

BIOLOGY 3: INTRODUCTION TO LIFE SCIENCE

Fall 2010

Instructor: Mr. Bryon Spicci

Office Hours: To be arranged

Phone: 559-824-2006

E-mail: bryon.spicci@reedleycollege.edu

Lecture: T 6:00-8:40 pm; Selma high school 608.

Lab: Th 6:00-8:40 pm, Selma high school 608

I. COURSE DESCRIPTION

A. Title: Biology 3 – Introduction to Life Science

B. Prerequisite: None

Basic Skills Advisories: Eligibility for ENGL 125 & 126

C. Summary: Biology 3 is an introductory course using biological concepts general and satisfies the general education science requirements. This is a 4 unit class with approximately 3 hours of lecture and 2 hours of laboratory each week. This course is recommended for non-biological science majors.

D. Objectives: To become familiar with the study of anatomical and physiological similarities and differences of living systems as they relate to heredity, evolutionary history and ecology. When completed, the student will have an awareness and an appreciation of some of the choices the field of Biology has to offer, as well as a solid background to pursue the career of their choice.

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. COURSE OUTCOMES:

Upon completion of this course, students will be able to:

- A.** understand the structure and functions of living organisms.
- B.** understand scientific method and be able to apply the process to any situation that needs evaluation and recommendations.
- C.** use DNA testing, probes and profiles in the clinical field.
- D.** work at different levels in biological organization.

E. evaluate comparative anatomy and physiology in living organisms. This applies to the normal vs. abnormal anatomy and physiology as well as comparing totally different organisms.

F. use inductive and deductive reasoning in any environmental or ecological issue.

IV. REQUIRED MATERIALS:

1. Text: Mader, S., ESSENTIALS of BIOLOGY, 2nd edition, McGraw-Hill.
2. Laboratory handout
3. Scantron form 882 (X6) and quiz strips #815-E
4. E-mail address. This can be obtained free through the school

V. I reserve the right to make changes in this syllabus with notification

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

VII. ATTENDANCE:

You are expected to be on time for each laboratory and lecture session. Tardiness may be construed as an absence from the class. Be aware that 3 tardies = 1 absence. If you are late, it is your responsibility to see the instructor after class. This is very important because **if you miss more hours than this class meets in two weeks (i.e. 10), you will be dropped** unless your instructor has been informed of the extenuating circumstances causing your absences. Any missed lab counts for two hours absence. Attendance in this class is closely monitored due to safety issues.

VIII. TESTS AND EVALUATIONS:

A. Grading

<u>Description</u>	<u>Points Possible</u>
11 Lab Exercises (10 pts. each)	110
19 Unannounced Quizzes (19 @ 10 pts. each)	190
6 Lecture Exams (100 pts. each) Lowest score dropped	500
Approximate Total Points =	800

B. Grading scale:

90% = A 80% = B 70% = C 60% = D 50% and below = F

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

<http://www.blackboard.reedleycollege.edu> go to the external links section and click on 'webgrade' to view your grades. Your webgrade password can be obtained from your teacher.

You are encouraged to check this site regularly and keep track of your own grades! Your Blackboard username and password is your 7 digit student ID number. The helpdesk hours are 8-5 M-F. The help address is: bbhelp@fresnocitycollege.edu and phone is 265-5760. Additionally, all handouts and class notes for our class will be available on this site.

C. *Lecture Exams* will include 40-60 multiple choice questions.

D. *Lab Book Exercises* will consist of lab questions taken directly from the lab book. They will be collected one week after the laboratory was completed. 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. Forgotten lab notebooks means no score – as you are responsible for your work.

E. *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! These quizzes are closed note. Quizzes missed due to **tardies may NOT be made up**. Quizzes may also be given at the **end of a laboratory or lecture or any time the instructor wants to**.

F. Make-up lecture exams will not be given. Your lowest test score will be automatically dropped.

IX. 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 given, by state law, whether you attend class or not.

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 lab, in the 17th week of the semester. *If you have over four absences within the semester you will not be eligible for these points.*

X. 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.

XI. 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 Fresno City 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.

XII. 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 2010

Biology 3	Readings	Lab Assignments
Week 1: 8/31, 9/2		
Orientation, Grading, Goals, Attendance	Syllabus, Schedule	Microscope safety/use
How Do Biologists Study Life?	Ch. 1	Letter e slides
Chemistry	Ch. 2	
Chemistry cont.	Ch. 3	
Week 2: 9/7, 9/9		
Inside the Cell	Ch. 4	Cheek/Onion cells
Cell reproduction	Ch. 8	Lab Plate #1 – cells
Week 3: 9/14, 9/16		
Cellular respiration/Fermentation	Ch. 7	Mitosis
Photosynthesis	Ch. 6	
Exam #1 (ch.1,2,3,4,& 8)		Lab Plate #2 – mitosis
Week 4: 9/21, 9/23		
DNA & Protein synthesis	Ch. 11	Protein Syn. Worksheet
Sexual Reproduction	Ch. 9	DNA Extraction
		Lab Plate #3 – DNA
Week 5: 9/28, 9/30		
Patterns of Inheritance	Ch. 10	Genetics Problems
Genetic Counseling	Ch. 13	
Evolution	Ch. 14	
Week 6: 10/5, 10/7		
Microevolution	Ch. 15	Allele Frequency Lab
Macroevolution	Ch. 16	
Exam #2 (ch.6,7,9-11, 13)		
Week 7: 10/12, 10/14		
Classification	Ch. 16	No Lab
Viruses	Ch. 17	
Week 8: 10/19, 10/21		
Prokaryotes	Ch. 17	Disease Lab
Protists	Ch. 17	
Week 9: 10/26, 10/28		
Fungi	Ch. 18	Plant Lab
Plants	Ch. 18	
Exam #3 (ch.14-17)		
Week 10: 11/2, 11/4		
Animals	Ch. 19	Animal Diversity

Week 11: 11/9, 11/11

Animal Organization

Ch. 22

Tissue Lab

Week 12: 11/16, 11/18

Animal Digestion

Ch. 24

No Class

Animal Circulation

Ch. 23

Animal Respiration

Ch. 24

Week 13: 11/23, 11/25

Animal Excretion

Ch. 24

Circulation Lab

Week 14: 11/30, 12/2

Ecology of Populations

Ch. 30

Population Dynamics
Lab

Exam #4 (ch. 18, 19, 22-24)**Week 15: 12/7, 12/9**

Communities and Ecosystems

Ch. 31

Inconvenient Truth

Human Impact

Ch. 32

Week 16: 12/7, 12/9**Exam #5 (30-32) @ 6 pm.****No Class**