

BIOLOGY 3: Introduction to Life Science

Fall 2012

Instructor: Ms. Smith Bush

Office Hours: Tuesday, Wednesday & Thursday 11:00am-12:00pm; LFS 13

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Lecture: M, W, F 9:00-9:50am; SOC 32

Lab #57346 Monday & #57411 Friday 10:00-11:50 am; LFS 17.

I. COURSE DESCRIPTION

- A. Title:** Biology 3 – Introduction to Life Science
- B. Prerequisite:** None - Just the desire to learn & the ability to drive yourself to field trips.
- C. Summary:** This course is recommended for the non-biological science and pre-education majors. This is an introductory course using biological concepts. The organismal structure, function, inheritance, evolution, and ecology are covered. Field trips are required.
- D.** Biology 3 is a 4 unit class with 3 hours lecture and 2 hours laboratory each week.

II. COURSE OBJECTIVES:

In the process of completing this course, students will:

- A.** read, analyze, evaluate, and discuss Scientific Method, Microscopy, The cell, and Levels of Organization.
- B.** learn the periodic table of the elements and chemistry of the carbon atom and chemical structure of living organisms.
- C.** read appropriate scientific literature on classification.
- D.** learn the cell's structure, function, and organization of living organisms.

- E.** observe and document the structure and function of the human body by examining the organ systems: reproduction, respiration, circulation, excretion, and digestion.
- F.** review classical and molecular genetics and learn the process of replication, transcription, and translation.
- G.** perform experiments, observe, and record data.
- H.** learn plant structure, physiology, and interaction including photosynthesis and aerobic respiration.
- I.** study evolution.
- J.** observe chemical and energy relationships.

III. REQUIRED MATERIALS:

1. Text: Mader, S. Essentials of Biology, custom, 2nd edition McGraw Hill.
2. Text: Sierra Nevada Natural History, revised ed. Storer, T., Usinger, R., & Lukas, D. Univ. of California Press. 2004.
3. Biology Barcharts
4. Biology 3 Handouts, spring 2010

5. Scantron form 886 (X6) and quiz strips
6. E-mail address. This can be obtained free through the school
7. Biology Drawing Paper for lab plates
8. Camera – for field trips

IV. OPTIONAL, BUT RECOMMENDED:

1. Colored pencils (hard graphite) (no flow pens or crayons)
2. Trees of the Sierra Nevada, Field Card #4

V. NO FOOD, BEVERAGE, CELLULAR PHONES OR PROFANITY AT ANY TIME!!!

Hint!! Be sure to always put your name, code & lab day on all papers to insure you will not get 5 points deducted! Thanks!!

VI. ATTENDANCE:

You are expected to be on time for each laboratory and lecture session. Tardiness may be construed as an absence from the class. It is the students' responsibility to sign in when late and then to see the instructor after class to be sure that an absence has been changed to a tardy! Be aware that 3 tardies = 1 absence. This is very important because **if you miss more hours than 10 hours of class or lab, you will be dropped** unless your instructor has been informed of the extenuating circumstances causing your absences.

Reasons for being dropped from the course...

1. Student fails to attend the first laboratory or lecture session of the course.
2. 10 hours of absences during the first 9 weeks of the course.

VII. TESTS AND EVALUATIONS:

A. Grading

Description	Points Possible
Syllabus Tour	15
Textbook Tour	15
Lab Exercises (approx. 15)	150
7 Lab Plates (drawings) (10 pts. each)	70
10 Unannounced Quizzes (10 @ 10 pts. each)	100
6 Exams (100 pts. each)	600
Performance Art Projects (50 pts. Each)	100
Photo Essay Project	100
Approximate Total Points =	1150

B. Grading scale:

90% = A 80% = B 70% = C 60% = D 59% and below = F

At any point you can check your grades on webgrade via our Blackboard site

through the Reedley College homepage: www.reedleycollege.edu Your Blackboard username and password is your 7 digit student ID number. The 24/7 helpdesk address is: <http://d2.parature.com/ics/support/default.asp?deptID=8032> and phone is 1-866-401-7784.

