

## Biology 100 Principles of Biological Science

### Basic Course Information

Semester	<b>Spring 2017</b>	Instructor Name	<b>Eddie Chang</b>
Course Title & #	<b>BIOL 100, Principles of Biological Science</b>	Email	<b>eddie.chang@imperial.edu</b>
CRN #	<b>21163</b>	Webpage (optional)	<b>See below</b>
Room	<b>2717</b>	Office	<b>2778</b>
Class Dates	<b>2.13.17-6.09.17</b>	Office Hours	<b>See below for times and room</b>
Class Days	<b>Lecture- Tuesday; Lab-Thurs</b>	Office Phone #	<b>760-355-6301</b>
Class Times	<b>935a-1245p</b>	Office contact if student will be out or emergency	<b>Ofelia Duarte, SME secretary, 760-355-6155 ofelia.duarte@imperial.edu</b>
Units	<b>4</b>		

Office Hours: Effective, Feb 20 2017:

MONDAY: by arrangement; not available between 1250-2p

TUESDAY: 515-630p in 2712

WEDNESDAY: 130-2p in 2751

THURSDAY: 1-2p in 2712 and 515-630p in 2712

### 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.

### 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

1. The student will identify the basic characteristics of all living things.

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2. The student will name basic chemical aspects that pertain to life and the concept of homeostasis.
3. The student will describe the components of the cell including their structure and function.
4. The student will explain the light and dark reactions of photosynthesis.
5. The student will explain cellular respiration and its relations to the entire organism.
6. The student will demonstrate knowledge of the structure and function of DNA and RNA.
7. The student will explain protein synthesis and site the central dogma of cell biology.
8. The students will compare and contrast the fundamentals of asexual and sexual reproduction.

### Course objectives (cont'd)

9. The student will define ecology and the overall impact of ecology to conditions in the environment.
10. The student will solve problems in general genetics and in human genetics and relate advances in genetics to social responsibility of geneticists.
11. The student will identify and relate the functions of the major systems of the human body; the interrelationship among body systems and nature of disease.

## Textbooks & Other Resources or Links

### Required materials:

1. Textbook: Biology, the Essentials. by Marielle Hoefnagels. 2<sup>nd</sup> edition ISBN 0077701615
2. Lab Manual: Principles of Biological Science BIOL100 Lab Manual ISBN 0077701631

The text and lab manual are available as a single packet only- you have to get it from the bookstore because the lab manual is custom made for this class ONLY. **There is a copy of the textbook and lab manual at the library reserve desk**

**Course website:** go to [www.imperial.edu](http://www.imperial.edu). Once you're on the college site, you'll see some tabs near of the top of the web page. Click on the "Home" tab. Once you click on the home tab, a list of other tabs will then appear—now click on the "blackboard" tab and you can now log onto blackboard. To log onto blackboard, use the part of your official IVC student email address BEFORE the "@" symbol as the username and the password is your IVC email password.

Once you log in, you'll see the list of courses you're registered for and simply click on the course you're taking for me (eg, BIOL 100 CRN#^\*%+) and you're in!

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The website contains the syllabus as well as lecture slides, assignments, review guides, announcements and reminders and other teaching materials for the class . Please check the website often. Feel free to view and download the materials on the site

### Course Requirements and Instructional Methods

This class includes both lectures and laboratory portions. In order to pass this class, students must participate in both portions of the class, including regular attendance and performing experiments. **Lectures and Labs are an essential part of this course; therefore, attendance in both and note-taking are required.**

Students are also expected to complete all assignments, take all exams, participate in any field trips or other class related activities

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

I do NOT “hand out” grades. You earn your grade!!! Your grade is the result of what YOU do. Your final grade is based on:

1. four examinations: three exams and one final.-100 points each. Based on the materials covered in the lectures and textbook.

Note: All exams are to be taken on the scheduled dates as indicated on the schedule. There will be no make-up exams except for medical, legal or natural reasons.

**If you are a DSPS student, please inform me ASAP and remember to submit the forms at least 1 week before EACH exam (including final) so I can make the proper accommodations in a timely manner.**

2. Laboratory Portion: Based on attendance and participation in the laboratory sessions, completing laboratory exercises/reports (10-30pts each). Also includes 1-2 lab quizzes worth between 20-30pts each.

