

Imperial Valley College
Spring 2013-Course Syllabus
Biology 100, CRN # 20333
Instructors: Dr. Mohammad Ahrar
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Course Title: “**Principles of Biological Science**” - Credit Units: 4

Term: January 14, 2013 to May 10, 2013

Hours: Lecture; Fridays 8:15 am to 11:25 pm Room 2717

Laboratory: Fridays 11:35 pm to 2:45 pm Room 2717

Required Textbook and lab manual;

Textbook: Biology-The Essentials, by Marielle Hoefnagels -1st ed. McGraw- Hill 2013
ISBN # 978-0-07-809692

Lab manual: Biology 100-Principles of Biological Science- Imperial Valley College
McGraw-Hill, 2013. ISBN # 13- 978-0-07-770163

Course Description:

A comprehensive, general biology course for non-majors. Covering the areas of life from the molecular to the organismal level of both plants and animals. Special emphasis is put on cell division, photosynthesis, and plant and human biology within appropriate areas of study. Evolution of species and interaction of organisms within the environment is also included.

This course is also appropriate for general education as well as nursing, pre-professional, and higher level biological studies. Includes laboratory components.

Course Objectives

Upon completion of this course, the student should have a basic understanding of characteristics of living things. Students should be able to name basic chemical aspects that pertain to life and the concept of homeostasis, describe cell components and structure, cellular respiration, Photosynthesis, cell division and functions. Students should also be able to explain plant organization and plant reproduction and demonstrate knowledge of human organ systems, should demonstrate knowledge of the structure and function of DNA and RNA and solve problems in general genetics. The students will explain protein synthesis, compare fundamentals of asexual and sexual reproduction, and define ecology and its impact on environment.

Students should be able to classify organisms in the kingdoms of plants and animals, discuss their evolutions and their relationships, and demonstrate critical thinking skills relevant to the topics that are presented.

Student learning Outcome (SLO):

Upon completion of this course students will be able to respond to critical thinking applications of biological scenarios. Students will also be able to explain characteristics shared by all living organisms, describe diffusion, osmosis, enzyme functions, and photosynthesis. Understand characteristics of bacteria, fungi, protists, basic human genetic, describe diversity of plants and animals, basic human anatomy and principles of evolution.

DSP&S Student:

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Program and Services (DSP&S) office as soon as possible. DSP&S office is in Room 2117, Health Science Building. Tel: (760-355-6312).

Class policy:

Students should turn off their cell phones or leave them on vibration, before coming to class. Talks and discussion is not tolerated during lectures. Talking is a disturbance to your instructor and other students in the class. However discussions and exchanging ideas with classmates during lab experiments is encouraged. Eating is not allowed in the classroom or in laboratory. Snacks should be eaten outside the class during break time.

Attendance Policy:

Regular attendance is one component of the student’s success. It is imperative that students attend all classes and labs. Lectures and lab experiments will form the basis for the questions on quizzes and exams. If you have to miss a class in case of emergency, I will appreciate if you can give me advance notice. Excused absences must be documented. Students who miss more than three 3 lectures and/or lab sessions will be asked to drop the class. Attendance and Tardy policy is listed in the IVC catalog and will be enforced.

Withdrawal Policy: If you have to drop the course, it will be your responsibility to officially drop this class before the deadline. Failure to do so may result in a "F" grade. Please consult with the Office of Admissions for the drop, withdrawal and credit/no credit deadlines.

Academic Integrity Policy: Academic integrity is one of the most important values in higher education. The instructor will be proud of the students who are successful in conquering the course materials with integrity and succeed in their career. Students are encouraged to approach this class with diligence, be honest and ethical at all times and to act in accordance with the Student Code of Conduct, Policy 3100. This policy can be obtained at: <http://www.sdccd.net/police/policies.html#3100> It is your responsibility to be familiar with and abide by this code.

Cheating policy: Students take pride in their work. Cheating of any kind will not be tolerated and will result in the receipt of a failing grade for the quiz or exam and/or for the course. See IVC catalog for policies on academic cheating.

Plagiarism: Copying materials without mentioning the source and submit it as if it is your work is referred to as plagiarism, and is not allowed. Quotes from sources are acceptable provided that you cite all references. Plagiarism will result in zero point for the assignment.

Exam & grading procedures

Total of 6 lab Quizzes (20 points each).....	120 points
Total of 5 Exams (50 points each)	250 points
Total of 13 Lab reports (5 points each)	65 points
Field trip (Friday 3-15-2013).....	20 points
Group presentation.....	35 points

TOTAL	490 points

Grade point = Total points earned divided by 490 x 100

Example; if your total earned points is 450, your grade point will be calculated as (450 : 490 X 100 which will equal 91.8 % = A grade.

Quizzes and exams will cover material from lectures, class discussions, group presentations, lab assignments and materials from CD-ROM or video clips. A variety of testing methods will be employed, including but not limited to: true/false, multiple choice, essay, short answer etc.

