

# **BIOL 1 – PRINCIPLES OF BIOLOGY SYLLABUS**

## **Spring 2007**

Instructor: Mr. Bryon P. Spicci  
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Office Hours: T-Th 5:30-6:00 PM

Class Room: LFS 11  
Lecture: T 6:00 – 8:15 PM  
Lab.: Th 6:05 – 8:50 PM

### **Course Description:**

**Title:** Biology 1 – Principles of Biology

**Units:** 4.0

**Prerequisite:** MATH 103

**Basic Skills Advisories:** Eligibility for ENGL 125 and ENGL 126, H.S. Biology or H.S. Chemistry.

BIOL 1 is an introductory course designed to familiarize students with general principles of Biology. This course is recommended for the pre-professional and life science majors. It fulfills the prerequisite for BIOL 20 and BIOL 31 (and is recommended for BIOL 6) and also satisfies the general education science requirements.

Topics covered include the scientific methods; cellular and chemical basis of life; structure and function of selected animal organ systems (digestive, circulatory, respiratory, excretory, nervous, and reproductive); plant tissues; plant morphology; plant growth, development and reproduction; taxonomy; genetics; evolution; ecology and environmental concerns.

### **Required Materials:**

1. Text: Mader, S., BIOLOGY, 9<sup>th</sup> edition, McGraw-Hill.
2. Laboratory Manual: Mader, BIOLOGY Laboratory Manual, 8<sup>th</sup> edition.
3. Biology drawing paper, one 4H and one 2H pencils for lab plates (drawings).
4. Scantron form 886 (x6).
5. Scantron 815-E Quiz strips for the lecture quizzes.
5. Reedley college E-mail address.
6. Safety glasses.

### **Optional, But Recommended:**

1. Rubber gloves.
2. A basic dissection kit.
3. Lab. Coat.
4. Calculator.

## **In the Class Room:**

Your active participation in all lectures and laboratory sessions is mandatory because of the discussions, demonstrations, exercises, and quizzes, carried out during these periods. Your point totals on quizzes and lab. reports will be reduced by your absence from lecture and lab. Excessive unexcused absences (5 or more prior to the ninth week of the semester) will cause you to be dropped from the course. Five hours of any combination of lecture and lab absences is considered excessive. You are expected to be on time for each lecture and lab session. Tardiness may be construed as absence from the class. Be aware that 3 tardies = 1 absence. If you are late, it is your responsibility to see the instructor after the class.

Students are required to stay for the entire lecture period. Those who leave early will be deducted 10 points for each occurrence. All assignments, quizzes, and tests must have both your name and ID number or they will be discarded due to lack of identification.

Microscopes, glassware, and most lab supplies will be made available for each lab exercise but a replacement fee will be charged for lost and broken materials. You will be responsible for obtaining your own textbook, laboratory manual, and syllabus.

Absolutely **NO** Disruptive behavior, Food, Beverage, Beepers, Pagers or Cellular phone messaging are allowed in the class room. Turn off all the noise making electronic devices before coming to the class.

I. Grading: Note that point totals are tentative and approximate. Actual point totals and assignments may vary by the end of the semester. If so the grading scheme will be modified with notice.

### Lecture:

Lecture Exams (150 points each x 3)	450 points
Final Exam (300 points, comprehensive)	300 points
Quizzes (12 x 10 points each, drop 2)	100 points
Participation (50 points, lecture & lab)	50 points
Homework	200 pts

### Lab:

Lab Exams (100 points each x 3)	300 points
Lab Reports (10 points each x 14)	140 points
<u>Lab plates (10 points each x 10)</u>	<u>100 points</u>
Approximate Total Points	1640 points

**Lab reports will be due one week after the end of the lab.**

**Lab drawings and additional activities turned in late will receive no credit unless you have a serious and compelling reason for doing so. Only the instructor gets to determine what is serious and compelling.**

II. Your grade will be determined by the percentage of points that you have accumulated at the end of the semester.

100-90% = A    89-80% = B    79-70% = C    69-60% = D    less than 60% = F

Occasionally, a student's grade will fall on the borderline, within 3 points of a higher grade. As your instructor, I reserve the right to place that grade above the line if I think it is warranted. I use the following criteria to make that judgment: performance in lab, a steady increase in test and quiz scores, attendance, tardies and your attitude in lecture and lab.

This course utilizes the Reedley College Blackboard site and also the McGraw Hill Assessment, Review, and Instruction System (ARIS). Your ID and password for Blackboard is your 7 digit student ID number. You may change your password at anytime in Blackboard. To register for the ARIS site click on the ARIS button in Blackboard and follow the directions given. The ARIS site is a very important part of your homework grade for this course. There will be weekly assignments posted at ARIS for you to complete.

*At any point you can check your grades on the internet on webgrade.*

<http://sc.webgrade.classmanager.com/ReedleyCollege>

*You are encouraged to check this site regularly and keep track of your own grades! Your ID is your 7 digit student ID number. Your password is supplied by Mr. Spicci*

III. *Lecture Exams* will include multiple choice questions and usually 1-2 short essay questions. Many times these essays will be the main objectives of each chapter.

IV. *Lab exams* will be 'hands on' tests for the work done in the laboratory. Mid-term lab exams #1 and 2, each will be approximately an hour long.