Choose the webgrade link on the left hand side of the Bb screen. You will need a webgrade password which can be obtained from your teacher. You are encouraged to check this site regularly and keep track of your own grades!

- C. *Exams* will include multiple choice questions and usually 3-5 short essay questions. Many times these essays will be the main objectives of each chapter. **Policy for missed exams:** If you know you will miss class during an exam, you may arrange to take the exam early with no penalty. If you miss class on an exam day, you will have one week to make up the exam. ***Your exam score will have 10 percentage points deducted as a penalty for late work.*** If you have a medical excuse you will be exempt for the point deduction. It is the students' responsibility to arrange a time for the make-up exam.
- D. *Lab Exercise Grades* will come from your lab work itself. These are to have the answers to laboratory questions on handouts or from your lab guide as well as any problems to work or tables to fill in. Be sure these are neatly done and in the same order as the handouts. Forgotten lab work means no score – as you are responsible for your work. **Policy for missed labs:** If a lab is missed you have the option of attending another Bio 3 lab section that same week. If you do not do this, you will not be allowed to make it up at a later date. Attending the lab is mandatory. No points will be given for lab work if you were not present during the lab meeting.
- E. *Laboratory/Lecture Quizzes* will consist of questions concerning the previous labs/lectures and/or the current day's lab/lecture. Stay caught up and these will be welcome bonus points! Missed quizzes **may NOT be made up**. Quizzes may be given at the beginning or end of a laboratory or lecture.
- F. *Lab Plates* (drawings) will be due at the beginning of the next lab. Approximately 7 plates will be collected throughout the semester. Extra time and neatness as well as accuracy are very important to a successful laboratory grade. See the LAB DRAWING HAND OUT for more details on how the lab drawings will be graded. Drawings that are not on the required Biology drawing paper will not be graded. You will always have one week to complete the lab plate.
- G. There will be three laboratory assignments requiring you to create with the knowledge you have gathered from the class. Two of these will be performance art projects which will be presented to the class during a laboratory session. The third is the photo essay project will require you to travel into the mountains to conduct independent research. You will be responsible for providing your own transportation. More will follow on this later.

VIII. Other information:

Drops: You have until the end of the 9th week of school to drop. If you elect to do so, be sure to drop yourself. Do not assume you have been automatically

dropped. This is very important, as after the 9th week a grade must be given, by state law, whether you attend class or not.

Adds: If you are given an add slip, be sure to turn it into Student Services within two days of receipt. After this date, you will not be allowed to add the class with that add slip.

Extra Credit: Extra credit is recommended if you feel that you are a borderline grade and that you need 25 points to get you over the hump. Extra credit should be viewed like an insurance policy. You're never quite sure when it may be needed. All extra credit is due at the beginning of the 17th week. ***If you have over four absences within the semester you will not be eligible for these points.***

IX. Help:

If you should have difficulty grasping the material presented during the course be sure to see your instructor at the first sign of trouble. Often, a few minutes can clear up many problems! If you are having trouble studying, perhaps you need a few study hints or a tutor at the Tutorial Center. Please come in for help!

Always keep in mind that this is a four-unit course. As a general rule, each hour of lecture requires two hours of additional study outside of the classroom each week. Each hour of lab requires one hour of study time, outside the laboratory each week. This equals eight hours of study each week in order to pass this class. Do your planning accordingly. Success comes before work only in the dictionary. Overall, I hope you have a fun semester and learn Biology along the way. Good Luck.

X. Academic Dishonesty

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entire honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences. See college catalog for details.

