

Basic Course Information

Semester	Fall 2014	Instructor Name	Mohammad Ahrar
Course Title & #	Biology 100	Email	Mohammad.ahrar@imperial.edu
CRN #	10314	Webpage (optional)	
Room	2717	Office	
Class Dates	Aug. 18 to Dec. 13 2014	Office Hours	n/a
Class Days	Lecture; Fri. 8:35 am to 11:45 Labs: Fri. 11:55 pm to 3:05 pm	Office Phone #	Biology Dept. 760-355-6155
Class Times	8:35 am to 11:45 - lecture 11:55 pm to 3:05 pm Lab	Office contact if student will be out or emergency	Biology Department Secretary
Units	4 Units		

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. The course includes laboratory components.

Student learning outcomes:

Upon course completion, with a grade of “C” or better, the successful student will have acquired new skills, knowledge, and/or attitudes as demonstrated by being able to:

1. Demonstrate an understanding of the steps of the scientific method. (ILO2)
2. Communicate an understanding of the various patterns of inheritance of genetic traits. (ILO1 & ILO2)
3. Explain how the processes of natural selection influence evolution. (ILO1 & ILO2)
4. Perform lab activities properly, and correctly analyze lab data. (ILO1 & ILO2)

Course Objectives;

Upon satisfactory completion of the course, students with a grade of “C” or better will be able to:

1. Identify the basic characteristics of all living things.
2. Name basic chemical aspects that pertain to life and the concept of homeostasis
3. Describe the subcellular components for the cell including their structure and function
4. Explain the light and dark reactions of photosynthesis
5. Explain cellular respiration and its relations to the entire organism.
6. Demonstrate knowledge of the structure and function of DNA and RNA.
7. Explain protein synthesis and site the central dogma of cell biology.
8. Compare and contrast the fundamentals of asexual and sexual reproduction.
9. Define ecology and the overall impact of ecology to conditions in the environment.
10. Solve problems in general genetics and in human genetics and relate advances in genetics to social responsibility of geneticists.
11. Identify and relate the functions of the major systems of the human body; the interrelationship among body systems and nature of disease.
12. Classify organisms in the kingdoms of plants and animals, discuss their evolutions and their relationships.

Textbooks & Other Resources or Links

Lecture Text: Biology Concepts and investigations (3rd edition) by Marielle Hoefnagels – ISBN 978-0-07-3525549-9

Lab. Text: Laboratory Outlines in Biology - VI: Peter Abramoff, & Robert G. Thompson

Pencil and Colored Pencils are recommended –

Please bring Scantron form – long forms 50 questions on each side

Course Requirements and Instructional Methods

Lab duties and assignments: There will be lab assignments and lab reports in each lab session. The lab reports are due at the end of each lab session. Note; I expect my students to be very careful with lab equipment, 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. Most lab experiments will be a team work and all members of the group must actively participate in experiments.

Extra credit; There may be outside class homework which allows students to earn 5 to 10 points for a complete work. Your class attendance, demonstrating responsibilities and honesty, can earn extra 5 points.

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.

Course Grading Based on Course Objectives

Course grading procedure and Exam dates and points are as follow;

Total of 4 tests (30 points each).....	120 points
Total of 13 Lab reports (5 points each)	65 points
Midterm Exam 10-10-2014 (100 points)	100 points
Final Exam 12-12-2014 (100 points).....	100 points
Field trip report (Friday 11-8-2013).....	25 points
Group presentation.....	35 points

TOTAL 445 points

Grade point calculation = Total points earned divided by 445 x 100 Example; if your total earned points is 410, your grade point will be calculated as (410 :445 X 100 which will equal 92.1 % = A grade.

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

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:

Attendance

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the **student's responsibility** to drop or officially withdraw from the class. See General Catalog for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. Officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class unless otherwise directed by the instructor. **Consider**: specifics for your class/program
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

Academic Honesty

- Plagiarism is to take and present as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to correctly 'cite a source', you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment or using or attempting to use materials, or assisting others in using materials, or assisting others in using materials, which are prohibited or inappropriate in the context of the academic assignment in question.
- Anyone caught cheating or will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General School Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment ;(c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment, (e) use of a commercial term paper service

Additional Help – Discretionary Section and Language

- Blackboard support center: <http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543>
- Learning Labs: There are several 'labs' on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the Math Lab, Reading & Writing Lab, and Learning Services (library). Please speak to the instructor about labs unique to your specific program
- Library Services: There is more to our library than just books. You have access to tutors in the learning center, study rooms for small groups, and online access to a wealth of resources.

