

Basic Course Information

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| Semester: | Fall 2022 | Instructor Name: | Dr. Patrick S. Pauley |
| Course Title & #: | Biology 100 | Email: | Patrick.pauley@imperial.edu |
| CRN #: | 10443/10470 | Webpage (optional): | N/A |
| Classroom: | Online (CANVAS) | Office #: | Online (Email) |
| Class Dates: | August 15, 2022 – December 10, 2022 | Office Hours: | Monday – Thursday 7AM – 8 AM |
| Class Days: | N/A (Online) | Office Phone #: | (760) 355 - 6363 |
| Class Times: | N/A (Online) | Emergency Contact: | |
| Units: | 4 | Class Format: | |

Course Description

This 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 human biology within appropriate areas of study. Appropriate for general education as well as nursing, pre- professional, and higher-level biology courses. Includes a laboratory component. (CSU, and UC credit limited. See a counselor.)

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

Appropriate placement as defined by AB705; or MATH 098 or MATH 091 with a grade of “C” or better.

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. (ILO2)

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 plants and animals; discuss their evolutions and their relationships. Identify and relate the functions of the major systems of the human body; the interrelationship among body systems and nature of disease.

Textbooks & Other Resources or Links

Hoefnagels, Mariëlle. Biology: The Essentials 4th edition with Connect (Digital only) ISBN: 9781265505790

Course Requirements and Instructional Methods

Exams:

There will be seven (7) exams covering chapters assigned. The power points have already been uploaded.

Assignments:

In addition, there will two (2) papers Fed Up and Fungi, As well as, one big class assignment that is called Coronavirus (COVID-19).

Discussions:

I also will be doing weekly discussions. I do expect you to participate in these discussion boards. Discussions are an important component of many online classes. They replicate in-class (face-to-face) discussions, so they can be fertile ground for exploratory learning. They can also be fertile ground for self-assessment. When students are directed to consciously compare their ideas or their participation with other participants in the class, they may be able to adjust their participation (both quantity and quality) to meet the bar set by other students. A total of sixteen (16) discussions will take place online over the course of the semester.

Labs:

Laboratory experiments will be conducted. A total of five (5) labs will be assigned over the course of the semester.

Course Grading Based on Course Objectives

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

- Seven (7) Exams Covering Chapters Assigned - 100 points each
- One (1) Coronavirus (COVID-19) Assignment (I would like papers to be typed, double spaced, font to be Helvetica or Ariel and 12pt) – 200 point
- Two (2) papers Fed Up and Fungi (I would like the paper to be typed, double spaced, font to be Helvetica or Ariel and 12pt) - 100 points each
- Five (5) Labs – 50 points each
- Weekly Class Participation (16 weeks) – 25 points each

* Exams may include true/false, multiple choice and short answer questions. Missed quizzes and exams must be cleared with the professor to be made-up. Asking to make-up missed quizzes or exams is your responsibility and needs to be for a reasonable excuse. You have all day from 12:00AM to 11:59PM to take Exams/Quizzes. This is 24 hours so plan accordingly.



Grading: A = 100 – 90% B = 89 – 80% C = 79 – 70% D = 69 – 60% F = < 59%

Work-Based Learning

Work-Based Learning (WBL) allows students to apply classroom content in professional settings while gaining real-world experiences. These opportunities will provide you with a deeper, more engaging and relevant learning environment. This semester, I will be offering the following WBL activities in order to provide you with the opportunity to explore career options in Biology and other related fields.

| WBL Activity Name | WBL Activity Description |
|--|---|
| WBL Activity 1: Identifying Variables and Writing Hypotheses | The history of science and the foundations that it is built upon is the Scientific Method. The scientific method is a method for acquiring knowledge, and it depends on designing effective experiments. You will be performing and evaluating many different experiments in this field, so it is important to become familiar with hypotheses and identifying variables. |
| WBL Activity 2: Exercising Methods of Measurement | In the field of science, it is very important to understand measurement methods, the units we use, and how to manipulate them to get the information we need. In this activity, you will review units of length, mass, and volume, practice converting from imperial units to metric units, and then calculate the density of objects using different methods. |

Course Policies

What does it mean to “attend” an online class?

Attendance is critical to student success and for IVC to use federal aid funds. Acceptable indications of attendance are:

- Student submission of an academic assignment
- Student submission of an exam
- Documented student interaction with class postings, such as weekly discussions.
- A posting by the student showing the student's participation in an assignment created by the instructor.
- A posting by the student in a discussion forum showing the student's participation in an online discussion about academic matters.
- An email from the student or other documentation showing that the student has initiated contact with a faculty member to ask a question about an academic subject studied in the course.

Logging onto Canvas alone is NOT adequate to demonstrate academic attendance by the student.

What is online netiquette?

Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online.

Students are to comply with the following rules of netiquette: (1) identify yourself, (2) include a subject line, (3) avoid sarcasm, (4) respect others' opinions and privacy, (5) acknowledge and return messages promptly, (6) copy with caution, (7) do not spam or junk mail, (8) be concise, (9) use appropriate language, (10) use appropriate emoticons (emotional icons) to help convey meaning, and (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!)].

Academic Honesty

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important 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.

Examples of Academic Dishonesty that can occur in an online environment:

- Copying from others on a quiz, test, examination, or assignment;
- Allowing someone else to copy your answers on a quiz, test, exam, or assignment;
- Having someone else take an exam or quiz for you;
- Conferring with others during a test or quiz (if the instructor didn’t explicitly say it was a group project, then he/she expects you to do the work without conferring with others);
- Buying or using a term paper or research paper from an internet source or other company or taking any work of another, even with permission, and presenting the work as your own;
- Excessive revising or editing by others that substantially alters your final work;
- Sharing information that allows other students an advantage on an exam (such as telling a peer what to expect on a make-up exam or prepping a student for a test in another section of the same class);
- Taking and using the words, work, or ideas of others and presenting any of these as your own work is plagiarism. This applies to all work generated by another, whether it be oral, written, or artistic work. Plagiarism may either be deliberate or unintentional.

