

Basic Course Information

Semester:	Fall 2025	Instructor Name:	Dr. Daniel Gilison
Course Title & #:	Principles of Biological Science – BIOL 100	Email:	daniel.gilison@imperial.edu
CRN #:	10016	Webpage (optional):	https://imperial.instructure.com/
Classroom:	2711	Office #:	2770
Class Dates:	8/11 – 12/4	Office Hours:	M 1:30-2:30 PM (2770) T 1:30-2:30 PM (2711) W 1:00-2:30 PM (2770) R 10:30-11:00 AM (2711)
Class Days:	R	Office Phone #:	760-355-5759
Class Times:	11:20-2:30 PM	Emergency Contact:	daniel.gilison@imperial.edu
Units:	4	Class Format/Modality:	Hybrid

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)

Successful completion 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 attitudes 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 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 relationships.

Textbooks & Other Resources or Links

- Fowler, S., Roush, R., and Wise, J. (2022) *Concepts of Biology*. Rice University. ISBN: 9787947172036
- Mader, Sylvia S. (2022). *Laboratory Manual to accompany Biology 14th edition, Custom Edition* (14th/e). New York, NY McGraw-Hill. ISBN: 9781266244476

Updated 11/2024

Course Requirements and Instructional Methods

1. There will be **7 exams**, worth **50 points** each (**350 points** total). Exams will last 30 minutes and will consist of 25 multiple choice questions dealing with lecture material. Figures from the lectures and textbook will appear on the exams. Exams will be in-person and will be closed book. Scantron sheets will be provided for all exams.
2. There will be **1 lab exam**, worth **150 points**. This lab exam will cover all lab activities during the course. For this exam, you will view some results or other aspects from the lab and then answer questions about them. This exam will be in-person and will be closed book.
3. There will be **10 lab worksheets** worth **10 points** each (**100 points** total). Lab worksheets are due at the end of each lab.
4. There will be **20 on-line** homework assignments worth **10 points** each (**200 points** total). Homework will be due on the date in the schedule listed at 11:59 PM. Homework cannot be made up, except for extreme circumstances.
5. There will be **4 on-line** review quizzes for extra credit, and they will be due on the date in the schedule listed at 11:59 PM.
6. There will be extra credit available on some assignments.
7. There will be no make-up assignments, except for extreme circumstances. If you have a valid, documented reason for missing an assignment, it is **your responsibility** to tell me about it and provide valid documentation **as soon as possible (preferably BEFORE it is due)**, otherwise you will not have the opportunity to make it up and will be given a **zero** for it. Work issues, family issues, or forgetting to turn in assignments do not count as valid excuses.

Course Grading Based on Course Objectives

7 Exams	350 points	Grade	Points
1 Lab exam	150 points	A (90%+)	720 - 800 points
10 lab worksheets	100 points	B (80-89.9%)	640 - 719 points
20 homework assignments	200 points	C (70-79.9%)	560 - 639 points
Total	800 points	D (60-69.9%)	480 - 559 points
		F (0-59.9%)	0 - 479 points

Academic Honesty (Artificial Intelligence - AI)

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the importance of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- 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 plagiarizing 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 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.

IVC values critical thinking and communication skills and considers 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 academic honesty policy 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 use of AI tools, students are encouraged to reach out to their instructors for clarification.

Course Policies

- 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.



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- 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. Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.
- Food, drinks, and large bags in the lab room must be kept on the wire rack.
- **Electronic devices must be always turned off!** Ringing cell phones are a distraction both to me and to other students in the class. If you must use your electronic device during class, please take it outside, and then come back in when you are done. You should not be checking/using your electronic devices during lectures. If you are caught, you may be asked to leave for the day. This also includes using cameras to take pictures of slides or whiteboards during class.
- **No talking during class!** Talking is a distraction to me and other students in the class. If you have questions during the lecture, please ask me! If you are caught talking, you may be asked to leave for the day.
- Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.
- The deadline for dropping a course without appearing on transcript is **Sunday, August 24**.
- The deadline for dropping a full-term class is **Saturday, November 1**.

Additional Help

1. Make sure you watch all lectures! Not watching the lecture videos, or just skipping through them, can cause you to miss lecture material, and will only put you at a disadvantage in this class.
2. Make sure you know what will happen each day for class! Keep the class schedule handy.
3. Skim through or read the chapter before watching the lectures, and lab activities before performing the labs. You will have a general feel for the subject matter, which will help your understanding of the material during lecture. You will also be able to easily understand what is happening in the lab.
4. Pay attention during lectures! I will say things during lecture that are not written on the PowerPoint slides that will be on the exams. Make sure you take good notes during lecture. Don't just mindlessly write down word-for-word what is on the slides. Listen to what I have to say and take notes on that also!
5. Study, study, study! You should spend at least 4 hours studying for this class each week. You should study in an area where there are no distractions (television, radio, computers, music, other people, etc.). However, you should also spend time studying with other students (online, of course!). Nothing makes you learn the material better than having to explain it to someone else!
6. Spend time doing the online homework! It is there to help you learn the material, so not doing it, or waiting until the due date to start the homework will only hurt your grade in the class.
7. Don't cram! It is better to spend some time each day studying as compared to saving it all until the night before the exam.
8. It is not enough just to memorize facts! On the exams, you will be responsible for using the information learned and applying it to new situations. You need to understand what these facts mean!