XI. Accommodations

If you have a verified need for an academic accommodation or material in alternate media (i.e. Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Tentative Lecture & Lab Schedule

Biology 3 – Fall 2012

Monday Lab: #57346 & Friday Lab: #57411

Biology 3	Readings	Lab Assignments
Week 1: 8/13-8-17		
M: Orientation, Grading, Goals, Attendance	Syllabus, Schedule	Microscope safety/use
W: A View of Life	Ch. 1	Letter e slides
F: Chemistry	Ch. 2	
Week 2: 8/20-8/24		
M: Chemistry cont.		Cell Lab
W: Inside the Cell (<i>assign LP#1: Cell</i>)	Ch.4	
F: Cell Reproduction	Ch.8	
Week 3: 8/27-8/31		
M: Cellular Respiration/Fermentation	Ch.7	Mitosis Lab
W: CR/Fermentation cont.		Microscope Quiz
F: Photosynthesis	Ch.6	
Week 4: 9/3-9/7		
M: Labor Day Holiday		
W: Photosynthesis cont.		Photo Essay Research
F: Exam #1(ch.1, 2, 4, 7,8 & labs)		
Week 5: 9/10-9/14		
M: DNA (<i>assign LP#2: DNA</i>)	Ch. 11	Online Leaf Lab
W: Protein synthesis	Ch.11	
F: Sexual Reproduction	Ch.9	
Week 6: 9/17-9/21		
M: Patterns of Inheritance	Ch.10	LP#2 Due
W: Human Genetics	Ch.13	Protein Synthesis & DNA Extraction
F: Evolution	Ch.14	
Week 7: 9/24-9/28		
M. Evolution cont.		Genetics Worksheet
W: Microevolution (Intro into BC project)	Ch. 15	
F: Macroevolution	Ch.16	
Week 8: 10/1-10/5		
M: Classification	Ch.16	Dot Game
W: Viruses	Ch. 17	
F: Exam #2 (ch.6,9-11,13 & lab)		
Week 9: 10/8-10/12 (drop day)		
M: Prokaryotes (<i>assign LP#3 virus/bact</i>)	Ch. 17	Last week to turn in PE Research Lab
W: Protists	Ch. 17	Disease Lab
F: Fungi	Ch. 18	
Week 10: 10/15-10/19		
M: Plants (<i>assign LP#4 Altern. of Gen</i>)	Ch. 18	LP #3 Due Biological Change Project
W: Plants cont.		
F: Exam #3 (ch.14-17 & labs)		
Week 11: 10/22-10/26		
M: Invertebrates	Ch. 19	LP #4 Due Introduction to Pollination
W: Protostomes	Ch. 19	Project - video

F: Protostomes cont.

Week 12: 10/29-11/2

M: Deuterostomes Ch. 19 Animal Diversity Lab

W: Deuterostomes cont.

F: Animal Organization Ch. 22

Week 13: 11/5-11/9

M: Animal Digestion (*assign LP#5 GI tract*) Ch.24

W: Exam #4 (ch.17-19 & labs) Pollination Project

F: Animal Circulation (*assign LP#6 heart*) Ch. 23

Week 14: 11/12-11/16

M: Veterans' Day

LP #5 Due

W: Animal Respiration Ch. 24

Online Human
Demography Lab

F: Animal Excretion (*assign LP#7 nephron*) Ch. 24

Week 15: 11/19-11/23

M: Ecology of Population Ch. 30

LP #6 Due

W: Populations cont.

Online Human
Demography Lab

F: Thanksgiving Holiday

Week 16: 11/26-11/30

M: Communities & Ecosystems Ch. 31

LP #7 Due

W: Exam #5 (20-24 & labs)

Carbon Footprint Lab
Photo Essay Project
Due in Lab

F: Ecosystems cont.

Week 17: 12/3-12/7

M: Biomes

Food Inc. Movie

W: Human Impact Ch. 32

Extra Credit

F: Humans Impact cont.

In Lab

Week 18: Wednesday 12/12/12 9:00am

Exam #6 (ch.30-32 & labs)