IMPERIAL VALLEY COLLEGE

Basic Course Information

Semester:	**Fall 2025**	Instructor Name:	**Charlotte Murray**
Course Title & #:	**Biol 100**	Email:	**Charlotte.murray@imperial.edu**
CRN #:	**10565**	Webpage :	**NA**
Classroom:	**Lec. & Lab. in 2713**	Office #:	**NA**
Class Dates:	**Aug. 12 – Dec. 6**	Office Hours:	**Any time by email or during class**
Class Days:	**Tue - Lec --- TH. Lab.**	Office Phone #:	
Class Times:	Lec. & Lab. 6:30- 9:40	Emergency Contact:	**Me --- By email**
Units:	4	Class Format:	Face-to-Face

Course Description

(Letter Grade Only) --- This class 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 evolution, ecology and 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. (UC credit limited. See a counselor.) (CSU/UC)

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

Successful complete ion of Intermediate Algebra or appropriate placement as defined by AB705.

Student Learning Outcomes

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

1. Demonstrate an understanding of the steps of the Scientific Method.
2. Demonstrate an understanding of the basis of Evolution.

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 sub-cellular 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 Protista, Plants and Animals; discuss their evolutions and their relationships.

Textbooks & Other Resources or Links

- Lec. Text: Biology The Essentials (2nd 3rd or 4th edition) by Marielle Hoefnagels – ISBN 978-0-07-802425-2
  The changes made in the newer editions are insignificant and not worth the extra money.
- Or Fowler, S, Roush, and Wise, J. (2022) Concepts of Biology Rice University ISBN: 978794712036
- Lab. Information provided by instructor on the day of the lab

Course Requirements and Instructional Methods

For the lab; Students will learn to identify various species of algae, protozoa, plants and animals and their parts. They will also learn much of the taxonomy of these species. Students will dissect animals from 4 phyla. Students 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. There will be weekly questions within the videos use to teach the lecture. The answers to these questions are within the videos. The point of the weekly questions is to act as a weekly roster… and to point out interesting and important concepts and encourage you to write and think in depth about these concepts and issues. Study guides will be posted in Canvas for both the labs and the lectures to assist with studying and to fill in additional details and information useful for testing. There will be a multiple choice true false exam that may also have a short answer essay after the completion of each group of lecture chapters. After the completion of each lab there will be fill-in-the-blank and short answer exams/quizzes worth 60-80 points each.

Course Grading Based on Course Objectives

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

- 12 Lecture Exams covering chapters assigned — 70-120 points each Total points approximately 1000
- 12 Lab Exams 60-80 points each — Total points 800
- 1 – 5 Quizzes on information covered On previous lecture — 20- 30 points each – Max 200 points
- Approximately 2000 points possible

Lecture Quizzes are essay format. Exams are mostly true/false and multiple choice type questions. They may also include essay and/or short answer questions. Missed **Lecture** quizzes and exams may be made-up. However, they must be made-up at the next class meeting unless otherwise discussed. **This means you need to come prepared to take that quiz or exam the next time you come to class.** Asking to make-up missed quizzes or exams is your responsibility. Lab

exams **cannot** be made-up as it takes a long time to give them. Grades will be calculated based on highest score in class being equal to 100%.

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.

Academic Honesty Policy – Use of AI

IVC values critical thinking and communication skills. We consider academic integrity essential to learning. Using AI tools as a replacement for your own thinking, writing, or quantitative reasoning goes against both our mission and will be considered academic dishonesty or plagiarism unless you have been instructed to do so by your instructor. In case of any uncertainty regarding the ethical us of AI tools, students are encouraged to reach out to their instructors for clarification.

Course Attendance Policies and makeup missed tests or quizzes.

All students that miss the first day of class will be dropped.

Missed quizzes and exams may be made-up. However, they must be made-up at the next class meeting unless otherwise discussed. **This means you need to come prepared to take that quiz or exam.** Asking to make-up missed quizzes or exams is your responsibility. **Again, lab quizzes cannot be made up. You have to be there.**

Other Course Information

The lectures will be posted in Canvas. If the Zoom videos continue to be supported by IVC the lecture will also be posted. I will keep you updated with announcements through Canvas. I will respond to all emails sent to me as quickly as possible. Any lack of response to emails on my part is only because I did not see them.

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.

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Anticipated Class Schedule/Calendar

Fall 2025 Schedule -- ***Tentative, and likely to change without prior notice***

Lec. Tuesdays	Lecture Chapters	Thursday Lab	Lab. Subject & Page Numbers in lab. book
Aug. 12	1-- Sci. Study of Life, 2 – Chem. of Life	**Aug 14**	**Roots & Stems**
Aug 19	Chapter 2-- Continued	**Aug 21**	**Quiz Roots and Stems**
Aug 26	Complete Chapter 2 Start Chapter 3—Cells – Membranes	**Aug. 28**	**Leaves, Flower Parts & Seeds**
Sept. 2	**Chapters 1 & 2 Exam** Chapter 3 – Organelles	**Sept 4**	**Quiz Leaves & Flower Parts & Seeds**
Sept. 9	Complete Chapter 3 Chap. 4 – The Energy of Life & Enzymes	**Sept 11**	**Protoza & Algae**
Sept. 16	**Chapters 3 Exam** Finish Chapter 4 Chapter 5 -- Photosynthesis	**Sept 18**	**Quiz Protozoa & Algae**
Sept 23	6 – How cells Release Energy Chap 8 – Mitosis	**Sept 25**	**Cnidarians Lab**
Sept 30	**Chapter 4, 5 & 6 Exams** Finish chap 8 Chapter 9 – Meiosis	**Oct 2**	**Quiz Cnidarians** **&** **Platyhelminthes Lab**
Oct. 7	**Chapter 9 & 10 Exam** Chapters 10 – Genetics	**Oct 9**	**Quiz Platyhelminthes** **&** **Earthworm Dissection Lab**
Oct. 14	Genetics Continued Chapter 12 -- Forces of evolution	**Oct 16**	**Quiz Annelida (earthworm)** **&** **Crayfish Dissection Lab**
Oct. 21	**Chapter 9 & 10 Genetics Exam** **Finish Chapter 12** 13 – Evidence of Evolution	**Oct 23**	**Quiz Crayfish**
Oct. 28	**Chapter 12 Exam** **Finish Chap 13** 14 – Speciation and Extinction	**Oct 30**	**Starfish Lab**
Nov. 4	**Chapter 14 Exam** Chapter 7	**Nov 6**	**Quiz Starfish**
Nov. 11	Chapter 7 continues Chap 15 Evol. of Microbial life. (Prokaryotic life)	**Nov 13**	**Amphioxus pp 359-360**
Nov. 18	Chapter 15 Continue	**Nov. 20**	**Frog Dissection**
THANKGIVING BREAK November 24 – 28			
Dec. 2	**Lecture Final… Chapter 7 & maybe Chapter 15**	**Dec 4**	**Lab Final** **Quiz Amphioxus** **Quiz Frog**