HYBRID CLASSES:

1. Hybrid classes are typically harder, not easier, for most students. You need to be self-sufficient with studying and keeping up with the material and work needed to be done for the class.
2. I will be sending out constant announcements about when lectures are available and when assignments are due. However, this is not a substitute for reading the syllabus and class schedule.
3. **Check your IVC email** constantly! All announcements and major forms of communication will be sent to it.
4. You need to **watch the full lectures** – and probably multiple times! Don't treat lectures like regular videos that you can just skip through. You need to treat the online lecture videos as if you were really in the classroom listening to the lecture. Not doing so will hurt your grade in this class.
5. Any questions about the course material or anything else about the class? Ask me! **DO NOT** rely on Google or random websites to get the information. If you are confused about something in the class, your primary resources should be the lecture videos, lecture notes, textbook, and myself.

Anticipated Class Schedule/Calendar

Week	Lecture (Mondays)	Lab (Thursdays)
8/11	Introduction to the class Ch. 1 – Introduction to Biology	Introduction to the lab Metric Measurement Lab
8/18	Ch. 2 – Chemistry of Life Biology HW due	Chemical Composition of Cells Lab
8/25	Ch. 3.1-3 – Cells Ch. 3.4-5 – Membranes Chemistry HW due Review Quiz for Exam 1 due	Microscopy Lab Exam 1 – Ch. 1-2
9/1	NO CLASS – LABOR DAY Ch. 4.1 – Energy & Enzymes	Cell Structure and Function Lab Cells HW due Membranes HW due
9/8	Ch. 6.1-2 – Mitosis Ch. 7.2-3 – Meiosis Energy HW due Review Quiz for Exam 2 due	Enzymes Lab Exam 2 – Ch. 3-4
9/15	Ch. 15.1 – Tissues Mitosis HW due	Cellular Division Lab Meiosis HW due
9/22	Ch. 16.3 – Circulation Tissues HW due Review Quiz for Exam 3 due	Exam 3 – Ch. 6, 7, 15
9/29	Ch. 16.3 – Respiration Ch. 16.2 – Digestion Circulation HW due	Fetal Pig Dissection 1 Lab
10/6	Ch. 16.1 – Urination Respiration HW due Digestion HW due Review Quiz for Exam 4 due	Fetal Pig Dissection 2 Lab Exam 4 – Ch. 16.2-3
10/13	Ch. 16.6 – Nervous System Ch (not in textbook) – Senses Urination HW due	Fetal Pig Dissection 3 Lab
10/20	Ch. 9.1-2 – DNA Nervous System HW due Senses HW due Review Quiz for Exam 5 due	Senses Lab Exam 5 – Ch. 16.1, 6, Senses
10/27	Ch. 9.3-4 – Gene Function DNA HW due	DNA Isolation Lab
11/3	Ch. 8 – Genetics Gene Function HW due	Human Genetics Lab
11/10	NO CLASS - VETERAN DAY Ch. 6.3 – Cancer Genetics HW due (Due 11/11) Review Quiz for Exam 6 due (Due 11/11)	Exam 6 – Ch. 9, 8 Lab Exam Review
11/17	Ch. 11.1, 2, 5 – Evolution Ch. 19.2-3 – Populations	Lab Exam (all labs) Cancer HW due
11/24	NO CLASS - THANKSGIVING	NO LAB - THANKSGIVING
12/1	Evolution HW due Populations HW due Review Quiz for Exam 7 due	Exam 7 – Ch. 6, 11, 19



Accessibility Statement

Imperial Valley College is committed to providing an accessible learning experience for all students, regardless of course modality. Every effort has been made to ensure that this course complies with all state and federal accessibility regulations, including Section 508 of the Rehabilitation Act, the Americans with Disabilities Act (ADA), and Title 5 of the California Code of Regulations. However, if you encounter any content that is not accessible, please contact your instructor or the area dean for assistance. If you have specific accommodations through **DSPS**, contact them for additional assistance.

We are here to support you and ensure that you have equal access to all course materials.

Financial Aid

Your Grades Matter! In order to continue to receive financial aid, you must meet the Satisfactory Academic Progress (SAP) requirement. Making SAP means that you are maintaining a 2.0 GPA, you have successfully completed 67% of your coursework, and you will graduate on time. If you do not maintain SAP, you may lose your financial aid. If you have questions, please contact financial aid at finaid@imperial.edu.

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.