Biology 1 – Principles of Biology #50150
Course Description and Tentative Schedule Fall 2013

Instructor: **Joseph Yen Lin, M.S**.
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Office hours: Available upon appointment
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Lecture: T, TH 11:00-12:15 pm LFS Room C (08/12/2013-12/13/2013)
Lab: Thursday 12:30-2:20 pm; LFS Room C

I. COURSE OVERVIEW

A. Course Structure: 4 units, 3 weekly lecture hours, 2 weekly laboratory hours
B. Prerequisite: Math 103
Basic Skills Advisories: Eligibility for ENGL 125 & 126
Subject Advisories: One year courses in high school chemistry and high school biology are recommended, but not required.

C. Summary: Primarily for students majoring in health related and biological professions. Biol 1 will focus on providing a basic understanding and working knowledge of cellular and chemical basis of life, organ systems, genetics, evolution, current hypotheses regarding the origin of life, ecology, environmental concerns, and the impact of human activity on the biosphere. It is especially useful for those students planning a career as a nurse, physician's assistant, nurse practitioner, laboratory technician, radiologist, nuclear medicine technologist, inhalation therapist, medical office assistant, medical record keeper, dental hygienist, physical therapist, surgical assistant, diagnostic medical sonographer, mortician, cytotechnologist, EEG technologist, paramedic, and also students in premedical, pre-dental, physical education, sports medicine, nutrition, and pre-chiropractic programs. This course demands an excellent grasp of the English language, the discipline to commit many facts to memory, and a great deal of study time.

D. Objectives: To understand the fundamentals of biological and chemical similarities and differences of living systems as they relate to heredity, evolutionary history and ecology. When completed, the student will have awareness and an appreciation of some choices the field of Biology has to offer, as well as a solid background to pursue the career of their choice. This course fulfills the prerequisite for Biology 20 (and is a recommended prerequisite for Biology 4 and Biology 6).

II. COURSE OBJECTIVES

In the process of completing this course, students will:

- **A.** Identify life from an evolutionary approach, from basic organic molecules to whole organ systems.
- **B.** Evaluate the biological sciences through references to historical discoveries and contributions which have led to the current use of scientific methods.
- **C.** Use scientific methods in performing experiments and collecting data.
- **D.** Apply the classical principles of Mendelian genetics to understand DNA as hereditary material and the application to evolutionary thought.
- **E**. Understand chemical and energy relationships of the levels of biological organization.
- **F.** Compare and contrast functional systems of living organisms.

G. Identify environmental and ecological issues.
H. Evaluate scientific literature and current biological advances.

III. MATERIALS

A. Text: Mader, S., BIOLOGY REEDLEY COLLEGE CUSTOM, 10th edition, McGraw-Hill.
B. Laboratory Manual: Mader, BIOLOGY CUSTOM LAB MANUAL REEDLEY COLLEGE, 10th edition, McGraw-Hill.
C. Quiz Strips (x10)
D. Scantron form 886 (x4)
E. Biology Drawing Paper for lab plates
F. E-mail Address

Materials on Blackboard: Several **critical** items are available on Blackboard for this course, posted in PDF or Word formats. Within "Syllabus" you will find this syllabus and schedule. Within "Course Documents" you will find my **lecture in PDF format**.

IV. POLICIES: PROFESSIONAL BEHAVIOR IS EXPECTED AT ALL TIMES:

Please respect other students, other teachers, and me. No food, cellular phones, pagers, or profanity at any time! I am aware that emergencies arise, but place your electronics on silent or "manner" mode. Disruptive behavior that interferes with the teaching and learning processes will be cause for appropriate penalties as described in university procedures. **CHEATING IS NOT TOLERATED** and will be reported according to college procedures. It will result in one of three options to be decided at my discretion: a zero for that exam OR an F in the course OR expulsion from the college. The last date to withdraw from the class without a serious and compelling reason is the 9th week of school.

