

### Basic Course Information

Semester	<b>Spring 2016</b>	Instructor's Name	<b>Charlotte Murray</b>
Course Title & #	<b>BIOL 100</b>	Instructor's Email	<a href="mailto:charlotte.murray@imperial.edu">charlotte.murray@imperial.edu</a>
CRN #	<b>20032</b>	Webpage (optional)	
Room	<b>2013</b>	Office (PT Faculty:809)	
Class Dates	<b>Feb. 17 through June 12</b>	Office Hours (n/a for PT Faculty)	n/a
Class Days	<b>Lec: Tuesday &amp; Lab: Thursday</b>	Home Phone #	<b>760-357-2865</b>
Class Times	<b>6:30-9:40 pm</b>	Who students should contact if emergency or other absence	<b>Contact me by phone or e-mail or Silvia Murray 760-355-6201 or Ofelia Duarte 760-355-6155</b>
Units	<b>4 units</b>		

### Course Description

This is 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 a laboratory component. (CSU, and UC credit limited. See a counselor)

### 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

- Lec. Text: Biology Concepts and investigations (3<sup>rd</sup> edition) by Marielle Hoefnagels – ISBN 978-0-07-3525549-9
- Lab. Text: Laboratory Outlines in Biology VI: Peter Abramoff, & Robert G. Thompson
- Colored Pencils are recommended – a box of 12-24 colors is best
- Safety glasses – will be needed beginning October 9<sup>th</sup>. You can purchase them at the book store for about \$5.00 and at Harbor Freight for about \$1.00.

### 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.

### Course Grading Based on Course Objectives

Class grading will be based on points accumulated in the following ways.

- |  |                               |
|--|-------------------------------|
| • 3 Lecture Exams covering chapters assigned | 150-200 points each           |
| • 10 Lecture Quizzes 12 to 45 points each    | Total points 150 – 200 points |
| • 3 Lab Exams 80 points each                 | Total points 240              |
| • Approximately 1000 points possible         |                               |

Exams may include true/false, multiple choice, essay and short answer questions. Missed quizzes and exams may be made-up. However, they must be made-up at the next class meeting unless otherwise discussed. Asking to make-up missed quizzes or exams is your responsibility. Lab exams cannot be made-up as it takes hours to set them up.

Grading: A = 100 – 90%      B = 89 – 80%      C = 79 – 70%      D = 69 – 60%      F = ≤ 59%

There is no extra credit offered. I need you to learn what I ask you to learn.

### 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 (unless being used to take notes etc.) 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.
- **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 helping others to cheat 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.

### **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. If you feel you need to be evaluated for educational accommodations, the DSP&S office is located in Building 2100, telephone 760-355-6313.

### **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.

### **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 2016 Schedule -- subject to modification.**

Lec Date	Chapters	Lab Date	Subject & Page Numbers
Feb 16	1-- Sci. Study of Life, 2 – Chem. of Life	Feb 18	Roots & Shoots pp 229-239
Feb 23	2-- Continued & 3—Cells -- Chap 4 pp 75-81	Feb 25	Leaves & Flower Parts pp 239-243
March 1	8-- DNA Rep. Binary Fission & Mitosis 9 Sexual Reproduction and Meiosis pg 167 to 176	March 3	Mitosis and Lab Quiz pp 57-62
March 8	Rest of 4 – The Energy of Life, 5-- Photosynthesis	March 10	LAB EXAM
March 15	5 –Continued, 6 -- How cells Release Energy	March 17	Algae pp 171-181
March 22	LECTURE EXAM CHAP. 1-6, 8 and part of 9	March 24	Protozoa pp 185-193
<b>Spring Break ----- March 28 - April 2</b>			
April 5	9 – Sexual Reproduction & Meiosis pg 177 to 185 10 – Patterns of Inheritance	April 7	Cnidarians pp291, 293-297 Platyhelminthes pp303-310
April 12	10—Cont, 12 – Forces of Evolutionary Change	April 14	Annelida pp 325-333
April 19	13 – Evidence of Evolution, 14 – Speciation and Extinction	April 21	LAB EXAM
April 26	LECTURE EXAM par of 9, & 10, 12, 13, & 14	April 28	Crayfish pp 335-336 & 341-344
May 3	7 Viruses etc. 125-133, 15 Evo. & Div. Microbial life	May 5	Grasshop0pers pp 346-350
May 10	15 cont. 16 Evolution & Diversity of Plants	May 12	Starfish pp 351-354
May 17	17 Evolution and Diversity of Animals	May 19	Amphioxus pp 359-360 &
May 24	17 Continued	May 26	Frog 393-396, And 405-406
May 31	17 Continued	June 2	Lab Final
June 7	LECTURE FINAL: Chapters 7 pp 125-133, 15, 16, & 17	June 9	

### THINGS YOU MUST DO:

1. Purchase a pair of safety glasses. They can be purchased at the book store for about \$5.00 or Harbor Freight for about \$1.00. We will need them when we start to do dissection around Oct 9<sup>th</sup>.
2. Go to WebStar – Go to; “Services and IVC Safety Policy” and complete the form for the lab safety information as required by the department. \* Failure to complete the form may affect your grade.

1. You may audio record the class
2. Important date: February 28 Last day to drop without having it appear on transcripts.
3. Important date: April 17 last day to **petition for graduation**
4. **Important date:** Last day to Drop: May 14
5. *Prerequisite: Math 091 or Math 090.*