Grading scale: $\geq 90\%$ = A, 80% - 89% = B, 70% - 79% = C, 60% - 69% = D, $< 60\%$ = F

Quizzes or exams cannot be made up (except in extreme cases and with prior notification). Made up quizzes or exams will not receive full points; the first missed quiz or test will only receive 80% of the points. The second missed quiz or test will receive only 50% of the points. No point is gained for missed quizzes after that.

Lab duties and assignments:

There will be individual as well as group assignments and lab reports. The lab reports are due at the end of each lab session.

I expect my students to be very careful with lab equipments, adopt safety issues at all time,, clean tools and the working area and return all items to their place before leaving the lab.

It is highly recommended that review the lab experiment prior to coming to the lab.

In group lab experiments, all members of the group must actively participate in experiments

Group presentation;

Students will be teamed up, in group of 3 students per group. Each team will be assigned a topic related to biology. Team members should work together and coordinate the research about the subject and be prepared for a 15-minute presentation to the class. Date of presentation will be discussed in the third lab session. The credit for each presentation will go to the group members equally.

Emergency situations: The College Nurse is available Monday through Friday, 7:30 a.m. to 4:00 p.m. at extension 310. Cell Phone number for nurse assistance is (760) 337-0300. If unable to reach the nurse, dial "0" and notify switchboard of medical emergency. In critical situation dial "911"

Study Hints

- 1- Be in the class a few minute before the lectures and labs begin..
- 2- Do not miss any class or lab. It will be difficult to catch up with the class if you miss a session..
- 3- Look over the text chapters and lab manual prior to coming to class and labs. Lectures and labs will be more meaningful and easier to understand if you are somewhat familiar with the materials.
- 4- Spend some time each day studying the materials covered in the class. Look over your notes and use your text to clarify the materials with which you are having difficulty.

Tentative Course Lesson Plan Outline (Spring 2013) is shown on next page.

Note: The Schedule is tentative and subject to change.

Week	DATE	LECTURE Textbook Chapters	LABORATORY Lab manual chapters
1	1-18	Ch. 1 Scientific study of life (p 2) Ch. 23 Animal tissues –review (pages 467-471)	Introduction to the lab. Biology Overview Lab Ch. 25 (pages 353-365), 25.1
2	1-25	Ch. 2 The Chemistry of life (p 20)	Lab Ch.3- Chem. composition of cells 3.1, 3.2 Lab Quiz. 1 (Lab exp. 25, and today's lab assignment)
3	2-1	Ch. 4 The energy of life (p 68)	Lab Ch.2- Metric Measurement and Microscopy 2.1, 2.4, 2.5 Exam 1 (Ch. 1, 2, 23 + lab assignments)
4	2-8	HOLIDAY no class	HOLIDAY no lab
5	2-15	Ch. 3 Cells (p 48)	Lab Ch. 4 Cell structure and function, 4.2, 4.3, 4.4 Lab Quiz. 2 (today's lab assignment)
6	2-22	Ch. 8- DNA Replication and cell division (p 138) Ch. 9 Sexual reproduction and Meiosis (p 154)	Lab Ch. 8 Mitosis & Meiosis – 8.1, 8.2, 8.3 Exam 2 (Ch. 3, 4 + lab assignments)
7	3-1	Ch. 5 Photosynthesis (p 84)	Lab Ch. 6 Photosynthesis – 6.1, 6.2 Lab Quiz 3 (today's lab assignment.)
8	3-8	Ch. 6 How cells release energy (p 98)	Lab Ch. 7 Cellular respiration – 7.1, 7.2 Exam 3 (Ch. 8, 9, 5 + lab assignments)
9	3-15	Field trip (san Diego Zoo)	Field trip
10	3-22	Ch. 16 Evolution and diversity of Plants (p 304) Ch. 21 Plant form and function (p 426)	Lab Ch. 18 flowering plants – 18.3, 18.4, 18.5 Lab Quiz 4 (Exp. 7 and today's lab assignment)
11	3-29	Ch. 27 The Circulatory and Respiratory system (p 542) - <i>An introduction to digestive system</i>	Fetal pig dissection– 26.1 to 26.6 Exam 4 (Ch. 6, 16, 21 + today's lab assignment)
	4-5	SPRING BREAK	No class
12	4-12	Ch. 28 Regulating temperature, Nutrients, and body fluid (p 564).	Lab Exp. 28 - Chemical Digestion – Exp. 28.1, 28.3 Quiz 5 (today's lab assignment)
13	4-19	Ch. 24 The nervous system and the senses (p 482).	Lab Ch. 30 Senses – 30.2 to 30.4 Exam 5 (Ch. 27, 28 + today's lab assignment)
14	4-26	Ch. 7 DNA structure (p. 111-115) Ch. 10 Patterns of Inheritance (p 170) Ch. 12 Forces of evolutionary change (p 218)	Lab Ch. 10- Human Genetics Quiz 6 (today's lab assignment)
15	5-3	Ch. 13 Evidence of evolution (p 242)	Lab Exp. 11.2 Lab Ch. 12 Evidence of Evolution- Exp. 12.1, and 12.2
16	5-10	FINAL EXAM (Textbook Ch. 24, 7, 10, 12, 13)	Plus Lab assignments mitosis/meiosis, photosynthesis and evidence of evolution