V. *Lab Reports* 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 mean 'no score' – as you are responsible for your work.

VI. *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! NO handouts or books or any electronic devices will be allowed. Quizzes missed due to tardies may NOT be made up. If you walk in late while a quiz is in session you may not take it. There will be NO make-up quizzes. Quizzes may also be given at the end of a lecture or a laboratory.

VII. *Lab Plates (drawings)* will be due, without notice, at the beginning of the next lab. Approximately 10 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 HANDOUT 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. Keep all graded and ungraded lab plates in a lab notebook. You will always have one week to complete the lab plate therefore late lab plates will not be accepted.

VIII. Lecture exams will be comprehensive. This will keep you current throughout the semester and will better prepare you for next class. Remember, this is a prerequisite for all other advance classes and thus one of the major goals is to have you adequately prepared.

IX. There are no make ups on lecture exams you need to not miss exams. Missed lab practical's cannot be made up due to the equipment, time, space availability, and the preparation needed to do so.

X. *The Academic Code:* All Students are reminded that the Academic code of Reedley College requires a standard of honesty and integrity and this code will be strictly enforced in Biol 1 class. Although I suggest students to study in groups, all the homework, laboratory assignments, quizzes, and exams must meet the standards of the Academic code that means each student's work must be his or her own - no copying from another student or cheating by any means. Exception: There will be some lab. projects which are specifically designated as small group activities, there you will share your data/results with your group and write your reports accordingly. If any violation of the Code is found – such activity will be reported to the appropriate authority for immediate action.

XI. *Special Needs:* If you have a verified need for an academic accommodation or materials 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.

XII. *Drops:* You have until the 9<sup>th</sup> week of school to drop a course. 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 9<sup>th</sup> week a grade must be given, by state law, whether you attend class or not.

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 for this class.

## Course Outline: Tentative Lecture Schedule for *Biology 1*: *SPRING 2007*

Week	Date (T & Th)	Lecture Topics	Lab Material
1	Jan. 9 & 11	Introduction (1) A View of Life (2) Basic Chemistry	Lab #2 – Metrics and Microscopy Microscope & Cells Plate #1 – The Microscope
2	Jan. 16 & 18	(3) The Chemistry of Organic Molecules (4) Cell Structure and Function	Lab #3 – Chemical Composition of Cells Plate #2 – Cell Structure
3	Jan. 23 & 25	(5) Membrane Structure and Function (6) Metabolism: Energy and Enzymes	Lab #4 – Cell Structure and Function
4	Jan. 30 & Feb. 1	(7) Photosynthesis (8) Cellular Respiration	Biology Labs Online– Photosynthesis
5	Feb. 6 & 8	Lecture Exam 1 (1,2,3,4,5,6,7,8) (9) The Cell Cycle and Cellular Reproduction (10) Meiosis	Lab #8 – Mitosis and Meiosis Plate #3 – Phases of Mitosis
6	Feb. 13 & 15	(17) Darwin and Evolution (18) Process of Evolution	Lab Practical 1 (Labs 2,3,4,8, & Photosynthesis)
7	Feb. 20 & 22	(20) Classification of Living Things (21) Viruses, Bacteria, and Archaea (22) The Protists	Lab #12 – Evolution Biology Labs Online– Evolution
8	Feb 27. & Mar. 1	(24) Diversity of Plants (25) Structure and Organization of Plants (26) Nutrition and Transport	Lab #16 – Nonvascular and Seedless Vascular Plants Lab #17 – Seed Plants Plate #4 – Flower Structure
9	Mar. 6 & 8	Lecture Exam 2 (9,10,17,18,20-22,24,25,26)	Lab #18 – Organization of Flowering Plants Plate #5 – Typical Plant

Week	Date (T & Th)	Lecture Topics	Lab Material
10	Mar. 13 & 15	(33) Animal Organization and Homeostasis (36) Digestion and Nutrition (42) Hormones and the Endocrine System	Lab #25 – Animal Organization Plate #6 – Skin
11	Mar. 20 & 22	(34) Circulation (35) Lymphatic System	Lab #26 – Mammalian Anatomy I Plate #7 – Heart Structure
12	Mar. 27 & 29	(11) Mendelian Patterns of Inheritance (12) Chromosomal Patterns of Inheritance	Lab Practical 2 – (Labs 12,16,17,18,25,26)
	Apr. 3 & 5	Spring Break Lecture Exam 3	No Classes Held
13	Apr. 10 & 12	(33,34,35,36,41,11,12) (13) DNA Structure and Function (14) Gene Activity: How Genes Work	Lab #9 Mendelian Genetics Plate #8 – DNA Structure
14	Apr. 17 & 19	(37) Respiration (38) Body Fluid Regulation and Excretion	Lab #29 – Homeostasis Plate #9 – Kidney
15	Apr. 24 & 26	(39) Neurons and the Nervous System	Lab #30 – Nervous System and Senses Plate #10 – Lobes of Brain
16	May 1 & 3	(41) Reproduction (44) Development	Lab #32 – Animal Development
17	May 8 & 11	(46) Ecology of Populations (50) Conservation	Lab Practical 3 (Labs 9,29,30,32)

Finals Week: Final Lecture Exam (300 points, comprehensive), Tuesday, May. 15, 6:00 pm