



IMPERIAL VALLEY COLLEGE

## Basic Course Information

Semester:	<b>Spring 2026</b>	Instructor Name:	<b>Peggy Brady</b>
Course Title & #:	<b>Principles of Biological Sciences – BIOL 100</b>	Email:	peggy.brady@imperial.edu
CRN #:	<b>20024</b>	Webpage (optional):	<b>Canvas</b>
Classroom:	<b>2713</b>	Office #:	<b>2777</b>
Class Dates:	<b>2/17/26 – 6/12/26</b>	Drop- in Hours:	<b>M/W: 11:30am – 12:30pm, T/Th: 3-4pm.</b>
Class Days:	<b>T/Th</b>	Office Phone #:	<b>760-355-6202</b>
Class Times:	11:20am – 2:30pm	Emergency Contact:	peggy.brady@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)

Successful completion of Intermediate Algebra or appropriate placement as defined by AB 705.

## 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.



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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

**This class has two required books and requires lab safety goggles.**

#### For Lab:

LAB MANUAL TO ACCOMPANY BIOLOGY (CUSTOM IVC)

**ISBN:** 9798219085406

**Author:** Villalobos

**Publisher:** MCGRAW HILL (CUSTOM PUBLISHING)

**This book is for sale from the IVC Bookstore. You will need a copy before your first lab.**

**Lab Safety Goggles or glasses (for dissection lab)**

**Available at retailers such as Walmart, Target, Amazon.**

#### For Class:

Good news: your textbook for this class is available for free online!

Concepts of Biology from OpenStax, Print ISBN 1938168119, Digital ISBN 1947172034,

[www.openstax.org/details/concepts-biology](http://www.openstax.org/details/concepts-biology)

There are additional student resources available for this book as well and can be found on website listed above under "student resources".

### Course Requirements and Instructional Methods

**Class activities:** This class will utilize lectures, videos, discussions, and other activities to aid your learning. You are expected to come to class having looked over the materials presented in the textbook. This will help you engage during the class. You have an obligation to yourself and to the others in the class to participate in creating an excellent learning environment in our classroom. Participation is expected from all students.

**Lecture Exams:** There will be 4 Lecture exams worth 100 points each (400 points total). Exams will happen at the end of class. Each exam will be given 70 minutes for completion. These exams can include multiple choice, short answer, true/false, matching, and fill in the blank questions. Be sure to bring a few writing utensils.

**Lab Exams:** There will be 2 lab exams worth 100 points each (200 points total). These will happen during the laboratory time. You will have the entire time to complete the exam, but you may not need the entire lab period. These exams can include multiple choice, short answer, true/false, fill in the blank, and practical (application) questions. For some questions you may need to complete a task (such as taking measurements) to answer the question.

**There will be no makeup exams, except for extreme circumstances (ex. illness, emergency).** If you have a valid and documentable reason for missing an exam it is your responsibility to inform me (the instructor) within 48 hours of the missed exam and provide documentation for the day of the exam. **This must be done by email.** Without this you will be unable to make up the exam and a grade of 0 will be entered into the gradebook. The makeup exam will be scheduled as soon as reasonably possible. Failure to show up for the makeup will be treated the same way as missing the original exam day. Work conflicts, family conflicts, travel, or forgetting about the exam do not count as valid excused absences.

**Lab worksheets:** There will be 12 lab worksheets worth 25 points each (300 points total). Lab worksheets are due at the end of lab. You are responsible for making sure everyone's name is on the worksheet. Student groups must be either 2



or 3 students. Larger groups are not permitted, and points will be deducted. Students must stay in lab until everyone in their lab group has completed the entire lab. Leaving before your lab group is done will result in a 0 for that lab assignment. The lab groups must also clean their lab area before leaving to receive full points for their lab assignments. **These assignments cannot be made up** because the room is only set up for one day. Students may have their first missed lab excused without documentation. After the first absence, additional missed labs will require valid documentation to be excused from the assignment. No more than 4 lab assignments will be excused. This documentation must be provided by email within 48 hours of the missed lab. Work conflicts, family conflicts, travel, or forgetting about the exam do not count as valid excuses.

