

I. Instructor: John Schampel

Office: Dalby Building (DB) rm 211

Office Hours: M-Th: 5-6 pm, F: 11-12, or by appointment.

If you cannot make these office hours, please email or call me for an appointment. I am flexible and willing to get together at other times.

Phone: 602-285-7875

Email: John.Schampel@pcmail.maricopa.edu

In addition to my above office hours, students are encouraged to seek help from me whenever they desire to do so. I am available during office hours, by appointment, and via email at the above address.

II. Book: Available at PC bookstore. The lecture text (*Essential Biology with Physiology*, by **Campbell, Reece, and Simon**) is REQUIRED and should be brought to each class meeting.

III. Attendance: You **MUST** attend lecture and lab. If a student accumulates unofficial absences in excess of one lab or four lectures, the instructor may withdraw that student. Missing a second lab will drop your final class average by 2 points, while missing three labs will result in an automatic drop from the class. **Attendance is taken at the beginning of class. If you are late, it is YOUR responsibility to find and sign the attendance sheet before you leave the class.** Leaving early from a class or lab is considered an absence, so please see me before class if your early dismissal is excused. If you miss a lab, you are still responsible for the material that was covered. When possible, please inform me that you will miss a lab or lecture in advance.

Your performance in class depends a great deal on your attendance. It is really important that you are on time for class, have few or no absences, and remain in class for the full period. One study found that for each class period a student missed, his or her overall course grade average dropped 3-5 percentage points. So, the evidence indicates it is in your best interest to attend lectures!

IV. Grading: Your course grade is calculated as follows:

Diet Lab Report	50 points
Reading Quizzes	50 points
Lab Quizzes	300 points
Lab Assignments	150 points
Three Exams	300 points
Final Exam	150 points
Course Total	1000 points

A. Reading Quizzes: Readings from your textbooks will be assigned throughout the semester, and I expect you to do the assigned reading. I think our textbook is excellent, and you will likely learn a lot from doing the assigned readings. In order to encourage your active participation in this, I will have pop quizzes on the reading material several times throughout the semester. If you have read the material, you should do quite well on these quizzes. After everyone has turned in their quizzes, you will discuss your answers with a pre-assigned group of fellow students and submit a second group quiz that represents your group's collective understanding of the reading material. Both quiz results will count toward your reading quiz grade.

B. Lab Quizzes: Approximately every two weeks, I will give lab quizzes that will measure your comprehension of lab material. Study the previous two labs before these quizzes. They will be announced in advance.

C. Assignments: I will assign homework during most labs and occasionally in lecture. Homework must be turned in on the day on which it is due. I will not accept late homework unless you have an excused absence. Even then, I cannot accept homework after I have returned it to the other students.

D. Exams: Three exams plus a final exam are scheduled. Tentative dates for exams are shown on the lecture schedule. You must take your comprehensive final exam on **Tuesday, May 8th from 10:00-11:50**. Exams cover lecture and laboratory concepts, material from the text and the lab handouts, and homework. Format of the exam questions may be multiple choice, true/false, or short answer. In accordance with the course objectives, you will be tested on your understanding of scientific reasoning as well as biological concepts. **Make-up exams are allowed ONLY with PRIOR approval of the instructor.** It is the student's responsibility to contact the instructor WELL BEFORE the exam; otherwise, a zero may result for that exam. No student who has missed two or more exams will pass the course.

E. Academic Honesty: A student found cheating on either a quiz or exam will receive a zero for that activity and be sent to the Department Chairperson and/or Dean. Cheating may result in withdrawal from the course and a failing grade assigned for the class. For your protection, please avoid even the appearance of academic dishonesty.

F. Lab Equipment: Take care using all of the lab equipment, as some of it is delicate and very expensive. Students are also expected to clean up after themselves in the lab by cleaning their own lab space and returning equipment back to where it was previously located or other site as designated by the instructor. Failure to follow these policies will affect your lab score in the class.

V. Course Objectives: *BIO 100 is an introductory biology course intended for non-biology majors only. Pre-med, Pre-vet, and nursing majors, etc. are advised to take BIO 181 or BIO 156 instead of BIO 100.* If you have any doubt about the appropriateness of this course for your particular major, you should consult your instructor, the course catalog, and/or your academic advisor. Among other goals, when you complete this course you should be able to:

- formulate testable hypotheses regarding scientific questions
- design and conduct controlled experiments

- develop predictions of the expected results associated with alternative hypotheses
- identify cause and effect relationships between independent and dependent variables
- draw appropriate conclusions supporting or rejecting hypotheses
- appreciate the scope and limitations of scientific capability and the potential for uncertainty in scientific inquiry
- identify and describe the basic macromolecules of life
- identify and describe the fundamental role of enzymes in controlling the chemistry of life
- identify, describe, and analyze:
 - the process of photosynthesis and cellular respiration
 - the ecological interactions of organisms with their environment
 - the flow of energy through and the cycling of chemicals within ecosystems
 - the mechanisms of evolutionary change through time
 - the growth and regulation of populations
 - the molecular basis for genetic information and expression
 - patterns of genetic inheritance
 - patterns of cell reproduction and their consequences for growth, development, and sexual reproduction
- utilize computer technology to access information
- create and interpret scientific graphs
- understand how and why a working, critical knowledge of much of the above makes you a more informed citizen

VI. Instructional Methods: Students will be expected to read and comprehend their textbook and laboratory handouts. Written application questions and/or problems will often be required following laboratory work. Students may be required to access information via the World Wide Web. Visual images may be supplied in class by computer display, and film. Students will be required to use the microscope in certain laboratory exercises.

