if you are passing at the time of withdrawal; if you are failing, academic standards require that you receive an F.

One More Thing: Universities expect you to spend 2-3 hours of study time **OUTSIDE OF CLASS** for each credit hour! There is a lot of material to cover in any introductory course, but you can do very well in any class if you decide to study efficiently and commit the necessary time to your education. What should you do during that time? Some suggestions: read your text as you review your lecture notes, make sure you understand the material, be sure and ask questions as they arise, and re-write your notes and incorporate important information from the text, develop study aids, etc. The investment will be worth it as you approach your exams.

Date	Topics	Sections Covered	Pages	Homework	Helpful Problems*
Tu 8/25	Introduction				
W 8/26	Characterizing Life	1.1 A	3-6		
Th 8/27	Diversity of Life	1.1 BCDE	6-9		Ch1: MC#1,3; TK#1-5
M 8/31				#1a-5pts	
Tu 9/1	Nature of Science	1.2AB, 1.3A, 2.1AB, 2.2	9-14, 22-23, 24-25		Ch1: MC#4,6,8; TK#8,10 Ch2: MC#1-4; TK#1,2
W 9/2	Basic Chemistry, Water and Life	2.1C, 2.2BCD, 2.3A	23,26-29	#1b-5pts	Ch2: MC#3,5; TK#8; TS#1,2
Th 9/3	Organic Chemistry	2.5ABC, 3.2A	33-40, 54-56		Ch2: TK#12; TS#5 Ch3: MC#3; TK#3,4
M 9/7				#2a-5pts	
Tu 9/8	Organic Compounds, Cells	2.5D, 3.1AB	40-43, 50-51		Ch3: TS#1
W 9/9	Cells	3.3ABC, 3.4ABD	57-61, 62-66,67-68	#2b-5pts	Ch3: MC#4,5,8; TK#6; TS#2,3,7
Th 9/10	Cell Membrane, Energy Release	3.2AB, 4.3AB, 4.5ABC	54-57, 85-87,89-95		Ch3: TK#3,4 Ch4: MC#8,9; TK#7,10; TS#5
M 9/14				#3a-5pts	
Tu 9/15	DNA Structure and Replication	6.1-6.4, 6.5ABC, 7.2AB	120-127, 141-143		Ch6: MC#1,4-7; TK#1-3,5; TS#1,4 Ch7: MC#1; TK#1,2
W 9/16	DNA Replication, Mitosis	7.3A, 8.1AB,8.2ABC	144-145, 156-164	#3b-5pts	Ch7: MC#2-5; TK#5 Ch8: MC#3,5; TK#2-5; TS#4,
Th 9/17	Review				
Tu 9/22	EXAM 1				
W 9/23	Protein Synthesis, Transcription	12.1AB, 12.2AB	236-239	#4-10pts	Ch12: MC#1,2; TK#1,3,5; TS#1
Th 9/24	Translation	12.3ABC, 12.4AB	240-243, 244-246		Ch12: MC#4,5; TK#8,9; TS#4
M 9/28				#5a-5pts	
Tu 9/29	Gene Regulation	12.4C, 12.5ABCD	246-251		Ch12: MC#7,9; TK#10
W 9/30	Meiosis	9.1, 9.2AB, 9.3AB, 9.4ABC	176-183	#5b-5pts	Ch9: MC#1-3,5-7; TK#5-7; TS#1,4
Th 10/1	Gamete Formation	9.5, 9.7A, 10.1A	184, 188-189, 196		Ch9: MC#8,9; TK#10 Ch10: TK#1

