IMPERIAL VALLEY COLLEGE

Basic Course Information

Semester:	Winter 2026	Instructor Name:	Alison Mills
Course Title & #:	Principles of Biological Sciences - BIOL 100	Email:	alison.mills@imperial.edu
CRN #:	15016	Webpage (optional):	Canvas
Classroom:	2713	Office #:	2768
Class Dates:	1/5/26 - 2/4/26	Office Hours:	By appointment
Class Days:	MTWRF	Office Phone #:	N/A
Class Times:	Lecture 12:30 PM - 02:45 PM Lab 02:55 PM - 05:10 PM	Emergency Contact:	alison.mills@imperial.edu
Units:	4	Class Format/Modality:	Face-to-Face (On Ground)

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)

PREREQUISITES: - 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 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 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 cite 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.

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Textbooks & Other Resources or Links

Required Textbook:
This course will use the digitally free open educational resource from Openstax
You can view the book on the web or download a PDF version for free using this link:
https://openstax.org/details/books/concepts-biology

Concepts of Biology from OpenStax. Published 4/23/13. Web version last updated 7/7/25. ISBN **978-1938168116**.

Print versions are available for purchase at the IVC Bookstore and for purchase online from the Kendall Hunt publishing company and Amazon.

Other Required Materials:
Goggles for dissection lab. Available for purchase at the IVC bookstore and other retailers such as Lowe's and Home Depot or online retailers.

Course Requirements and Instructional Methods

This is a fast-paced, 5-week course. We cover the same material as a full semester, but in a much shorter time. Expect daily homework, daily labs, and regular exams. Please reach out early if you need help staying on track. I'm here to support you!

This class will utilize lectures, videos, and in class learning activities to aid in your learning. You are expected to come to class having looked over the textbook and slides to be covered that day (even just a brief skim of the materials before class will be helpful!). Doing so will help prepare you to engage effectively in class.

Lecture slides, online worksheets, and lab resources will be posted in Canvas under weekly modules.

Exams: There will be five exams total. **Four of the exams will be based on concepts covered in lecture and one will be based on lab worksheets and activities.** Each exam will be worth 100 points for a total of 500 points for all exams. Exams will be taken in person during regularly scheduled class time. Each student is allowed to use one (1) 5 inch x 8 inch notecard of notes on each exam. Exams may include multiple choice, fill in the blank, true/false, matching, diagram labeling, and/or short answer style questions. Short answer questions must be written in pen if the student wishes to request a regrade on a question. All exam dates and times are listed in the course outline below. There will be no makeup exams, except for extreme circumstances (see "Course Policies" below for details).

Lab worksheets: There will be 16 lab worksheets worth 20 points each. These worksheets will be completed during lab sessions and turned in at the end of each lab. **Your highest 15 scores will be included in your final grade (meaning, your lowest (1) handout score will be dropped).** Students will work in groups of 2-4 on lab activities, but EACH student is responsible for completing and turning in their own lab worksheet. **You may collaborate on activities, but your written answers must be in your own words.** All members of the group must complete their worksheet before leaving the lab. Leaving the lab early before everyone in the group has finished will result in a score of "0" on the worksheet. Lab groups are also responsible for ensuring their table is clean before leaving the lab. Messy lab stations will result in a penalty on the lab worksheet (up to a 20% deduction). Labs are set up the day of the activity so there will be no makeup for lab worksheets except for extreme circumstances (see "Course Policies" below for details).

Online Homework: There will be 12 online worksheets worth 10 points each. These worksheets will focus on lecture materials and will be available on Canvas each week. Each worksheet will be due at 11:59pm on the date specified in the course outline below. **Your highest 11 scores will be included in your final grade (meaning, your lowest one (1) online homework score will be dropped).** Start online homework early! They align directly with exam material.

Spelling and grammar: If spelling or grammar impede my ability to understand your answer you will lose points.

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

4 Lecture Exams (100 points each) --------- 400

1 Lab Exams (100 points each) ---------- 100

15 Lab Worksheets (20 points each) ------- 300

11 Online homework (10 points each) ---- 100

Total Points Possible ----------900

Letter grades will be assigned based on the percentage of total points earned:

- **A:** 90–100% (810–900 points)
- **B:** 80–89% (720–809 points)
- **C:** 70–79% (630–719 points)
- **D:** 60–69% (540–629 points)
- **F:** Below 60% (0–539 points)

Grade scale adjustments may be made at the discretion of the instructor. However, anyone receiving ≥90% of all points is guaranteed at least an A, ≥80% of all points at least a B, and ≥70% of all points at least a C. The grade cutoffs might fall below these levels but will not be raised above them.

Academic Honesty (Artificial Intelligence -AI)

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.

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: plagiarism, copying or attempting to copy from others during an examination or on an assignment, communicating test information with another person during an examination, allowing others to do an assignment or portion of an assignment, using a commercial term paper service, or using work from a previous course and submitting it for credit.

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.

