

## Syllabus - BIOL 100 Fall 2013 - Morrell



**Course Title:** Principles of Biological Science  
BIOL 200  
CRN: 10214 Credits: 3

**Instructor:** Dr. Tom Morrell  
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**Website:** <http://spaces.imperial.edu/thomas.morrell/>

**Office Hours:**  
Monday: 4:45 - 5:45 pm  
Tuesday: 5:50 - 6:50 pm  
Wednesday: 4:45 - 5:45 pm  
Thursday: 5:50 – 6:50 pm

If for some reason you not see me during my scheduled office hours, please call or stop by, or email me to arrange a meeting. I have an open door policy and my office is always open, so feel free to stop by anytime.

**Class days, Time, Room:**  
Lecture - Monday, 1:30 - 4:40 pm, Rm. 2737  
Lab - Wednesday, 1:30 - 4:40 pm, Rm. 2713

## Class Description

Prerequisite: MATH 091 or MATH 090 with a grade of "C" or better. 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.)

## Required Text Books:

1) **Hoefnagels, Marielle.** 2013. **Biology the Essentials.** McGraw Hill Publisher

AND

2) **Principles of Biological Science.** BIOL 100. Imperial Valley College (Lab Manual) - This manual is only available at the bookstore

## Attendance Policy

**Attendance is required.** You are responsible for all material presented during lecture and lab sessions. If for some reason you can't attend a lecture, quiz or an exam, it is your responsibility to approach me as soon as possible to determine if you have missed something important, and whether you can make it up. In order to make up missed opportunities you must **provide a signed medical or legal excuse** to document your absence. Students must realize that some labs, "in-class lab assignments," and particularly lab practical exams **CANNOT** be made up (regardless of the activity that resulted in the absence, or whether it's an excused absence). Some labs and lab practical exams require numerous hours to prepare and/or require cooperative student participation. Thus, attendance is mandatory at all labs. **All research indicates that there is a strong positive correlation between class attendance and good grades (i.e., those who attend class get better grades than those who skip class).**

Class attendance and tardy policy follows regulations set forth in the IVC catalog. Additionally, the IVC catalog states "disruption of a class can result in disciplinary action." I consider coming into class tardy - a disruption. **Thus, if I have started my lecture or lab - you can not enter the class.** Wait for the class to take the next break and then enter. This includes being tardy following any announced breaks during class or lab. **Again, do not enter the class if lecture has already started.** Wait outside of class until the class takes a break. Please note that personal issues, such as family obligations, family situations, border slowdowns, babysitters, railroad crossings, job interviews, car problems, taking family members to appointments, and work schedules are not acceptable excuses for an absence or a tardy. Additionally, leaving class or lab before it has been officially dismissed will be regarded as an unexcused absence. If you accrue 4 absences you will be dropped from the

class. Additionally, if you miss two components of a lecture you will be recorded absent even if you attend the third component of the lecture. If you leave class before it has been officially dismissed you will be recorded as absent. **If you acquire 4 unexcused absences you will be dropped from the class.**

In order to participate in lab you must read and submit the lab safety form. To access this form click on "Lab Safety Form" in the left column. Safety glasses are required for some labs. If you do not bring your safety glasses to lab you will not be able to participate in lab.

**It is the responsibility of the student to fill out the necessary paperwork if he/she no longer attends the class. In order for a student to "officially" drop the course he/she must fill out the proper paperwork (this can be done on-line). If this is not done a semester grade of "F" will be assigned.**

### **Honor Policy**

Imperial Valley College students must conduct themselves in accordance with the highest standards of academic honesty and integrity. Academic dishonesty by a student will not be tolerated. Cheating, plagiarism or violations of copyright policies are a form of academic dishonesty and are treated as an ethics violation.

### **Grading**

If I see you checking your cell phone for ANY reason, or if your cell phone rings, vibrates, buzzes, flashes or blinks during lecture or during lab (even if it is in your backpack, pocket, or purse!) I will ask you to leave the class for that day and you will be recorded as absent. Rest assured, I will provide you plenty of breaks that enable you to address all of your cell phone and social networking needs. You can provide your children's day care, and/or family health care providers the number of the IVC front office, and the front office can contact you in class in the event of an emergency.

