

Basic Course Information

Semester	Winter 2015	Instructor Name	James Castle
Course Title & #	Principles of Biological Science Biology 100	Email	James.castle@imperial.edu
CRN #	15137	Webpage (optional)	None
Room	2713	Office	Room 809
Class Dates	Jan 6 – Feb 6	Office Hours	None
Class Days	MTWRF	Office Phone #	(760) 355 - 6155
Class Times	Lecture 0730-0940 Laboratory 1000-1210	Office contact if student will be out or emergency	Department Secretary
Units	Four (4)		

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:

- Demonstrate an understanding of the steps of the scientific method. (ILO2)
- Communicate an understanding of the various patterns of inheritance of genetic traits. (ILO1, ILO2)
- Explain how the processes of natural selection influence evolution. (ILO1, ILO2)
- Perform lab activities properly, and correctly analyze lab data. (ILO1, ILO2)

Course Objectives

Upon satisfactory completion of the course, students will be able to:

- Identify the basic characteristics of all living things.
- Name basic chemical aspects that pertain to life and the concept of homeostasis.
- Describe the subcellular components of the cell including their structure and function.
- Explain the light and dark reactions of photosynthesis.
- Explain cellular respiration and its relations to the entire organism.
- Demonstrate knowledge of the structure and function of DNA and RNA.
- Explain protein synthesis and site the central dogma of cell biology.
- Compare and contrast the fundamentals of asexual and sexual reproduction.
- Define ecology and the overall impact of ecology to conditions in the environment.

- Solve problems in general genetics and in human genetics and relate advances in genetics to social responsibility of geneticists.
- Identify and relate the functions of the major systems of the human body; the interrelationship among body systems and nature of disease.
- Classify organisms in the kingdoms of plants and animals, discuss their evolutions and their relationships.

Textbooks & Other Resources or Links

- Hoefnagels, M. (2013). *Biology: The Essentials* (1st/e). New York, NY McGraw-Hill. ISBN: 0077701615
- Mader, Sylvia S. (2013). *Laboratory Manual to accompany Biology 11th edition, Custom Edition* (11th/e). New York, NY McGraw-Hill. ISBN: 0077701631
- Lab Notebook (composition book) 2 black pens (ball point) and 6 inch ruler
Safety goggles, gloves (required/supplied) and Lab Apron/coat (optional) all of these supplies may be purchased at the IVC bookstore.

Course Requirements and Instructional Methods

How to do well in this class:

- Make sure you come on time to all lectures and Labs! Arriving late or missing a class for any reason (excused or unexcused) can cause you to miss lecture material, and will only put you at a disadvantage in this class.
- Make sure you know what will be happening each day for class! Keep the class schedule handy.
- Skim through or read the chapter before coming to lecture. You will have a general feel for the subject matter, which will help your understanding of the material during lecture. Look through the figures for the chapter, and try to understand them.
- **Take Notes!!!** Whether you take notes via paper and pen or an electronic device (computer, tablet, etc does not matter, the important point is you will not pass this course without good note take skills.
- Pay attention during lectures and Labs! I will say things during lecture that are not written on the PowerPoint slides or the board that will be on the exams. Make sure you take good notes during class. Don't just mindlessly write down word-for-word what is on the slides. Listen to what I have to say and supplement the slides with my lecture and the text.
- Read the Text. I will ask you questions from reading sections in your text.
- **Study, study, study!** You should spend at least 4-5 hours studying for this class each week. This is a 4 unit class, the ratio is 1:2 so for each unit of instruction you should study 2 hours; therefore 8 hours would be the average. You should study in an area where there are no distractions (television, radio, computers, iPods, other people, etc.).

- You should also spend time studying in groups. Nothing makes you learn the material better than having to explain it to someone else!
- Don't cram! It's better to spend some time each week studying as compared to saving it all until the night before the exam.
- It is not enough just to memorize facts! On the exams, you will be responsible for using the information learned, understanding and applying it to new situations. You need to understand what these concepts mean!