**Mini project:** There will be 1 mini project worth 50 points. This project will be assigned and completed during lab.

**Participation Self-Assessments:** There will be 5 self-assessments worth 10 points each (50 points total). These will be due every few weeks. They will be online and will be submitted through Canvas.

**Spelling and grammar** (within reason) count on all written assignments. If spelling or grammar impedes my ability to understand your answer you will lose points.

**Extra Credit:** I often give extra credit in the form bonus questions on exams. These are never guaranteed. If I choose to do so, everyone will receive the same opportunities to earn the extra points.

**Late Work:** I do not accept late work.

### Course Grading Based on Course Objectives

4 class exams - 100 points each  
2 lab exams - 100 points each  
1 mini project - 50 points  
12 Lab worksheets - 25 points each  
5 participation self-assessments - 10 points each  
Total: 1000 points

Grade Breakdown:

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

Should I feel a grade adjustment is called for based upon the distribution of point totals across the entire class, I will adjust this grading scheme. 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.

At the end of the term many students tend to email me asking me to round their grade. Decisions on grade adjustments, as per the policy above, are made once I can see the distribution of grades for the entire class. If any adjustments are made, they will be applied to all students in the course. Emailing me will not change your final grade. Because of this, I ask that you please refrain from emailing about grade adjustments.



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## 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.

**My policy:** AI use is not permitted in this class for any reason. Therefore, using AI in any capacity for any assignment where you would earn points will result in an automatic 0 for cheating.

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 are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct. If you are ever unsure about what conduct is permitted, you must ask.

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: (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; (f) using work from a previous course and submitting it for credit; (g) using materials not permitted for an assignment or exam.

**While group work is encouraged and expected on labs, note that sharing work so that others may copy it without doing the work themselves is considered cheating and will result in a 0 on the assignment for both groups.**

## 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 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.
- Regular attendance in all classes is expected of all students. A student who misses two continuous weeks of class may be dropped from the course. If you will be absent for an extended period of time, it is your responsibility to communicate this with me as soon as possible.



- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences and will not count towards the two-week cutoff.

### ***Classroom Etiquette:***

It is everyone's responsibility to create a fair, welcoming, productive, and collaborative learning environment. It falls on each of us to make sure the learning environment of our classroom is free from unnecessary distractions, personal attacks, and other disrespectful behavior. Distracting and/or inappropriate behavior is not permitted and will be met with a warning or being asked to leave the room.

### ***Classroom Rules:***

- Cell phones must be silent and should not be used for distraction. If you need to take or make a call, please do so outside the classroom and return to class when you are done.
- No talking during lecture or other presentation portions of the class. It is distracting to everyone. If you have a question, please raise your hand and I will happily address it. Students who continue to disrupt class after a warning will be asked to leave. Disciplinary procedures will be followed as outlined in the General Catalog.
- Due to college rules, no one who is not enrolled in the class may attend.

### ***Additional Lab Safety Requirements:***

Absolutely no food or drink (including water). If you need to drink water or eat you may step out and rejoin the class when you are done.

Wear closed toe shoes and other protective clothing. This is for your own safety.

Some labs will require safety goggles for your protection. You will need to provide your own goggles.

### ***Email Policy:***

I will respond to emails within 1 business day. If a full business day has passed, send a follow-up email. Saturdays and Sundays are not business days. I do try to answer emails on the weekend, but I cannot guarantee them.