Your course grade will be based on 5 lecture exams, 2-3 lab practical exams, lab and lecture quizzes (some unannounced), and assignments.

- 2 to 3 lab practical exams (80 points each approximately)
- 5 lecture exams to cover lectures, textbook, CD-roms, videos, and other lecture/lab materials (100 points each approximately)
- 3 to 8 Quizzes (approx.) (5 - 20 points ea. approximately)
- 5 to 10 Homework and lab assignments (approx.) (10 - 25 points ea. approximately)
- 1 Literature Research written assignment 50 - points approximately)

Total = 850 points (approximate)

Grades will be assigned according to the following scale:

>90% = A  
80 - 89.9% = B  
70 - 79.9% = C  
60 - 69.9% = D  
<59.9% = F

**I do not accept late homework without a signed legal or medical excuse.**

### **Learning Disabilities and Special Accommodations**

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, Room 2177, Health Sciences Building (760 355-6312).

If you have emergency medical information to share with me, or if you need special arrangements in the event the building must be evacuated, please let me know during the first week of class.

### **Course Objectives**

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 cite 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.

### **Student Learning Outcomes**

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

- respond to critical thinking applications of biological scenarios. (ILO2)
- attend and arrive on time for class and lab meetings. (ILO3)
- communicate ideas in biology clearly. (ILO1)
- perform lab activities properly and correctly analyze lab data. (ILO1, ILO2)

**Schedule - BIOL 100 - Fall 2013 - CRN 10214**

WK	DATE	LECTURE (MONDAY)	DATE	LABORATORY (WEDNESDAY)
1	08-19	Cha. 1. Introduction: What is Life	8-21	What is Science? (Nothing Needed)
2	08-26	Cha. 2. Atoms, Molecules of Life	8-28	Cha. 3 Lecture: Cells (Nothing Needed)
3	09-02	Labor Day (No Class – Yippeeaaaa)	09-04	<b>Exam 1 – Microscopes (Toothpicks/slides/cover slips/dye for cheek cell observations)</b>
4	09-09	Cha. 6 Energy/ Respiration/ Enzymes	09-11	Lab 4. Cell Structures & Functions (4.3 Diffusion, 4.2 [elodea])
5	09-16	Cha. 7 DNA/Gene Expression	09-18	Lecture: Cha. 8 & Cha. 9 Cell Division
6	09-23	Cha.12 & 13 Natural Selection & Evolution	09-25	<b>Exam 2 - Literature Review – Library - Graphs</b>
7	09-30	Cha 13. & Cha. 14 Speciation & Extinction	10-02	Natural Selection Lab - Nothing Needed
8	10-07	Cha. 15 Origin & Diversity of Life	10-09	<b>Exam 3 - Dichotomous Key (I Need the following critters at each island – From the Animal Survey Set B: #9 Fiddler Crab; #10 centipede; #11 Millipede; #12 Scorpion; #17 Newt; and #19 Frog)</b>
9	10-14	Cha. 21 Plant Form and Function	10-16	Plant slides: leaves, parenchyma, collenchyma, and sclerenchyma cells, dicot & monocot stems and roots, plant and flower models, elodea 300 ml 5% sucrose sol'n
10	10-21	Cha. 22 Plant Reproduction	10-23	Floral Arrangements; Plant slides: leaves, parenchyma, collenchymas, and sclerenchyma cells, dicot & monocot stems and roots, plant and flower models, elodea

<b>11</b>	10-28	Cha. 17 Evolution & Diversity of Animals	10-30	<b>Exam 4 &amp; Plant Lab Practical Exam</b>
<b>12</b>	11-04	Cha. 23 Tissues & Organs & Cha. 28 Digestion	11-06	Cha. 27 Circulatory & Respiratory System
<b>13</b>	11-11	Veteran's Day (No Class – yippeeaaaaaa)	11-13	Lecture: Cha. 24 Senses
<b>14</b>	11-18	Cha. 24 The Nervous System	11-20	Pig Dissection
<b>15</b>	11-25	Cha. 26 Support and Movement	11-27	Pig Dissection
<b>16</b>	12-02	Cha. 18 Population Dynamics & Review	12-4	<b>EXAM % and Animal Lab Practical</b>