V. ATTENDANCE:

Attendance is mandatory for both lecture and laboratory. In addition, attendance will be taken during the course every day. Keep in mind 3 tardies will result in an absence. There will be "NO" excused absences for any reason unless you have consulted with me beforehand (extenuating circumstances). In result, 3 absences will correlate to a reduction of one full letter grade and 6 or more absences will result in you being dropped from the course. You are responsible to see the instructor after class to confirm your attendance, if you are late to class.

VI. TEST AND EVALUTIONS:

A. Grading

Description	Points Possible
10 Lab Exercises (10 pts. each)	100
10 Quizzes (10 pts. each)	100
Research report	100
3 Lab Practicals (100 pts. each)	300
3 Lecture Exams (100 pts. each)	300
Lecture Final (comprehensive)	200
Approximate Total Points =	1100

B. All lecture exams and the final will be given during class time. *Lecture Exams* will include multiple choice questions and usually 2-3 short essay questions. Many times these essays will be the main objectives of each chapter. The final lecture exam will be comprehensive.

Course grading scale

100 - 90%; A 89.99 - 80%; B 79.99 - 70%; C 69.99-60 %; D 59.99< %; F

C. *Lab Practicals* will be a "hands on" test for the work done in the laboratory or multiple choice questions given related to the laboratory. No make-up lab practical / quizzes will be allowed.

D. *Lab Exercises* will consist of lab questions taken directly from the lab book or handouts. They will be collected one week after the laboratory was completed. These are to have the answers to laboratory questions as well as any problems to work or tables to fill in. Forgotten lab notebooks mean no score – as you are responsible for your work.

F. *Quizzes* will consist of questions concerning the previous labs/lectures and/or the current day's lab/lecture. Sometimes it will be group activities during the lab! Quizzes missed due to *tardies or absences may NOT be made up.*

G. Make-up lecture exams will be at the discretion of the instructor. You have approximately one week to make-up any missed lecture exam. After two weeks any missed exam will not be made up.

H. See research report information on Blackboard.

VII. OTHER INFORMATION:

Drops: You have until 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 give, by state law, whether you attend class or not.

VIII. HELP:

A. If you should experience difficulty understanding the material presented in the course, it is **your responsibility** to see me at the earliest possible time.
B. This course requires that you become familiar with and understand a great deal of information about biological processes. In any college course, you are expected to spend 2-3 hours per class hour outside the lecture and lab studying: that translates to 6-9 hours per week for this course, excluding test study time. Some of the work, especially for the labs, should be completed prior to the class.
C. Listen in lecture and take good notes using my outlines from Blackboard (you may use a tape recorder during lecture if you wish). Organize your notes and redo them if necessary after lecture. Review your notes frequently, not just before a test.
D. Do your reading assignments prior to the lecture on that particular topic. Read your labs **prior to the lab** period and partially complete the lab report to verify your answers during the lab.
E. Keep a vocabulary list of all terms mentioned in lecture, in bold print in the text, or listed at the end of each chapter. Know the meaning of each of these terms and the correct spelling.
F. Spend some time studying each day. You are learning a new language; immerse yourself in it!

Review notes for 15-30 minutes at one time. The best way to absorb book chapters is to read for one to two hours at a time. Don't try to complete your study hours all in one sitting or on the same day, as your efficiency will drop dramatically. Review an additional 3-5 hours a day prior to examinations.

G. Use all materials available (text, lab notebook, internet sites, etc.); if one study method does not work try another! Use as many ways to access your memory as possible (auditory, visual, kinetic, etc.).

H. Stay healthy and get adequate sleep!

IX. ACADEMIC DISHONESTY:

Academic dishonesty is unacceptable and will not be tolerated by Reedley College. Cheating, plagiarism and collusion in dishonest activities erode the college's educational and social role in the community.