M 10/5				#6a-5pts	
Tu 10/6	Single Gene Inheritance	10.1BC, 10.2AB, 10.3AB	196-203		Ch10: MC#1-3,5; TK#2; TS#2 & Genetics Problems
W 10/7	Multiple Gene Inheritance	10.3AB		#6b-5pts	Ch10: MC#6; TK#4,5; TS#6 & Genetics Problems
Th 10/8	Complications to Mendelian Ratios	10.4ABCD, 10.5AB	204-208		Ch10: MC#7-10; TK#6,7; TS#6 & Genetics Problems
M 10/12				#7a-5pts	
Tu 10/13	Chromosomes and Gene Linkage	11.1, 11.2AB	216-219		Ch11: MC#1,3-6; TK#3-5 & Genetics Problems
W 10/14	Sex Linked Traits	11.4, 11.5AB	222-227	#7b-5pts	Ch11: MC#9,10; TK#9; TS#5,6 & Genetics Problems
Th 10/15	Review				
Tu 10/20	EXAM 2				
W 10/21	Introduction to Evolution			#8-10pts	
Th 10/22	Darwin, Natural Selection	13.1ABC, 13.2A	264-273, 324-326		Ch13: MC#2-4; TK#2,3,5,6; TS#2,4
M 10/26				#9a-5pts	
Tu 10/27	Hardy-Weinberg, Allele Frequencies	13.2AB, 13.3A	269-271, 275-277		Ch13: MC#5,8; TK#9,10
W 10/28	Speciation	13.4AB	277-279	#9b-5pts	Ch13: TK#13; TS#13,15
Th 10/29	Speciation, Tracing Phylogeny	14.2AB, 14.3ABC, 15.2C	290-294, 310, 312-313		Ch14: MC#3,5; TK#2,3; TS#3 Ch15: TS#2,3
M 11/2				#10a-5pts	
Tu 11/3	History of the Earth, Comparing Structures	15.3AB, 15.4AB, 15.5A, 15.6ABC	314-319, 322-324		Ch15: MC#3-7,9,10; TK#6-8,10; TS#5,6,9
W 11/4	Overview of Animalia	22.1BCD, 22.2	448-454	#10b-5pts	Ch22: MC#2-4; TK#1,2
Th 11/5	Phyla of Kingdom Animalia	22.3-22.7, 22.8B, 22.9	455-470		Ch22: MC#5-10; TK#3-5,7; TS#1,3,8
Tu 11/10	Chordates	23.1AB, 23.2	478-482		Ch23: MC#1,2,4; TK#1
W 11/11	Chordates	23.3-23.5, 23.6B	483-489	#11: Museum-15pts	Ch23: MC#3; TK#2,4-6; TS#6
Th 11/12	Chordates	23.7AB, 23.8AB	489-492		Ch23: MC#7,10; TS#5

Tu 11/17	EXAM 3				
W 11/18	Tissues	27.1, 27.2AB	360-363	#12-10pts	Ch27: MC#1,3-5; TK#1
Th 11/19	Homeostatis, Hormone Regulation	27.2CD-27.4, 30.1ABC, 30.2AB, 3.3, 30.4	561-569, 616-622, 624		Ch27: MC#6-8,10; TK#2,4; TS#3,4 Ch30: MC#1,5-7; TK#1,2,9; TS#6
M 11/23				#13-5pts	
Tu 11/24	Illusions, Nervous System	28.1, 28.2A	576-578		Ch28: MC#1,2; TK#1,2
W 11/25	Holiday	Holiday	Holiday		
Th 11/26	Holiday	Holiday	Holiday		
M 11/30				#14a-5pts	
Tu 12/1	Nervous System	28.3, 28.4AB, 28.5	579-585		Ch28: MC#5,6,8; TK#4-8; TS#3
W 12/2	Muscle Movement	31.4ABC	642-646	#14b-5pts	Ch31: MC#6-8; TK#9; TS#4
Th 12/3	Muscle Movement, Reproductive System	37.2ABC, 37.3ABC	749-757		Ch37: MC#2-4; TK#7
Tu 12/8	Animal Physiology	TBA	TBA		TBA
W 12/9	Animal Physiology	TBA	TBA	#15: Build your own final-10pts	TBA
Th 12/10	Animal Physiology	TBA	TBA		TBA
T 12/15	Final EXAM for sections 1 & 2, 8:00-10:00 AM				
F 12/18	Final EXAM for sections 3 & 4, 1:30-3:30 PM				

*For Helpful Problems, MC=Multiple Choice, TK=Testing Your Knowledge, TS=Thinking As A Scientist; not intended to represent everything you need to know for the class