Course Policies

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.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

Classroom Rules:

- No food or drinks during lab (including water). We will have occasional breaks for you to step outside of the lab for water and snacks. If you must drink or eat during class, please quietly step outside to do so.
- Wear closed toe shoes and other protective clothing. This is for your safety working in a lab environment. **Please wear clothing that covers your legs and avoids loose sleeves during dissection labs.**
- Some lab activities require safety goggles for your protection. You will need to provide your own goggles.
- Cell phones must be silenced during class. Excessive use of a cell phone in class for nonclass related matters is prohibited and you will be asked to leave. If you must make or take a call, please step outside of the classroom and return promptly when you're finished.
- No talking during lecture portions of class. If you have a question please raise your hand.
- Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

Classroom Etiquette:

- Creating a safe and welcoming environment: Everyone in class (instructor included) should strive to create a classroom atmosphere that is respectful, open, and welcoming in which all are invited to learn, prepare, and explore new ideas. We all come from different and diverse backgrounds, interests, and traditions that enrich how we all learn. We all have a collective responsibility to create a scholarly environment where everyone is encouraged to feel comfortable participating and is shown compassion, courtesy, and respect.
- Upholding ethical standards: You as a student should be comfortable sharing your views with your classmates and your professors. It is fine to have open discussion of competing ideas. However, when engaged in discussion remember we are challenging ideas NOT individuals. Therefore, personal attacks and prejudicial remarks are NOT allowed under any circumstance
- Communication is key: My goal is to provide you with the best learning experience while recognizing that everyone has different circumstances and challenges. With this in mind please don't hesitate to let me know what I can do to help you succeed. I'm happy to support you to the best of my ability and/or help direct you to campus resources to help you succeed.

Communication:

- I typically respond to emails within 24 hours Monday–Friday. Messages sent after 6pm or on weekends may be answered the next business day.

- Email me early if you're confused or falling behind. If you are feeling overwhelmed, stressed, or struggling with life outside of class, please talk to me or reach out to DSPS or Student Health Services. You deserve support.

Late Policy and Makeups:

- As stated previously, there will be NO makeup exams and NO makeup lab worksheets, except for extreme circumstances. Work conflicts, family conflicts, travel, or forgetting about the lab assignment/exam DO NOT count as emergencies. In the case of an emergency it is your responsibility to contact the instructor as soon as possible.
    - Examples of extreme circumstances:
        - Medical emergencies or extended medical care, including mental health support
        - Loss of a family member or loved one
        - Exceptions will be at the discretion of the instructor
- **Online worksheets may be submitted late but will be docked 5% of the value of the assignment (to max 50% off)** per calendar day late unless arrangements to turn it in late were made in advance. After the 50% limit is reached, you may still turn in the assignment up until the last day of class meetings, for a maximum possible of 50% of the value of the assignment.

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.

IMPERIAL VALLEY COLLEGE

Anticipated Class Schedule/Calendar

Day	Lecture 12:30 PM - 02:45 PM	Lab 02:55 PM - 05:10 PM	Online Assignment Due Dates
Week 1			
M 1/5	Syllabus & Introduction Introduction to Biology - Chapter 1	Lab Safety - Chapter 1	
T 1/6	Chemistry of Life - Chapter 2	The Metric System Lab	
W 1/7	Cell structure & Function - Chapter 3	Chemical composition of Cells Lab	Chemistry of Life - Chapter 2 Homework due 1/7 11:59pm
R 1/8	How Cells Obtain Energy - Chapter 4.1 (Part 1)	Microscopy Lab	Cell structure & Function - Chapter 3 Homework due 1/8 11:59pm
F 1/9	How Cells Obtain Energy - Chapter 4.2,3,4 (Part 2)	**Lecture Exam 1: Ch 1-3**	
Week 2			
M 1/12	Photosynthesis - Chapter 5	Photosynthesis Lab	How Cells Obtain Energy Homework due 1/12 11:59pm
T 1/13	Reproduction at the Cellular Level - Chapter 6	Enzymes Lab	Photosynthesis Homework due 1/13 11:59pm
W 1/14	Molecular Biology - Chapter 9	Cell Structure & Function Lab	Reproduction at the Cellular Level Homework due 1/14 11:59pm
R 1/15	Biotechnology - Chapter 10	Cellular Respiration (Fermentation) Lab	
F 1/16	Meiosis - Chapter 7	**Lecture Exam 2: Ch 4,5,6,9, and 10**	Molecular Biology and Biotechnology Homework 1/16 11:59pm
Week 3			
M 1/19	NO CLASS	NO CLASS	
T 1/20	Patterns of Inheritance - Chapter 8	DNA biology Lab	Meiosis Homework due 1/20 11:59pm
W 1/21	Animal Structure and Function: Digestive System – Ch 16.2	Cell Division and Intro to Genetics Lab	Patterns of Inheritance

Updated 12/10/25

IMPERIAL VALLEY COLLEGE

Day	Lecture 12:30 PM - 02:45 PM	Lab 02:55 PM - 05:10 PM	Online Assignment Due Dates
			Homework due 1/21 11:59pm
R 1/22	Animal Structure and Function: Circulatory and Respiratory System – Ch 16.3	Non-Mendelian Genetics Lab	
F 1/23	Animal Structure and Function: Musculoskeletal System – Ch 16.5	Fetal Pig Dissection Lab 1	Animal Structure and Function Part 1 Homework due 1/23 11:59pm
Week 4			
M 1/26	Animal Structure and Function: Nervous System - Chapter 16.6	Fetal Pig Dissection Lab 2	
T 1/27	Evolution and its Processes Chapter 11	**Lecture Exam 3 Ch 7, 8, and 16**	Animal Structure and Function Part 2 Homework due 1/27 11:59pm
W 1/28	Diversity of Plants - Chapter 14	Seed Plants Lab	Evolution and its Processes Homework due 1/28 11:59pm
R 1/29	Diversity of Animals - Chapter 15	DNA Isolation Lab	
F 1/30	Population and Community Ecology - Chapter 19 Chapter 20 - Ecosystems and the Biosphere	Senses Lab	Diversity of Plants and Animals Homework due 1/30 11:59pm
Week 5			
M 2/2	**NO LECTURE**	**Exam Review**	
T 2/3	**NO LECTURE**	**Lecture Exam 4 Ch 11, 14, 15, 19, 20**	
W 2/4	**NO LECTURE**	**Lab Exam**	

*****Subject to change without prior notice*****