3. Reflections papers- 1 to 2 page reports regarding your thoughts on various issues in biology. More guidelines on this later in the semester.

4. There may also be several homework assignments, in-class exercises and/or quizzes worth 10-20points each.

Grading Scale: The student's semester grade will be determined by the total number of points the student has earned in both the laboratory and lecture sections. The points are then divided by the total number of points possible to get a “percentage score.” I do not “curve” exam scores or overall grades

grading scale: A=at least 88.0% of total points B=at least 78.0% C=at least 70.0% D=at least 60.0% F= below 60.0% “

I do not “round off”- if you earned 77.8% of the points, you get a 77.8% (“C”), NOT 78% (“B”)

Make up Policy: there will be NO make-up labs due to liability issues

A student may take a make up test due to the following basic reasons:

1. Medical reasons – student’s or immediate family member’s illness.
2. Legal reasons – student is required to be in court.
3. Family tragedy/emergency – e.g. death in the family.

**Make up exams are to be taken within 1 week of the original exam date.**

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Note: An incomplete grade will be assigned only after a written request by the student stating the reasons why the student cannot complete the course as stipulated in the course syllabus. If the student does not make a written request for an incomplete grade, the student will be assigned a grade commensurate with the total points the student has earned up to the time the grades are turned into the Registrar's office.

### 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. Absolutely NO TEXTING or other online activities are allowed during the lecture or laboratory sessions. **If you use any electronic devices during an exam, your exam score will be reduced by 50%.**
- Food and Drink **are prohibited** in all classrooms. Water inside 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.
- If your disruptive behavior delays the progress of the class- **you OWE me time.** We will stay in class beyond the end of class so we can make up for time lost due to your disruptive behavior. Also, if we are unable to cover the material in class due to disruptions on your part, you will STILL be responsible for it on the exam.
- 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- in other word, NO CHEATING allowed

- 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.

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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 –**

- **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)**

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.

### **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**

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week	Week of	LECTURE (Tuesday)	LAB (THURS)	remarks
1	2.14	CH 1 intro; Ch2 chemistry	lab safety rules scientific method lecture and lab	Scientific method lab is on a handout given out during class on tues or thurs of week 1
2	2.21	Ch2	Lab 3 chemical composition	Bring a drink or a snack to class
3	2.28	Ch 2 chemistry; start ch 3 cells	Lab 2 (section 2.1-2.5) microscopy	
4	3.7	CH3 cells and ch 4.5 (section 5 of ch4) transport across membranes	Lab 4 cells and diffusion	Additional instructions for lab 4 are on handout posted on class website
5	3.14	Ch4 enzymes; Ch 6 using energy from food	Exam 1	Covers Ch1-3, ch4.5, plus scientific method lecture and lab
6	3.21	CH6 using energy from food;	catch up on lecture if needed; lab quiz 1	<b>Lab quiz 1 covers the labs of weeks 2-4</b>
7	3.28	Ch5 photosynthesis-using solar energy; Ch8 cell division-mitosis	Lab 5 enzyme	
8	4.4	Ch23 tissues organization of animal body Ch27 heart, vessels, blood	Lab7.2; photosynthesis/respiration lab	Note: Photosynthesis/respiration lab is a handout
9	4.11	Finish ch27; Ch 28 digestion and excretion	Exam 2 Ch4,5,6,8	
		Spring break 4/17-4/23		

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week	Week of	Lecture- Tuesdays	Lab- thursdays	remarks
10	4.25	Finish Ch28; start Ch24 nervous system	Pig dissection labs 27 and 29	Labs also called "basic mammalian anatomy I and II" Use diagram on p30-2 in lab manual to help you as well
11	5.2	Ch24 and stem cell lecture- assign paper 1; start Ch7 DNA	Lab 31- senses	
12	5.9	Ch7 DNA	Exam 3: Ch23,24,27, 28	
13	5.16	Ch 9 cell division and reproduction; Ch10 genetics	Catch up on lecture as needed	
14	5.23	Ch 10 cont'd	Lab 11 & DNA necklace lab	
15	5.30	Ch12-14 evolution; paper 1 due thurs 6.1.17	catch up on lecture review for final	
16	6.5	Ch12-14 evolution	Final exam Ch7,9,10, 12-14	