## **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](mailto:finaid@imperial.edu).

## **IVC Student Resources**

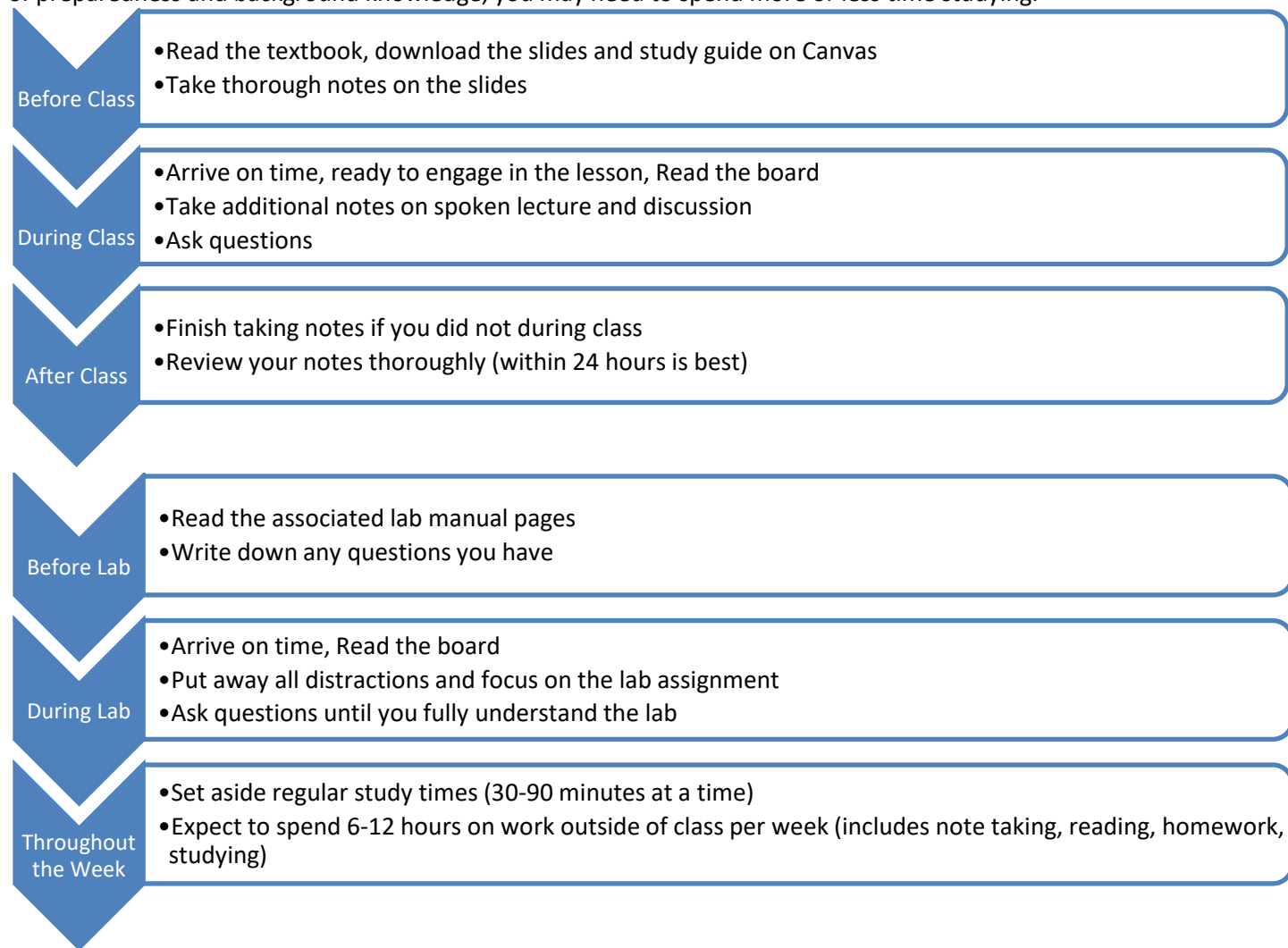
IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

If you are experiencing illness (physical or mental) the health center is here for you! They can be found here: <https://www.imperial.edu/student-support/student-health-center/>

Notes from the health center are one form of documentation accepted for excused absences. Remember they must excuse you from the day you missed the exam/lab to be accepted.

## Roadmap to success!

Below is schedule to help you succeed in my course. Note that a general guideline for college courses is to expect to spend 2-3 hours on work outside of class for each unit the class is worth. This is a 4-unit class. Depending on your level of preparedness and background knowledge, you may need to spend more or less time studying.



