



Basic Course Information

Semester:	Spring2022	Instructor Name:	Jim Pendley
Course Title & #:	Biology 100	Email:	Pendley@imperial.edu
CRN #:	20938	Webpage (optional):	
Classroom:	RT-OnLine	Office #:	
Class Dates:	2/14-6/10	Office Hours:	Mon. 11:10-12:10
Class Days:	M,W+	Office Phone #:	-use the email-
Class Times:	8-11:10	Emergency Contact:	760-355-6201
Units:	4	Class Format:	Real Time on-line / Canvas

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

Course Prerequisite(s) and/or Corequisite(s)

Appropriate placement as defined by AB705; or MATH 098 or MATH 091 with a grade of "C" or better.

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)

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 relations

Textbooks & Other Resources or Links

Concepts of Biology (not at bookstore, read the info in Canvas. It is produced by OpenStax) (No charge for download and it is incorporated into your Canvas for the class.)

Course Requirements and Instructional Methods

Students will be able to describe various cellular processes such as photosynthesis, aerobic cellular respiration, enzymatic reactions, mitosis, and meiosis. Students will acquire a general knowledge of genetics and how genetic information is passed to offspring. Students will learn about the origin of life on Earth and how organisms underwent adaptation and evolution to give rise to life as we know it today. Students will learn the functions of the major systems of the human body, and some ways that these systems work cooperatively to maintain critical life functions. Simulated laboratory experiments will be conducted using Labster.

Course Grading Based on Course Objectives

There will be 4-5 section tests @ 50 points each.

There will be approx.. 9-10 quizzes @ 10-20 points each

There will be Labster lab experiment @ 10-20 points each and various written assignments @ various values

There will be 1 final @ 100 points (no makeup! Except under documented approval)

** Missed assignments may be reduced in value depending on circumstances **

Final total scores will result in a percentage scale (100-90%) =A., (89-80%) =B, (79-70%)=C , (69-60%)=D, below 60%=F



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Course Policies

This RT-online course requires each student to check into the class on Canvas ConferZoom at 8:00 MW for lecture , (see the introduction Module in Canvas), Followed by individual Lab work using the simulations or research papers. Teacher will be available by e-mail to assist until the end of the class .

Other Course Information

As this is an online course, please also review the Netiquette guidelines for online interactions in the Course Logistics folder. 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

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

Anticipated Class Schedule/Calendar

Each meeting will contain usually 1 chapter, with some shorter chapters combined or larger ones split. If specific subjects or time periods may conflict with your schedule such that compromises might occur, email me at the above email address and I will get back to you. The lab portion will be simulations with various Labster® experiments.

2/14 WEEK 1. Intro to Biol 100 ~ Chap 1 in 'Concepts of Biology'. Chp.1 concepts Zoom lecture over powerpoints +Lab

2/21 Week 2. **Monday 2/21 is Washington's Birthday HOLIDAY, no class.** Wed. Chp 2 Concepts of Biology
Prerequisites -Chemistry -molecules and bonding -biological molecules Labster lab Safety

2/28 Week 3 Chp.3 Cell structure prokaryotic and Eukaryotic , concepts , cell membrane/wall -Organelles and function -

3/7 Week 4. Chp 4. concepts of Metabolism. chap 4-cellular respiration:glycolysis, oxidative phosphorylation -
fermentation , ADP/ATP cycles. Human Dietary requirements. Energy storage in organisms.

3/14 Week 5 Photosynthesis LABSTER LAB on CELLULAR RESPIRATION LABSTER LAB on ELECTRON TRANSPORT SYSTEM
Chp 5 lecture over powerpoints. -light and dark reactions -Calvin Cycle .Types of plants

3/21 Week 6 Genetics Chp 6 genome-Cell cycle, cancer-Human Genetic Diseases -Human genetics /DNA -Cell Division ,
Characteristics.

3/28 Week 7 Cellular basis of Inheritance concepts chap 7, Comparison Meiosis and mitosis Meiosis- reproduction ,
Mutations, cancer, viruses/diseases.

4/4 Week 8 Patterns of Inheritance ,Concepts -Inheritance - punnet square -Mendelian Genetics -Meiosis, combination,
crossing over. nondisjunction of chromosomes



4/11 Week 9 Biotechnology chp. 9 and biotech (sections) Chp.10.1 and 10.2 for testing, but if time read 10.3 for knowledge.. biotech concepts Biotech From DNA to Biotechnology-Cloning. -Biotech and medicines

4/18 Week 10 SPRING BREAK !!! no classes

4/25 Week 11 Chap 11 Evolution and Chap 12 Diversity of Life (sections) chp 12.-evolution Darwin's finches Extinction of organisms-evolution and natural selection=Evolution and Diversity of life .

5/2 Week 12 Chap. 16 Human Systems .digestive system, dissection of sheep heart, -special organs-Human endocrine system

5/9 Week 13 Chap 17 Immunology and Disease

5/16 Week 14 Chp 18 Reproduction of animal and Humans organisms -Human female reproduction-Human Male Reproduction

5/23 Week 15 Chp. 19 ECOLOGY :Populations of organisms -Communities-Human populations &Population Pyramid-population ecology

5/30 Week 16 MEMORIAL DAY HOLIDAY 6/1 & 6/6 (?) Chp. 20 Ecosystems and the Biosphere.

FINALS TBA, COMMENCEMENT 6/11

SUMMER SESSION starts 6/20