

Reedley College - Spring 2009

Class: Biology 1 – Principles of Biology 57003 (4 Units)
Lecture - Monday: 12:00pm – 1:50pm in LFS 11
- Wednesday: 12:00pm – 12:50pm in LFS 11
Lab - Wednesday: 1:00pm – 2:50pm in LFS 11

This course is recommended for the pre-professional and life science majors. It fulfills the prerequisite for Biology 20 (and is recommended for Biology 4 and 6 and for Biology 11A and 11B). Topics covered include the cellular and chemical basis of life, organ systems, genetics, evolution and the origin of life, ecology and environmental concerns.

Subject Prerequisites: Mathematics 103.

Subject Advisories: One year high school chemistry and/or high school biology.

Basic Skills Advisories: Eligibility for English 125 and 126. (A, CSU-GE, UC, I)

Text: Biology (ninth edition) by Sylvia S. Mader McGraw Hill

Lab Manual: Selected Exercises From Biology Laboratory Manual (eighth edition)
by Sylvia S. Mader McGraw Hill

Instructor: Dr. B.J. Marquez

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Office: Life Science Room 13 **Phone:** 559-638-3641 ext. 3257

Office Hours: Tuesday 11:00 am, Wednesday 3:00 pm, & Thursday 1:00 pm or to arrange

Attendance:

You are required to attend **ALL** class sessions. There are NO excused absences except as defined in the Reedley College Catalog. If you are absent more than **FIVE** hours during the semester, you **MAY** be dropped from the class. If you are absent more than TEN hours, you **WILL** be dropped from class. If your ELEVENTH hour of absence occurs after the last day to drop, your final point total will be lowered by 25 points for each absence.

Tardiness: Three tardies equal one class absence.

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

Final Grade: **Determined on a basis of points accrued throughout the course.**

A = 90 - 100%	30%	- Three (3) Lecture Exams: 100 points each
B = 80 - 89%	20%	- One (1) Final Exam: 200 points
C = 70 - 79%	15%	- Fifteen (15) Laboratory Assignments: 150 points
D = 60 - 69%	30%	- Three (3) Lab Practical Exams: 100 points each
F = 59% & lower	5%	- Lecture & Laboratory Participation : 50 points

NO FOOD OR DRINK ALLOWED IN ANY CLASSROOMS

NO EXTRA CREDIT

No children allowed in class at any time

No disruptive behavior

Tardy assignments count for only one-half credit or no credit.

"If you have special needs as addressed by the Americans with Disabilities (ADA) act including alternate media requests, please notify your course instructor immediately. Reasonable efforts will be made to accommodate your special needs."

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.

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. For example: the pre-nursing students are learning how to approach each patient and the evaluative process.
- C. use DNA testing, probes and profiles in the clinical field..
- D. work at different levels in biological organization. For example: the Radiology Techs use correct terminology, structure, and function to look inside living organisms with the least invasive procedures.
- 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.
- G. evaluate and interpret scientific literature as all allied health fields require research and writing in their respective areas: nursing, radiology tech, dental hygiene, research, pre-med, and pre-pharmacy.

Canceled Class Notification: If circumstances do not allow me to hold class, the Deans' office will place a notice on the class room door.

Cheating on exams, will not be tolerated, anyone caught cheating will receive 0% on that exam.

Biology 1 - Principles of Biology 57003
Lecture & Lab Schedule

Dr. Marquez

Spring 2009

****I reserve the right to make changes in this schedule with notification****

	Lecture Monday	Lecture Wednesday	Lab Wednesday
1	12-Jan-09 Chapter 1 - View of Life Chapter 2 - Basic Chemistry	14-Jan-09 Chapter 3 - Chemistry of Organics	14-Jan-09 Lab 2 - Metric & The Microscope
2	19-Jan-09 MLK Jr Day	21-Jan-09 Chapter 4 - Cell Structure & Function	21-Jan-09 Lab 3 - Chemical Composition of Cells
3	26-Jan-09 Chapter 5 - Membrane Structure & Function	28-Jan-09 Chapter 6 - Metabolism, Energy & Enzymes	28-Jan-09 Lab 4 - Cell Structure and Function
4	2-Feb-09 Chapter 7 - Photosynthesis	4-Feb-09 Chapter 8 Cellular Respiration	4-Feb-09 Photosynthesis - Online
5	9-Feb-09 ***Lecture Exam 1***	11-Feb-09 Chapter 9 - Cell Cycle & Reproduction	11-Feb-09 Lab 8 - Mitosis & Meiosis
6	16-Feb-09 Washington's Day	18-Feb-09 Chapter 10 - Meiosis & Sexual Reproduction	18-Feb-09 **Lab Exam 1**
7	23-Feb-09 Chapter 11 - Mendelian Patterns of Inheritance Chapter 12 - Chromosomal Pattern of Inheritance	25-Feb-09 Chapter 13 - DNA Structure and Function Chapter 14 - Gene Activity: How Genes Work	25-Feb-09 Lab 9 Mendelian Genetics
8	2-Mar-09 Chapter 17 - Darwin & Evolution Chapter 18 - Process of Evolution	4-Mar-09 Chapter 20 - Classification of Living Things Chapter 21 - Viruses, Bacteria, and Archaea	4-Mar-09 Lab 11- DNA and Biotechnology
9	9-Mar-09 Chapter 22 - The Protists Chapter 23 - The Fungi	11-Mar-09 ***Lecture Exam 2*** Drop Date	11-Mar-09 Lab 13 - Mechanisms in Evolution
10	16-Mar-09 Chapter 24 - Evolution and Diversity of Plants	18-Mar-09 Chapter 25 - Structure and Organization of Plants	18-Mar-09 Lab 16 - Nonvascular Plants and Seedless Vascular Plants
11	23-Mar-09 Chapter 28 - Reproduction in Plants	25-Mar-09 Chapter 29 - Introduction to Invertebrates Chapter 30 - The Protostomes	25-Mar-09 Lab 18 - Organization of Flowering Plants
12	30-Mar-09 Chapter 31 - The Deuterostomes	1-Apr-09 Chapter 33 - Animal Organization and Homeostasis	1-Apr-09 **Lab Exam 2**
13	6-Apr-09 Spring	8-Apr-09 Break	8-Apr-09
	13-Apr-09 Chapter 41 - Support Systems and Locomotion Chapter 36 - Digestion and Nutrition	15-Apr-09 ***Lecture Exam 3***	15-Apr-09 Lab 24 - The Deuterostomes
14	20-Apr-09 Chapter 34 - Circulation Chapter 35 - Lymph Transport and Immunity	22-Apr-09 Chapter 37 - Respiration	22-Apr-09 Lab 25 - Animal Organization
15	27-Apr-09 Chapter 38 - Body Fluid Regulation and Excretion	29-Apr-09 Chapter 39 - Neurons and Nervous Systems Chapter 40 - Sense Organs	29-Apr-09 Lab 30 - Nervous System and Senses
16	4-May-09 Chapter 42 - Hormones & the Endocrine System	6-May-09 Chapter 43 - Reproduction Chapter 44 - Development	6-May-09 Labs 26 & 27 - Basic Mammalian Anatomy I & II
17	11-May-09 Chapter 46 - Ecology of Populations Chapter 47 - Community Ecology	13-May-09 Chapter 48 - Ecosystems & Human Interferences Chapter 50 - Conservation Biology	13-May-09 **Lab Exam 3**

Final Exam: Tuesday

19-May-09

At 9:0 am