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

This schedule will be reviewed to include dates for the tests, assignments, and due dates. As the human experience is impacting the environment in positive and negative manners, and as the fifth IVC institutional learning outcome is global awareness this course will include human world events as part of the discussion. You will be expected to be aware of current world events and able to engage in discussion relevant to this fact. Amendments will be communicated in class and/or in canvas.

| Date or Week | Activity, Assignment, and/or Topic | Pages/ Due Dates/Tests |
|---------------------------------|--|--|
| Week 1 August 15 – 19 | Module 0: Orientation Module 1 (Week 1): Chapter 1 - Scientific Study of Life | Chapter 1 - Pages 2 – 19 Assignment: WBL Activity 1: Identifying Variables and Writing Hypotheses – August 19 Discussion: About You – August 19 Self-Check Quiz – August 19 Student Self-Evaluation – August 19 |
| Week 2 August 22 - 26 | Module 2 (Week 2): Chapter 2 - The Chemistry of Life | Chapter 2 - Pages 20 - 47 Exam 1: Chapters 1 & 2 – August 26 Discussion: Health Risk – August 26 |

| Date or Week | Activity, Assignment, and/or Topic | Pages/ Due Dates/Tests |
|---|--|--|
| | | Student Self-Evaluation – August 26 |
| Week 3 August 29 – September 2 | Module 3 (Week 3): Chapter 3 - Cells | Chapter 3 - Pages 48 – 67 Exam 2: Chapter 3 – September 2 Discussion: Human Health Risk – September 2 Student Self-Evaluation – September 2 |
| Week 4 September 6 - 9 | Module 4 (Week 4): Fungi | Assignment: Fungi – September 9 Labs: Laboratory - Genetics – September 9 Discussion: 5-second Rule – September 9 Student Self-Evaluation – September 9 |
| Week 5 September 12 - 16 | Module 5 (Week 5): Chapter 7 - DNA Structure and Gene Function | Chapter 7 - Pages 112 – 137 Discussion: Mask Wearing and it's Effects – September 16 Student Self-Evaluation – September 16 |
| Week 6 September 19 - 23 | Module 6 (Week 6): Chapter 8 - DNA Replication and Cell Division | Chapter 8 - Pages 138 – 153 Exam 3: Chapters 7 & 8 – September 23 Discussion: Mental Health – September 23 Student Self-Evaluation – September 23 |
| Week 7 September 26 - 30 | Module 7 (Week 7): Chapter 10 - Patterns of Inheritance | Chapter 10 – Pages 170 – 195 Labs: Laboratory - Earthworm Dissection – September 30 Discussion: Screen Time and The Brain – September 30 Student Self-Evaluation – September 30 |
| Week 8 October 3 - 7 | Module 8 (Week 8): Chapter 25 - The Endocrine System | Chapter 25 – Pages 502 – 515 Exam 4: Chapters 10 & 25 – October 7 Discussion: Raw Sewage – October 7 Student Self-Evaluation – October 7 |
| Week 9 October 10 - 14 | Module 9 (Week 9): Fed Up – Part 1 | Labs: Laboratory - Measuring A Pulse – October 14 Discussion: Healthy Eating – October 14 Student Self-Evaluation – October 14 |
| Week 10 October 17 - 21 | Module 10 (Week 10): Fed Up – Part 2 | Assignment: Fed Up – October 21 Assignment: WBL Activity 2: Exercising Methods of Measurement – October 21 Discussion: Exercise – October 21 Student Self-Evaluation – October 21 |
| Week 11 October 24 - 28 | Module 11 (Week 11): Chapter 28 - The Digestive and Urinary Systems | Chapter 28 - Pages 556 – 579 Exam 5: Chapters 28 – October 28 Discussion: Moods and Colors – October 28 Student Self-Evaluation – October 28 |
| Week 12 October 31 – November 4 | Module 12 (Week 12): Chapter 9 - Sexual Reproduction and Meiosis | Chapter 9 – Pages 154 – 169 Labs: Laboratory - Frog Dissection – November 4 Discussion: Fact or Fiction– November 4 Student Self-Evaluation – November 4 |
| Week 13 November 7 - 10 | Module 13 (Week 13): Chapter 27 - The Circulatory and Respiratory Systems | Chapter 27 – Pages 534 – 555 Exam 6: Chapters 9 & 27 – November 10 Discussion: Emotional Factors– November 10 Student Self-Evaluation – November 10 |
| Week 14 November 14 - 18 | Module 14 (Week 14): Coronavirus (COVID-19) | Assignment: Coronavirus (COVID – 19) – November 18 Discussion: Deadly Coronavirus– November 18 Student Self-Evaluation – November 18 |
| NO SCHOOL November 21 - 25 | NO SCHOOL | |
| Week 15 November 28 – December 2 | Module 15 (Week 15): Chapter 23 - Animal Tissues and Organ Systems | Chapter 23 – Pages 460 – 475 Labs: Laboratory - Pig Dissection – December 2 Discussion: Vector Control– December 2 Student Self-Evaluation – December 2 |
| Week 16 December 2 - 9 | Module 16 (Week 16): Chapter 30 - Animal Reproduction and Development | Chapter 30 – Pages 598 – 621 Final Exam: Chapters 23 & 30 – December 9 Discussion: It's Closing Time – December 9 Student Self-Evaluation – December 9 |

Subject to change without prior notice