



Basic Course Information

Semester:	Fall 2025	Instructor Name:	Alison Mills
Course Title & #:	Principles of Biological Sciences - BIOL 100	Email:	alison.mills@imperial.edu
CRN #:	10017	Webpage (optional):	Canvas
Classroom:	2717	Office #:	2786
Class Dates:	8/11/25 - 12/6/25	Office Hours:	Tue/Th 10am-11am Wed 3:30pm-4:30pm Or by appointment
Class Days:	Tuesday - Lecture Thursday - Lab	Office Phone #:	TBD
Class Times:	11:20am-2:30pm	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.

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.

Required Lab Manual:

BIOL 100 Imperial Valley College Lab Manual (Author: Mader). Available for purchase at the IVC bookstore
ISBN: 9781307871074

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 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 or lab manual chapters to be covered that day. Doing so will help prepare you to engage effectively in class.

Exams: There will be 6 noncumulative exams based on concepts covered in lecture and lab. Each exam will be worth 100 points for a total of 600 points for all exams. Exams will be taken in person during regularly scheduled class time. Exams will include multiple choice, fill in the blank, true/false, matching, and/or short answer style questions. Four of the exams will focus on lecture materials and two exams will focus on lab activities. Make sure to bring a writing implement, preferably a pen. Exams must be taken in pen if the student wishes to request a regrade on a question. Four exams will focus heavily on concepts covered in lecture and two will be focused on lab materials. There will be no makeup exams, except for extreme circumstances (see "Course Policies" below for details).

Lab worksheets: There will be 13 lab worksheets worth 25 points each. These worksheets will be completed during lab sessions and turned in at the end of each lab. Your highest 12 scores will be included in your final grade (meaning, your lowest (1) handout score will be dropped). Students will work in groups of 2-3 on lab activities, but EACH student is responsible for completing and turning in their own lab worksheet. 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).



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Online Worksheets: 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 Sunday of each week they are assigned. Dates indicated in the course outline below. Your highest 10 scores will be included in your final grade (meaning, your lowest two (2) online worksheets will be dropped).

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
2 Lab Exams (100 points each) -----	200
12 Lab Worksheets (25 points each) -----	300
10 Online Worksheets (10 points each) ---	100
Total Points Possible -----	1000

Grade Breakdown: **A** 900 - 1000 points, **B** 800 - 899 points, **C** 700 - 799 points, **D** 600 - 699 points, **F** 0 - 599 points

Grade scale adjustments may be made at the discretion of the instructor. However, anyone receiving $\geq 90\%$ of all points is guaranteed at least an A, $\geq 80\%$ of all points at least a B, and $\geq 70\%$ 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. 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 Rules:

- No food or drinks during class or 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.
- 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.

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 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. The first day late is recorded 5 min after the due date and time. 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.

Anticipated Class Schedule/Calendar

Week	Tuesday: Lecture Topic & Reading	Thursday: Lab Topic & Lab Manual	Online Worksheet Due Dates
Week 1 August 11-15	Syllabus & Introduction Introduction to Biology - Chapter 1	Lab Safety - Chapter 1 The Metric System - Chapter 2.1	No worksheet week 1
Week 2 August 18-22	Chemistry of Life - Chapter 2	Chemical composition of Cells - Chapter 3.1,2,3,4	August 24 11:59pm
Week 3 August 25-29	Cell structure & Function - Chapter 3	Microscopy - Chapter 2.3,4,5	August 31 11:59pm
Week 4 September 1-5	How Cells Obtain Energy - Chapter 4.1 Lecture Exam 1: Weeks 1-3	Cell Structure & Function - Chapter 4.3,4,5	September 7 11:59pm



Week	Tuesday: Lecture Topic & Reading	Thursday: Lab Topic & Lab Manual	Online Worksheet Due Dates
Week 5 September 8-12	How Cells Obtain Energy - Chapter 4.2,3,4	Enzymes - Chapter 5.1,2,3,4	September 14 11:59pm
Week 6 September 15-19	Photosynthesis - Chapter 5	Photosynthesis - Chapter 6.2	September 21 11:59pm
Week 7 September 22-26	Animal Structure and Function: Digestive, Circulatory, Respiratory, and Musculoskeletal Systems - Chapter 16.2,3,5	Cellular Respiration - Chapter 7.2	September 28 11:59pm
Week 8 September 29-October 3	Animal Structure and Function: Nervous System - Chapter 16.6 Lecture Exam 2: Weeks 4-7	Lab Exam 1: Weeks 1-7	No worksheet week 8
Week 9 October 6-10	Molecular Biology - Chapter 9 Biotechnology - Chapter 10	Fetal Pig/ Frog Dissection - Chapter 27,29	October 12 11:59pm
Week 10 October 13-17	Reproduction at the Cellular Level - Chapter 6	Senses - Chapter 31.2,3,4	October 19 11:59pm
Week 11 October 20-24	The Cellular Basis of Inheritance - Chapter 7	DNA biology 12.1,2,3	October 26 11:59pm
Week 12 October 27-31	Patterns of Inheritance - Chapter 8 Lecture Exam 3: Weeks 8-11	Cell Division - Chapter 8 Human Genetics - Chapter 11.1	November 2 11:59pm
Week 13 November 3-7	Evolution and its Processes Chapter 11	Patterns of Inheritance - Chapter 10.1	November 9 11:59pm
Week 14 November 10-14	Diversity of Plants - Chapter 14 Diversity of Animals - Chapter 15	Seed Plants - Chapter 18.1,2,3,4	November 16 11:59pm
Week 15 November 17-21	Population and Community Ecology - Chapter 19 Chapter 20 - Ecosystems and the Biosphere	Review Session for Final Exams	No worksheet week 15
BREAK November 24-28	Thanksgiving Break. No class.	Thanksgiving Break. No class.	Thanksgiving Break. No worksheet due.
Week 16 December 1-6	Lecture Exam 4: Weeks 12-15	Lab Exam 2: Weeks 9-15	Final exams. No worksheet due.

Subject to change without prior notice