If you have any learning disabilities or handicaps, please notify me at the beginning of the semester so I can make reasonable accommodations that may enhance your ability to learn.

VII. Bio 100 Resources:

- A. Your instructor** – feel free to come by to see me at anytime during my office hours, or if you cannot make those times, please call (or see me) to set up an appointment
- B. Study groups** – your classmates are a rich resource; form study groups and reap the benefits of several minds working together.
- C. Text and Handouts** – The text and handouts are learning resources. The text is designed for non-majors and the lab handouts were written expressly for this course.

VIII. Policies: Disruptive behavior will not be tolerated. Students who misbehave or disrupt class will be contacted by me and given a verbal warning. Any misbehavior after such a warning may result in the student being sent to the department Chairperson and/or Dean and/or withdrawal from the course.

Be aware of the last day for student withdrawal *without* the instructor's signature (**Friday, March 2**) and the last day for withdrawal *with* the instructor's signature (**Monday, April 23**). In both cases, it is the responsibility of the student to initiate the required paperwork.

Visitors, including children of students, are not permitted in either the lecture or the labs. Students are permitted to record classes (audio) if they wish.

Civility Statement

*To encourage a positive learning environment for the class, the **instructor** will be professional, courteous, respectful, and empathetic to students, and will:*

- Begin and end class on time and be prepared for each class session
- Provide academic feedback and grade assignments in a timely manner
- Be available to meet individually with the students
- Clarify assignments and inform students of any changes to the class schedule

*Each **student** is expected to be courteous, respectful, and empathetic to classmates and instructors, and will:*

- Be in class, on time and prepared for each class session
- Follow instructions and complete assignments on time
- Study hard and put forth your best effort
- Ask questions when you don't understand
- Keep track of your grade status
- Contact instructor right away regarding situations that may interfere with your performance
- Comply with policies found in the College catalog and student handbook

*****Revised Lecture Schedule (as of Jan. 30, 2007)*****

<u>DATE</u>	<u>TOPIC</u>	<u>READING FOR THAT DATE</u>
Jan 16	Organization of Class / What is Science?	
Jan 18	How Science Proceeds	1-18 (18 pages)
Jan 23	Essential Chemistry	20-34 (14 pages)
Jan 25	The Chemical Nature of Life	35-50 (15 pages)
Jan 30	Nutrition	494-500, 552-553 (9 pages)
Feb 1	Nutrition continued	
Feb 6	Membranes and Cellular Components	52-65, 80-84 (22 pages)
Feb 8	Enzymes, Cellular Respiration, review	73-79, 89-100 (18 pages)
Feb 13	Exam I	
Feb 15	How Are Traits Inherited?	142-154 (13 pages)
Feb 20	Mendelian Genetics	154-159, 163-167, 266 (11 pages)
Feb 22	More Mendelian Genetics	
Feb 27	How Cells Duplicate Themselves	121-138 (17 pages)
Mar 1	DNA <i>Is</i> the Genetic Material	171-175 (5 pages)
Mar 6	DNA to RNA to Protein	175-187 (12 pages)
Mar 8	Exam II	
Mar 13, 15	Spring Break – NO CLASSES	
Mar 20	An Introduction to Physiology	476-480 (5 pages)
Mar 22	Respiratory and Cardiovascular Systems	504-522 (18 pages)
Mar 27	Digestion and Absorption	485-494 (10 pages)
Mar 29	The Nervous System	586-595 (10 pages)
Apr 3	The Immune System	528-541, 190-193 (18 pages)
Apr 5	Exam III	
Apr 10	Population Ecology	388-398 (11 pages)
Apr 12	Competition, Predation, and Symbioses	407-417 (11 pages)
Apr 17	Ecosystems and Biomes	417-439 (23 pages)
Apr 19	Human Effects on Our World	442-462 (21 pages)

IX. Lecture Schedule (continued)

<u>DATE</u>	<u>TOPIC</u>	<u>READING FOR THAT DATE</u>
Apr 24	Theory of Evolution by Natural Selection	243-259 (16 pages)
Apr 26	Evidence Supporting Evolution	292-293, 368-374 (9 pages)
May 1	Darwinian Medicine	266-267 (2 pages)
May 3	Evolutionary Psychology	TBA
May 8	Cumulative Final Exam, (10:00 – 11:50 am)	

X. Lab Schedule (Quiz dates may change, I'll notify the class.)

<u>DATE</u>	<u>LAB</u>
Jan 16, 18	NO LABS this week (MLK Holiday)
Jan 23, 25	Hypothesis testing
Jan 30, Feb 1	The Molecules of Life
Feb 6, 8	Eat, Drink, and Feel Guilty
Feb 13, 15	Enzymes (QUIZ 1 – Hypothesis testing, Molecules of Life)
Feb 20, 22	NO LABS this week (Presidents' Holiday)
Feb 27, Mar 1	How Traits Are Inherited
Mar 6, 8	Fun with Forensics (QUIZ 2 – Eat Drink, Enzymes)
Mar 13, 15	NO LABS this week (Spring Break)
Mar 20, 22	Normal Cells and Problem Cells
Mar 27, 29	Cardiovascular System (QUIZ 3 – Inheritance of Traits, Forensics)
Apr 3, 5	Come to Your Senses
Apr 10, 12	What's in a Squid? (QUIZ 4 – Normal Cells, Cardiovascular)
Apr 17, 19	Desert Adaptations
Apr 24, 26	Natural Selection
May 1, 3	Human Evolution & Adaptation (QUIZ 5 – TBA)

To be completed by May 3rd: Desert Botanical Garden Lab