Disabled Student Programs and Services (DSPS)

Required Language: Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313 if you feel you need to be evaluated for educational accommodations.

Student Counseling and Health Services

Required Language: Students have counseling and health services available, provided by the pre-paid Student Health Fee. We now also have a fulltime mental health counselor. For information see <http://www.imperial.edu/students/student-health-center/>. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762

Important dates: Last day to Drop; Nov. 9

November 1, deadline to Petition for Graduation, *Prerequisite: Math 091 or Math 090.*

Information Literacy

Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at <http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/>

Anticipated Class Schedule / Calendar

Week	DATE	Biology 100- 10314- LECTURE	LABORATORY
1	08-22	Ch. 1 Scientific study of life (p 2), Ch. 23 Animal tissue & organ system (p 467)	Introduction to the lab. Biology – Overview Lab Exp. 25.1 (pages 353-365)
2	08-29	Ch. 2 The Chemistry of life (p 20)	Lab Exp. 3- Chemical composition of cells 3.1, 3.2
3	09-05	Ch. 15 Evolution of microbial life (p 276)	Lab Exp. 2- Metric and Microscopy - 2.1, 2.4, 2.5, Test 1 (Ch. 1, 2, 23 + lab exp. 25.1, and 3)
4	09-12	Ch. 3 Cells (p 48)	Lab Exp. 4 -Cell structure and function – 4.3 to 4.5
5	09-19	Ch. 8- DNA Replication and cell division (p 138), Ch. 9 Sexual reproduction and Meiosis (p 154)	Lab Exp. 8 Mitosis – Exp. 8.1 Exp. 8.2 Meiosis
6	09-26	Ch. 4 The energy of life (p 68) Ch. 28 Regulating temperature, Nutrients (p 564)	Lab Exp. 5: Enzymes (5.2, 5.3, 5.4) Lab Exp. 28 - Chemical Digestion – Exp. 28.1, 28.3, Test 2 (Ch. 3, 8, 15 + exp. 2, 4, 8)
7	10-03	Ch. 5 Photosynthesis (p 84) Ch. 6 How cells release energy	Lab Exp. 6 Photosynthesis – Exp. 6.1, 6.2, 6.3 Lab Exp. 7 Cellular respiration – Exp. 7.2
8	10-10	Ch. 30 Animal reproduction and development (p 6)	Midterm Exam (Ch. 1,23,2,15,3,8,9,4,28,5,6 Including Exp. 25, 3, 2, 4, 8, 5, 28, 6, 7)
9	10-17	Ch. 27 The Circulatory and Respiratory system	Fetal pig dissection – Exp. 26.3 to 26.6, Check Figures 27.1 to 27.5
10	10-24	Ch. 21 Plant form and function (p 426) Ch. 22 Flowering plants (p 448)	Lab Ch. 18 flowering plants Test 3 (Ch. 30, 27 + Exp. , 26, 27)

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11	10-31	Ch. 24 The nervous system and the senses (p 482)	Lab Exp. 30 Senses – Exp. 30.2, 30.3, 30.4
12	11-07	Field trip (san Diego Zoo)	Field trip
13	11-14	Ch. 7 DNA structure and gene function Ch. 10 Patterns of Inheritance (p 170)	Lab Exp. 10- Human Genetics - Exp. 11 DNA-review Test 4 (Ch. 21, 22, 24 + Exp. 18, 30, field trip)
14	11-21	Ch. 13 Evidence of evolution (p 242) Ch. 17 Evolution and diversity of animals (p 322)	Lab Exp. 12 Evidence of Evolution Exp. 12.1, 12.2
15	12-5	Ch. 16 Evolution and diversity of Plants (p 304) Ch. 19 Communities and Ecosystems-p 378 Overv	Exp. 34 Effect of pollution on ecosystem (p491)
16	12-12	Final Exam includes (Ch. 9, 30, 27, 21, 22, 24, 7, 10, 13, 17, 16, 19)	Lab Test include Exp. 18,26,28,30,10, 12)