

**Dr. Ahrar – Biology 100, Course syllabus,**

**Spring 2017 – CRN = 20031**

Semester	Spring 2017	Instructor Name	Mohammad Ahrar
Course Title & #	Biology 100	Email	Mohammad.ahrar@imperial.edu
CRN #	20031	Webpage	
Room	2717	Office	Room 2717
Class Dates	Feb. 13 to June 9, 2017	Office Hours	7 – 8 am
Class Days	Lecture; Fridays 8:00 am to 11:10 Labs: Fridays 11:20 pm to 2:30 pm	Office Phone #	Dept. # 760-355-6155
Units	4 Units	Office contact for emergency	Biology Department Secretary 760-355-6155

**Course Description;**

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

Laboratory Manual Principles of Biological Science BIOL100 Lab Manual ISBN 0077701631. The lab manual is custom made for this college, and available at the IVC bookstore as a single packet together with the textbook.

### 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 extra points for a completed assignment. Your class attendance, and demonstrating responsibilities and honesty, can also 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.

**Tests;** There will be 4 tests, and one midterm and one final exam. There may be a one or two unpredicted short quizzes during the course. The class and lab schedule and test dates are listed in the last page in this syllabus.

**Missed tests and lab assignments;** any missed quiz, exam or lab assignment will not be allowed to retake. In case of emergencies or excused situations (with written documentation), tests may be taken, but there will be 20% deductions from any retake test. Misses lab assignments cannot be retaken.

### Course Grading Based on Course Objectives

Course grading procedure and points are as follow, subject to change;

Total of 4 tests (40 points each).....	160 points
Total of 13 Lab reports (5 points each) .....	65 points
Midterm Exam (100 points) .....	100 points
Final Exam (100 points).....	100 points
Field trip report .....	25 points
Group presentation.....	35 points

-----  
**TOTAL .....** 485 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 ( 420 : 485 X 100 which will equal 86.6 % = B 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: true/false, multiple choice, essay, short answer etc.

### 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.
- Talks and discussion; is not tolerated during lectures. Talking is a disturbance to your instructor and to other students in the class. I ask my students to avoid side talks, using cell phones or computer, during the lectures. Discussions and exchanging ideas with classmates during lab experiments is OK. Disciplinary procedures will be followed as outlined in the General Catalog.

### 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>  
Most Power point presentations, some major assignments, and grades will be posted on blackboard and will be accessible to the students to use.
- **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)

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

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.

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"

### 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](http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762)

### 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 Spring 2017, is listed below (subject to change)

Week	DATE	Biology 100- 10031-Lecture schedule, Spring 2017	Lab schedule, Spring 2017
1	Friday 2/24/2017	<b>Ch. 1 Scientific study of life (p 2),</b> <b>Ch. 23 Animal tissue &amp; organ system (p 467)</b>	<b>Introduction to the lab. Biology - Overview</b> <b>Lab Exp. 25.1 (pages 353-365)</b>
2	3/3/2017	<b>Ch. 2 The Chemistry of life (p 20)</b>	<b>Lab Exp. 3- Chemical composition of cells</b> <b>3.1,2,3,4</b>

Imperial Valley College Course Syllabus – Course Title and number

3	3/10/2017	Ch. 15 Evolution of microbial life (p 276) Ch. 11 DNA Technology	Lab Exp. 2- Metric and Microscopy - 2.1,3,4,5 Test 1 (Ch. 1, 2, 23 + lab exp. 25.1, and 3)
4	3/17/2017	Ch. 3 Cells (p 48) Ch. 7- DNA Structure- Gene function	Lab Exp. 4 -Cell structure and function 4.3,4,5 Lab Exp. 12- DNA Biology and Technology
5	3/24/2017	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 Test 2 (Ch. 15, 11,3, 7 + Lab exp. 2, 4, 12)
6	3/31/2017	Ch. 4 The energy of life (p 68) Ch. 28 Regulating temperature, Nutrients (p 564)	Lab Exp. 5: Enzymes (5.1 to 5.4) Lab Exp. 28 - Chemical Digestion –
7	4/7/2017	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	4/14/2017	Ch. 30 Animal reproduction and development	Midterm Exam (Ch. 1,23,2,15,11,3,7,8,9,4,28, 5,6 + Exp. 25, 3, 2, 4, 12, 8, 5, 28, 6, 7)
9	4/21/2017	<b>Spring break - No class</b>	<b>No Lab</b>
10	4/28/2017	Ch. 27 The Circulatory and Respiratory system	Fetal pig dissection – Exp. 27 and 29
11	5/5/2017	<b>Field trip</b>	<b>San Diego Zoo</b>
12	5/12/2017	Ch. 24 The nervous system and the senses (p 482) Ch. 25 Endocrine system (overview).	Lab Exp. 31 Senses
	5/19/2017	Ch. 21 Plant form and function (p 426) Ch. 13 Evidence of Evolution	Lab Ch. 18 flowering plants Test 3 (Ch. 30, 27, 24, 25 + Exp. , 27, 29, 31)
13	5/26/2017	Ch. 7 DNA structure and gene function Ch. 10 Patterns of Inheritance (p 170)	Lab Exp. 10- Human Genetics - Exp. 11 DNA Test 4 (Ch. 21, 13 + Exp. 18 )
14	6/2/2017		
15	6/9/2017	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	12/9	Final Exam includes, chapters since midterm; ( Ch. 30, 27, 24, 25, 21, 13, 7, 10, 16, 19)	Lab Test include all lab Exp. Since midterm; (Exp. 27,29,31,18, 10, 34)

THINGS YOU MUST DO: Go to web site: <http://forms.imperial.edu/machform/view.php?id=24> and complete the form for the lab safety information as required by the department.