

### Basic Course Information

Semester:	<b>Fall 2015</b>	Instructor Name:	<b>Jia Sun</b>
Course Title & #:	<b>Principles of Biological Science - BIOL 100</b>	Email:	<b>jia.sun@imperial.edu</b>
CRN #:	<b>10036</b>	Webpage (optional):	<b>NA</b>
Classroom:	<b>2717</b>	Office #:	<b>2778.1</b>
Class Dates:	<b>8/17/15 - 12/9/15</b>	Office Hours:	<b>MTWR: 11:15AM - 12:15PM</b>
Class Days:	<b>MW</b>	Office Phone #:	<b>(760) 355-6521</b>
Class Times:	<b>8-11:10AM</b>	Emergency Contact:	<b>jia.sun@imperial.edu</b>
Units:	<b>4</b>		

### Course Description

A comprehensive one semester general biology course for non-majors. Includes life from the molecular to the organismic level of both plants and animals and their interactions within the environment. Special emphasis is put on human biology within appropriate areas of study. Appropriate for general education as well as nursing, pre-professional, and higher level biology courses. Includes laboratory component. (CSU) (UC credit limited. See a counselor.)

### Student Learning Outcomes

Upon course completion, 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 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 of 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**

Biology, Biol 100 Imperial Valley College ISBN: 9781308485652  
Lab Manual, Biol 100 Imperial Valley College ISBN: 9781308487557

### **Course Requirements and Instructional Methods**

Students will learn to use a microscope to identify various species of algae, protozoa, plants and animals and their parts. They will also learn much of the taxonomy of these species. They will be able to describe various cellular processes like photosynthesis, aerobic cellular respiration, enzymatic reactions, mitosis, and meiosis. Students will acquire a general knowledge of genetics and how genetic information is passed on to offspring. Students will learn about the likely origin of life on Earth and how the original species underwent adaptation and evolution to give rise to life as we know it today. Students will be presented with a general review of all five Kingdoms with the greatest focus on eight animal phyla. The students will understand how over time phyla acquired characteristics that made them more advanced than those phyla without these characteristics.

#### **Exams:**

The course includes four equally-weighted lecture exams and three equally-weighted lab exams, while they may not be fully cumulative; no concept in biology is truly independent, so each exam might require knowledge of previously covered material.

#### **Quizzes:**

Seven “pop” quizzes will be given intermittently throughout the semester; they will not be formally scheduled. They will test your knowledge of the information covered in both recent lectures and labs. Your two lowest scoring quizzes will be dropped.

**Out of Class Assignments:** The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

### Course Grading Based on Course Objectives

Lecture Exams	4 x 100pts	400pts
Lab Exams	3 x 50pts	150pts
Quizzes (7x)	5 x 10pts	50pts

The Following grade cutoffs are guaranteed:

A:  $\geq 90\%$ ; B:  $\geq 80\%$ ; C:  $\geq 70\%$ ; D:  $\geq 60\%$

### 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. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at 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.
- 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 by the instructor.
- 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

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- **Plagiarism** is taking and presenting 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 "cite a source" correctly, 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 that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing 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 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) using a commercial term paper service.

### **Additional Student Services**

Imperial Valley College offers various services in support of student success. The following are some of the services available for students. Please speak to your instructor about additional services which may be available.

- **Blackboard Support Site.** The Blackboard Support Site provides a variety of support channels available to students 24 hours per day.
- **Learning Services.** There are several learning labs on campus to assist students through the use of computers and tutors. Please consult your [Campus Map](#) for the [Math Lab](#); [Reading, Writing & Language Labs](#); and the [Study Skills Center](#).
- **Library Services.** There is more to our library than just books. You have access to tutors in the [Study Skills 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. Please contact them 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.

- **Student Health Center.** A Student Health Nurse is available on campus. In addition, Pioneers Memorial Healthcare District provide basic health services for students, such as first aid and care for minor illnesses. Contact the IVC [Student Health Center](#) at 760-355-6128 in Room 1536 for more information.

- [Mental Health Counseling Services](#). Short-term individual, couples, family, and group therapy are provided to currently enrolled students. Contact the IVC [Mental Health Counseling Services](#) at 760-355-6196 in Room 2109 for more information.

### Student Rights and Responsibilities

Students have the right to experience a positive learning environment and to due process of law. For more information regarding student rights and responsibilities, please refer to the IVC [General Catalog](#).

### Information Literacy

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. The IVC [Library Department](#) provides numerous [Information Literacy Tutorials](#) to assist students in this endeavor.

### Anticipated Class Schedule/Calendar

#### LECTURE SCHEDULE

WEEK	DATE	TOPIC	TEXT CHAPTER
1	8/17	Intro. to Biology/Chemistry of Life	2,3
2	8/24	Cell Structure and Function	4
3	8/31	Cell Energy	5,6,7
4	9/7	<b>Holiday - Exam 1 review (take home)</b>	
5	9/14	Cell Division and Enzymes ( <b>EXAM 1</b> )	8,9
6	9/21	DNA Structure and Reproduction	8,9
7	9/28	Mendelian and Human Genetics	10,11
8	10/5	Exam 2 Review ( <b>EXAM 2</b> )	
9	10/12	Evolution	13,14
10	10/19	Natural Selection and Speciation	14,15
11	10/26	Ecology	19,20
12	11/2	Exam 3 Review ( <b>EXAM 3</b> )	
13	11/9	Digestive and Respiratory System	28,29
14	11/16	Cardiovascular and Immune System	28,30
	11/23	<b>Holiday</b>	
15	11/30	Nervous System	25
16	12/7	<b>EXAM 4</b>	

**LAB SCHEDULE**

<b>WEEK</b>	<b>DATE</b>	<b>LAB TOPIC</b>	<b>LAB CHAPTER</b>
1	8/19	Lab Introduction and Safety	1
2	8/26	Chemical Composition of Cells	3.1,2,3,4
3	9/2	Metric and Microscopy	2.1,3,4,5
4	9/9	Cell Structure and Function	4.3,4,5
5	9/16	<b>EXAM 1</b>	
6	9/23	Enzymes	5.2,3,4
7	9/30	Cellular Respiration	7.2
8	10/7	<b>EXAM 2</b>	
9	10/14	Frog Dissection	25.3
10	10/21	Mendelian Genetics	10.1,2,3
11	10/28	Senses	30
12	11/4	<b>EXAM 3</b>	
13	<b>11/11</b>	<b><i>Holiday - Human Genetics (take home)</i></b>	11
14	11/18	Ecosystem Video/Worksheet	
	<b>11/25</b>	<b><i>Holiday</i></b>	
15	12/2	Exam 4 Review	
16	12/9	<b>WRAP UP</b>	

**\*\*\*Tentative, subject to change without prior notice\*\*\***