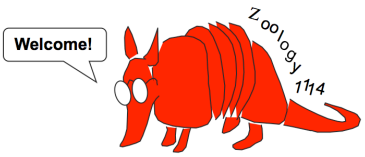
ZOO 1114 - Introductory Zoology [Fall 2011]

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 ran 100 meters 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 help you to 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 issue.

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

Timetable:

The course consists of three lectures a week distributed among 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 2: T,R 10:30-11:45; W 12:30-1:20
Section 3: T,R 1:30-2:45; W 10:30-11:20
Section 4: T,R 1:30-2:45; W 12:30-1:20

Required Materials:

1. Textbook (choice of the following options):

a) *Biology: Concepts and Investigations*. 2nd edition. Mariëlle Hoefnagels. McGraw-Hill.
b) Electronic textbook – *Biology: Concepts and Investigations*. 2nd edition. Mariëlle Hoefnagels. McGraw-Hill. Available through *McGraw-Hill* online.
c) *Biology: Concepts and Investigations* [custom abridged text] + ebook Access Card. 2nd edition. Mariëlle Hoefnagels. McGraw Hill.

2. i>Clicker2 remote

3. Packet of selected lecture figures:

Available at the OU bookstore [ISBN 978-0-07-804350-5]. 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 (140 points total), in-class "pop" quizzes (100 points total), special assignments (50 points), and a comprehensive final exam (250 points). We summarize these distributions in the table to the right:

Grade Component	Point Value
Midterm Exams (3*150pts)	450
Warm-up Exam	10
Homework Sets	140
Special Assignments	50
Pop Quizzes	100
Final Exam	250
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 108 questions. Three groups of 25 questions (two points each) will cover material relevant to the midterm exams. The remaining 33 questions (three points each) will cover material after the third exam. You will receive one free point on the final exam, to make a total of 250 possible points. Midterm exams will always be given during regularly scheduled class time.

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 i>clicker2 in-class voting system (a.k.a. "clickers"). We will present more information on the format of these quizzes and the i>clicker2 system on the first few days of class. You are responsible for purchasing and bringing your i>clicker2 remote control to each class.

Homework Sets: Typically, there will be homework sets due twice each week – every Tuesday and Thursday evening. Also, there will be one comprehensive homework assignment per unit, due on Saturday. 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 nearly 20% 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 We will use this system 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.

Action Tutoring: The Assessment and Learning Center, a department of University College, offers free tutoring sessions through **UC Action.** Every Tuesday from 5:00–7:00 in rooms 140 and 145 of Wagner Hall two talented undergraduates and I will offer walk-in tutoring. There will also be additional

sessions, with times to be announced soon. Bring your questions and a classmate, as group work is encouraged at these sessions. For more information, visit http://uc.ou.edu/action.

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 before 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 20, 2011
Exam #2 -- Tuesday, October 18, 2011
Exam #3 – Tuesday, November 15, 2011
Final Exam (Sections 1 & 2) – Monday, December 12, 2011 (8:00-10:00 AM)
Final Exam (Sections 3 & 4) – Thursday, December 15, 2011 (1:30-3:30 PM)

ADD/DROP

No Refund on Dropped Courses after this date	September 2
No Record of Grade on Dropped Courses	August 22-September 2
Final Day to Register or Add a Class	August 26
Automatic Grade of W for Dropped Course(s)	August 22-October 28
Grade of W or F for Dropped Course(s)	October 31-December 9
Petition to College Dean to Drop Course(s)	October 31-December 9

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 at least two 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.

