

## **BIOLOGY 3: Introduction to Life Science**

**Spring 2011**

Instructor: Mr. Bryon Spicci

Office Hours: By Appointment Only

Phone: 638-3641 #3926 or call my cell phone 559-824-2006

E-mail: bryon.spicci@reedleycollege.edu

Lecture: T. 6:00 pm to 8:15; LFS 17

Lab: Th. 6:00 pm to 8:15; LFS 17

### **I. COURSE DESCRIPTION**

- A. Title:** Biology 3 – Introduction to Life Science
- B. Prerequisite:** None
- 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.
- D.** Biology 3 is a 4 unit class with 3 hours lecture and 2 hours laboratory each week.

### **II. COURSE OUTCOMES:**

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

- A.** Understand the process of scientific method, microscopy, and the cell.
- B.** Identify levels of organization from the cell to the organism level. Identify human organ systems structure and function.
- C.** Evaluate scientific literature and current biological achievements.
- D.** Assess the role of human ecology, earth resources, and limitations.
- E.** Learn nature through the study of plant's structure, functions, and process such as photosynthesis
- F.** Apply the principles of genetics to humans and understand the outcome of reading DNA.
- G.** Classify and evaluate the wide range of living organisms and their place on earth.
- H.** Understand the chemical basis of life.
- I.** Identify life from an evolutionary approach.
- J.** Understand the chemical and energy relationships at all levels of biological organization.

### **III. 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.

#### IV. REQUIRED MATERIALS:

1. Text: Mader, S. Essentials of Biology, custom, 2<sup>nd</sup> edition McGraw Hill.
2. Biology 3 Handouts, spring 2009
3. Scan Tron form 882 (X6) and quiz strips 815-#
4. E-mail address. This can be obtained free through the school
5. Calculator

#### V. OPTIONAL, BUT RECOMMENDED:

1. Colored pencils (hard graphite) (no flow pens or crayons)

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

**TIME!!! You will be dismissed from class for using a cell phone any time during class without permission. Use of a cell phone during a quiz or exam is grounds for an automatic zero on that quiz or exam and will be considered a violation of Reedley College's policy on academic dishonesty.**

**Hint!! Be sure to always put your name on all papers to insure you will not get 5 points deducted! Thanks!!**

#### 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. It is the student's responsibility 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.

#### VIII. TESTS AND EVALUATIONS:

A. Grading

<u>Description</u>	<u>Points Possible</u>
Lab Exercises (approx. 14)	140
10 Lab Plates (drawings) (10 pts. each)	100
10 Lecture Quizzes (10 @ 10 pts. each)	100
6 Exams (100 pts. each) lowest score dropped	500
10 unannounced (pop quizzes)	100
Email Address	25

---

Approximate Total Points = 965

B. Grading scale:

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

At any point you can check your grades on web grade via our Blackboard site through the Reedley College homepage: [www.reedleycollege.edu](http://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 web grade link on the left hand side of the Bb screen. You will need a web grade 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 40-60 multiple choice questions.

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 will not be allowed to make it up. 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. These quizzes are closed note. Missed quizzes **may NOT be made up**. Quizzes may also be given at the **end of a laboratory or lecture**.

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

#### **VIV. 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 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 17<sup>th</sup> week. ***If you have over four absences within the semester you will not be eligible for these points.*** You are expected to read and understand the directions given for extra credit in the lab packet. **Do not ask the instructor questions about extra credit because the instructions for extra credit are written out for you to read and understand.**

#### **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 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.

- 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 – Spring 2011

<b>Biology 3</b>	<b>Readings</b>	<b>Lab Assignments</b>
<b>Week 1: 1/11-1/14</b>		
Orientation, Grading, Goals, Attendance	Syllabus, Schedule	Microscope safety/use
How Do Biologists Study Life?	Ch. 1	Letter e slides
Chemistry	Ch. 2	
<b>Week 2: 1/18-1/20</b>		
Chemistry cont.		Cheek/Onion cells
Inside the Cell	Ch. 4	Intro to Photo Essay
Cell reproduction	Ch. 8	
<b>Week 3: 1/25-1/27</b>		
Cellular respiration/Fermentation	Ch. 7	Mitosis
Photosynthesis	Ch. 6	
<b>Week 4: 2/1-2/3</b>		
Photosynthesis cont.		Biology On-Line
		Photosynthesis
<b>Exam #1 (ch.1,2,4,&amp; 8)</b>		
<b>Week 5: 2/8-2/10</b>		
DNA & Protein synthesis	Ch. 11	Protein Syn. Worksheet
Sexual Reproduction	Ch. 9	
<b>Week 6: 2/15-2/17</b>		
Patterns of Inheritance	Ch. 10	Genetics Problems
Genetic Counseling	Ch. 13	
Evolution	Ch. 14	
<b>Week 7: 2/22-2/24</b>		
Evolution cont.		Natural Selection Lab
Microevolution	Ch. 15	(download from blackboard)
<b>Exam #2 (ch.6,9-13)</b>		
<b>Week 8: 3/1-3/3</b>		
Macroevolution	Ch. 16	Allele Frequency Lab
Classification	Ch. 16	(download from blackboard)
Viruses	Ch. 17	
<b>Week 9: 3/8-3/10 ( 3/11 drop day)</b>		
Prokaryotes	Ch. 17	Disease Lab
Protists	Ch. 17	
Fungi	Ch. 18	
<b>Week 10: 3/15-3/17</b>		
<b>Exam #3 (ch.14-17)</b>		
		Diversity of Plants
		(download from blackboard)
Plants	Ch. 18	
<b>Week 11: 3/22-3/24</b>		
Animals	Ch. 19	Animal Diversity
<b>Week 12: 3/29-3/31</b>		
		Tissue Lab

Animal Organization	Ch. 22	(download from blackboard)
<b>Week 13: 4/5-4/7</b>		
<b>Exam #4 (ch.17-19)</b>		Metric System Lab (download from blackboard)
<b>Week 14: 4/12-4/14</b>		
Animal Digestion	Ch. 24	<b>Circulation Lab</b>
Animal Circulation	Ch. 23	
Animal Respiration	Ch. 24	
<b>Week 15: 4/26-4/28</b>		
Animal Excretion	Ch. 24	Excretion Lab
<b>Week 16: 5/3-5/5</b>		
<b>Exam #5 (Chapters 22-24)</b>		An Inconvenient Truth Video
Ecology of Populations	Ch. 30	
<b>Week 17: 5/11-5/13</b>		
Communities & Ecosystems	Ch. 31	To Be Announced
Human Impact	Ch.32	
<b>Week 18: Tuesday May.18th 6:00pm</b>		
<b>Exam #6 (ch.30-32)</b>	<b>Extra Credit Due</b>	