Cheating is the act of deception by which a student misleadingly demonstrates that he/she has mastered information on an academic exercise. Examples include but are not limited to:

1. Copying or allowing another to copy a test, paper, project, or performance.
2. Using unauthorized materials during a test, for example, notes, formula lists, or "cheat sheets."
3. Taking a test for someone else or permitting someone to take a test for you.

Plagiarism is the act of representing the work of another as one's own without giving credit. Plagiarism includes but is not limited to:

1. Incorporating the ideas or words of another's work without giving appropriate credit.
2. Representing another's artistic or scholarly works, such as musical compositions, computer programs, photographs, etc., as one's own.

Disciplinary Procedures are outlined in your Reedley College student catalog and are summarized as follows when a faculty member discovers a violation:

1. Conference with student to address allegations
2. Notification of division dean, report for permanent record of student.
3. May give student "F" for assignment or course.
4. If more than one infraction has occurred, the student may go on probation, be suspended, or expelled. An appeal may be made within 15 days of notification.

X. ACADEMIC ACCOMODATIONS:

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.

Biology 1
Fall 2013 LECTURE SCHEDULE (tentative)
#50150

Week	Date	Topic	Chapter
1	13. Aug	Introduction, What is Life?, Scientific Method	1
	15. Aug	Chemistry	2,3
2	20. Aug	Cell Structure	4
	22. Aug	Membranes	5
3	27. Aug	Metabolism	6
	29. Aug	Photosynthesis	7
4	3. Sept	Photosynthesis cont.	
		Cellular Respiration	8
	5. Sept	Mitosis	9
5	10. Sept	Meiosis	10
	12. Sept	**LECTURE EXAM #1 (ch.1-9)**	
6	17. Sept	Medelian Genetics	11
	19. Sept	Human Genetics	11
7	24. Sept	Molecular Biology of Genes	12
	26. Sept	Darwin & Evolution	15
8	01. Oct	How Populations Evolve	16
		Speciation & Macroevolution	17
	03. Oct	Systematics	19
9	08. Oct	Viruses, Bacteria	20
	10. Oct	Protists (last day to drop)	21
10	15. Oct	Fungi	23
	17. Oct	**LECTURE EXAM #2(ch.10-12,15-17,20,21)**	
11	22. Oct	Plants	23,24,27
	24. Oct	Invertebrates	28

12	29. Oct	Protostomes	29
	31. Oct	Deuterostomes	29
13	05. Nov	Animal Organization	31
		Circulation	32
	07. Nov	Digestion	34
14	12. Nov	Respiration	35
		Body Fluid Regulation	36
	14. Nov	**Lecture Exam #3 (ch.23,24,27-29,31,32,34)**	
15	19. Nov	Nervous System	37
	21. Nov	Sense Organs / Support systems & Locomotion	38 / 39
16	26. Nov	Population Ecology	44
	28. Dec	**Thanksgiving-No Class**	
17	03. Dec	Ecosystems	45
	05. Dec	Conservation Biology	47
18	10. Dec	**FINAL LECTURE EXAM (Cumulative) Dec 10 @ 11:00->12:50**	

Biology 1 Fall 2013 LAB SCHEDULE (tentative)			
Week	**Date**	**Topic**	**Lab #**
1	15. Aug	Metric measurement & Microscopy	2
2	22. Aug	Chemistry	3
3	29. Aug	Cell Structure & Function	4
4	5. Sept	Photosynthesis	on-line
5	12. Sept	Mitosis & Meiosis	8
6	19. Sept	**Lab Practical #1 (weeks 1-5)**	
7	26. Sept	Genetics	9
8	03. Oct	Evolution	12
9	10. Oct	Plants	17
10	17. Oct	Invertebrates	22
11	24. Oct	**Lab Practical #2 (weeks 7-10)**	
12	31. Oct	Protostomes	23
13	07. Nov	Deuterostomes	24
14	14. Nov	Animal Organization	25
15	21. Nov	Virtual Frog Lab	Online
16	28. Dec	**Thanksgiving**	
17	5. Dec	**Lab Practical #3 (weeks 12-16)**	