Calendar for Fall 2011

Date	Topics	Sections Covered	Pages	Homework/ Point value
Tu 8/23	Introduction			
W 8/24	Characterizing Life	1.1A	2-6	
Th 8/25	Diversity of Life	1.1B-E, 1.2	6-9	
Tu 8/30	Nature of Science, Begin Chemistry	1.3A-D, 2.1A-C	10-13, 20-22	HW1a – 5pts
W 8/31	Basic Chemistry, Chemical Bonds	2.2A-D	23-26	
Th 9/1	Water and Life, Organic Chemistry	2.3A-D, 2.4A, 2.5A,B	27-35	HW1b – 5pts
Tu 9/6	Organic Compounds, Cells Warm-up Exam (10 pts)	2.5C,D, 3.1A-D	36-40, 46-49	WU – 10 pts HW2a – 5pts
W 9/7	Cells, Endosymbiont Theory	3.2A-C, 3.4A-D, 14.2A	50-53, 56-61, 304-305	
Th 9/8	Cell Membrane, Energy Release	3.3, 4.1AB, 4.3ABC, 4.4A, 4.5ABC, 6.1	54-55, 72-73, 76-78, 80-84, 106	HW2b – 5pts
Tu 9/13	Cellular Respiration; DNA Structure and Replication	6.2-6.6, 7.2, 7.3intro	107-112, 124-126	HW3a – 5pts
W 9/14	DNA Replication, Mitosis	8.1-8.4	152-161	
Th 9/15	Review			HW3b – 5pts
Sa 9/17	Investigating Life #1 due			IL#1 – 10pts
Tu 9/20	**EXAM 1**			150pts
W 9/21	Protein Synthesis, Transcription	7.3AB, 7.4AB	126-129	
Th 9/22	Translation	7.5A-D 7.6AB	130-133, 134-136	HW4 – 10pts
Tu 9/27	Gene Regulation, Mutations	7.6A-C, 7.7A-D	134-140	HW5a – 5pts
W 9/28	Meiosis	9.1-9.6	180-188	
Th 9/29	Gamete Formation	9.8A, 34.2B, 34.3B 10.1	192-193, 697-698, 700-701, 200	HW5b – 5pts
Tu 10/4	Single Gene Inheritance	10.2A-D, 10.3AB	201-206	HW6a – 5pts
W 10/5	Multiple Gene Inheritance, Product Rule	10.4AB	206-208	
Th 10/6	Complications to Mendelian Ratios	10.6AB, 10.9AB	211-213, 219-220	HW6b – 5pts
Sa 10/8	Investigating Life #2 due			IL#2 – 10pts
Tu 10/11	Chromosomes and Gene Linkage	10.1, 10.5AB	200, 208-210	HW7 – 10pts
W 10/12	Sex Linked Traits	10.7A-C, 10.8	213-218	
Th 10/13	Review			
Tu 10/18	**EXAM 2**			150pts
W 10/19	Introduction to Evolution, Darwin	11.1A-D	230-235	
Th 10/20	Natural Selection, Hardy Weinberg	11.2A-D, 12.7, 11.3AB	236-239, 268-269, 240-241	HW8 – 10pts
Tu 10/25	Factors Affecting Allele Frequencies	11.5, 11.6A-D	240-241, 244-248	HW9a – 5pts
W 10/26	Species Concept, Speciation	13.1AB, 13.2AB, 13.3A-D	274-281	
Th 10/27	Tracing Phylogeny	12.1, 12.2AB, 12.3AB, 12.4A-C	254-263	HW9b – 5pts
Tu 11/1	Tracing Phylogeny (continued), History of Life on Earth	12.5, 12.6AB, 13.6A-D, 14.1AB	264-267, 286-291,298-301	HW10a – 5pts
W 11/2	Overview of Kingdom Animalia	20.1A-D, 20.2, 20.3	410-417	
Th 11/3	Kingdom Animalia: Protostomes	20.4-20.7, 20.8AB	418-429	HW10b – 5pts
Sa 11/5	Investigating Life #3 due			IL#3 – 10pts
Tu 11/8	Kingdom Animalia: Deuterostomes, Begin the Chordates	20.9, 20.10AB, 20.11	430-436	
W 11/9	Chordates	20.12-20.15A	437-443	
Th 11/10	Chordates	20.15B, 20.16AB	443-447, 449-450	Museum Exercise – 15pts
Tu 11/15	**EXAM 3**			150pts

W 11/16	Animal Tissues	24.1, 24.2AB	512-516	
Th 11/17	Homeostasis, Hormone Regulation	24.2CD, 24.4, 27.1AB-27.4	516-517, 520-521, 568-577	HW11 – 10pts
Tu 11/22	Illusions, Nervous System	25.1, 25.2AB	528-531	HW12 – 5pts
W 11/23	*Thanksgiving Holiday*			
Th 11/24	*Thanksgiving Holiday*			
Tu 11/29	Nervous System	25.3A-C, 25.4AB	532-537	HW13a – 5pts
W 11/30	Muscle Movement	28.4A-C	590-593	
Th 12/1	Regulation of Reproductive Function	34.2A-C, 34.3A-C	696-703	HW13b – 5pts
Sa 12/3	Investigating Life #4 due			IL#4 – 10pts
Tu 12/6	Regulation of the Cardiovascular System	29.4, 29.5	608-614	
W 12/7	Unit 4 Review			BYOF – 10 pts
Th 12/8	Semester Review			
M 12/12	**Final EXAM for sections 1 & 2, 8:00-10:00 AM**			
Th 12/15	**Final Exam for sections 3 & 4, 1:30-3:30 PM**			250 pts
			Pop Quzzes:	100 pts
			Total Points:	1000 pts