## Anticipated Class Schedule/Calendar

Week	Lecture Topic & Associated Textbook Reading	Lab Topic and Associated Lab Manual text
Week 1 Feb 16 - 20	Course Orientation; What is the scientific method? Chapter 1: Scientific Study of Life	Lab Safety; Chapter 1 Introduction to Lab and Metrics; Chapter 2.1-2.4
Week 2 Feb 23 - 27	Chapter 2: Chemistry of Life	Chemical Composition of Cells; Chapter 4.1-4.3
Week 3 Mar 2 - 6	Chapter 3: Cell Structure and Function	Microscopy; Chapter 3.1-3.3
Week 4 Mar 9 - 13	Chapter 4.1: Introduction to Energy and Enzymes <b>Lecture Exam 1 (Weeks 1-3)</b>	Cell Structure and Function; Chapter 5.2-5.4



Week	Lecture Topic & Associated Textbook Reading	Lab Topic and Associated Lab Manual text
	<b>Participation Self-Assessment 1 Due Tuesday by 11:59 pm</b>	
Week 5 Mar 16-20	Chapter 5: Photosynthesis	Enzymes; Chapter 6.1-6.3
Week 6 March 23-27	Chapter 4.2-4.4: Respiration and Fermentation <b>Participation Self-Assessment 2 Due Tuesday by 11:59 pm</b>	Photosynthesis; Chapter 8.2
Week 7 Mar 30 - Apr 3	Chapter 16.2-16.3: Digestive system, Circulation and Respiration Chapter 16.5: Musculoskeletal System	Cellular Respiration; Chapter 7.2
SPRING BREAK Apr 6-10	No class	No Class
Week 8 Apr 13-17	Chapter 16.6: Nervous System <b>Lecture Exam 2 (Weeks 4-7)</b>	<b>Lab Exam 1 (Weeks 1-7)</b>
Week 9 Apr 20 - 24	Chapter 6: Reproduction at the cellular level <b>Participation Self-Assessment 3 Due Tuesday by 11:59 pm</b>	Frog Dissection; Chapter 28.3 <b>THIS LAB REQUIRES SAFETY GOGGLES/GLASSES</b>
Week 10 Apr 27 - May 1	Chapter 7: Cellular Basis of Inheritance	Mitosis/Cellular Reproduction 9.1-9.3
Week 11 May 4-8	Chapter 9 & 10: Molecular Biology and Biotechnology	Senses; Chapter 34.2-34.4
Week 12 May 11- 15	Chapter 11: Evolution and its Processes <b>Lecture Exam 3 (Weeks 8-11)</b> <b>Participation Self-Assessment 4 Due Tuesday by 11:59 pm</b>	DNA Biology 13.1-13.3
Week 13 May 18 - 22	Chapter 14: Plant Diversity	Plant Exploration 20.1-20.4
Week 14 May 25 - 29	Chapter 15: Animal Diversity	Mini project: Science writing and the scientific method
Week 15 June 1 - 5	Chapter 19 & 20: Population and Community Ecology; Ecosystems and the Biosphere <b>Participation Self-Assessment 5 Due Tuesday by 11:59 pm</b>	Review for Final Exams
Week 16 June 8 - 12	<b>Lecture Exam 4 (Weeks 12-15)</b>	<b>Lab Exam 2 (Weeks 9-15)</b>

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

## Instructor Introduction

Hello! It's so wonderful to meet you! I know sometimes instructors can seem intimidating so I want to take some space to introduce myself and showcase that I'm just another person you will be interacting with.

My name is Peggy. You can call me Peggy, Dr. Brady, Professor Brady, Dr. Peggy, Professor Peggy, whichever of these you are most comfortable with! It has been my privilege to be involved in undergraduate education for the last several years. During my time in graduate school, I've been involved in classes ranging from general biology to disease ecology from systematics to comparative anatomy! I studied at UC Santa Cruz where I received my Bachelor of Science degree in General Biology. After that, I attended CSU Sacramento and obtained a Master of Science degree in Ecology, Evolution, and Conservation Biology. It was at CSU Sacramento that I developed a love for teaching science. Finally, I attended UC Riverside where I earned a PhD in Evolution, Ecology, and Organismal Biology. Over my time in graduate school, I've conducted research centered on kin selection in fruit flies and mammalian phylogenetics. I'm happy to discuss any of these experiences with you or answer questions you may have about higher education in biology. My office hours are a great time for these kinds of questions. I'm looking forward to meeting all of you soon!



This is a picture of me standing next to Max Mastodon! Max is a Pacific Mastodon who is typically on display at the Western Science Center in Hemet CA. He has his own twitter page @MaxMastodon if you want to learn more about this fossil!