Course Grading Based on Course Objectives

- There will be **2 exams**, worth **150 points** each (**300 points** total). Exams will be given on the scheduled day. Exams will last 90 minutes, and will consist of 50 multiple choice questions worth **3 points** each dealing with lecture material. Exams are closed notes, books and/or any electronic device. Scantron sheets will be provided, but make sure you bring good-quality #2 pencils with working erasers. If you are late to the exam, you will not be given extra time to finish it. There will be no make-up exams, except for extreme circumstances. If you have a valid, documented reason for missing an exam, it is **your responsibility** to tell me about it and provide valid documentation by the **next class meeting**, otherwise you will not have the opportunity to make up the exam, and will be given a **zero** for that exam.
- There will be **18 Labs** worth **5.5 points** each (**100 points** total). It is very important to make all Labs. There are no make ups for Labs missed. Labs are the exciting part of the class, this is where you have an opportunity to apply the information you learned in lecture. If you attend a lab and complete all of the work you will receive all of the points for that lab. There will be no labs exams, your grade is determined by participation in the lab.
- Extra Credit. There will be an opportunity to earn up to **40 points** for extra-credit assignments. I will discuss the assignments that may be turned in as extra-credit.
- Spelling and grammar count on all written assignments! You will lose up to **20% of the points** on each assignment if you have excessive spelling or grammatical errors

A	360 – 400 points
B	320 – 359 points
C	280 – 319 points
D	240 – 279 points
F	0 – 239 points

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.
- 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 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 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) using 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 Study Skills Center (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 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, 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

Information Literacy

Imperial Valley College is dedicated to helping 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

Imperial Valley College Course Syllabus – Biology 100 CRN 15137

WK	DAY	DATE	LECTURE	LABORATORY
1	Mon.	1-5	No Class	No Class
	Tues.	1-6	Chapters 1 Introduction and 2 Chemistry	Lab Safety, procedures, notebook and Scientific Method
	Wed.	1-7	Chapter 7 DNA	Exp. 3 Chemical Composition of Cells (3.1 – 3.4)
	Thurs.	1-8	Chapters 11 DNA Technology	Exp. 2 Metric System and Microscope (2.1, 2.3, 2.4,2.5)
	Fri.	1-9	Chapter 3 Cell Structure	Exp. 4 Cell Structure and Function (4.3, 4.4, 4.5)
2	Mon.	1-12	Chapter 8 Mitosis	Exp. 8 Mitosis and Meiosis
	Tues.	1-13	Chapter 9 Meiosis	Exp. 8 Continued
	Wed.	1-14	Chapter 15 Microbial Life and Evolution	Library Visit
	Thurs.	1-15	Chapter 4 Energy of Life	Exp. 5 Enzymes (5.2 – 5.4)
	Fri.	1-16	Chapter 6 Cellular Energy	Exp. 7 Cellular Respiration
3	Mon.	1-19	HOLIDAY	HOLIDAY
	Tues.	1-20	Chapter 21 Plant Form and Function (LNB)*	Mid-term Exam
	Wed.	1-21	Chapter 16 Evolution and Diversity of Plants	Plant Diversity Lab (Local Plants)
	Thurs.	1-22	Chapter 17 Evolution and Diversity of Animals	Exp. 26/27: Fetal Pig/Frog Dissection
	Fri.	1-23	Chapter 17 Continued	Exp. 26/27: Continued
4	Mon.	1-26	Chapter 26 Skeletal Muscular System	Musculoskeletal Lab
	Tues.	1-27	Chapter 27 Circulatory Respiratory System	Cardiovascular Lab
	Wed.	1-28	Chapter 24 Nervous System	Exp. 30 Senses
	Thurs.	1-29	Chapter 12 Forces of Evolution	Darwin's Dangerous Idea
	Fri.	1-30	Chapter 13 Evidence of Evolution	Paleontology Lab
5	Mon.	2-2	Chapter 10 Patterns of Inheritance	Exp. 10 Human Genetics
	Tues.	2-3	Chapter 14 Speciation and Extinction	Natural History of Imperial Valley
	Wed.	2-4	Chapter 19 Ecology	Predator-Prey Lab
	Thurs.	2-5	Chapter 19 Continued (all extra-credit due)	General Ecology Field Trip (Campus) (LNB)*
	Fri.	2-6	Chapter 20 Preserving Biodiversity	Final Exam

Lab Notebooks (LNB) due*

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 BIOLOGY-100
 CRN#: 15137

LEC: 2713 0730-0940
 LAB: 2713 1000-1210
 WINTER 2015