

Biology 100, Course syllabus,

Spring 2021 – CRN = 20028

Dr. Ahrar

Semester	Spring 2021	Instructor Name	Dr. Mohammad Ahrar
Course Title & #	Biology 100	Email	Mohammad.ahrar@imperial.edu
CRN #	20028	Webpage	
Room	Online	Office	Online
Class Dates	Feb. 16 to June 11, 2021	Office Hours	Online
Class Days	Not synchronized online	Office Phone #	Dept. # 760-355-6155
Units	4 Units		

Course Description:

Because of the COVID-19 pandemic this biology course is taught online, asynchronous, which means that there are no set hours for the class. However, we will have three Zoom meetings (all optional) throughout the course during which the students can meet their classmates and the professor, and we can have short discussions about the class materials and answer any question about the course. More information will be posted.

This course is comprehensive, general biology for non-majors. Covering the areas of life from the molecular, to the organismal level of both plants and animals. Special emphasis is put on cell division, photosynthesis, and plant and human biology within appropriate areas of study. Evolution of species and interaction of organisms within the environment is also included. This course is also appropriate for general education as well as nursing, pre-professional, and higher-level biological studies. This course includes laboratory components. Since the campus is closed during Spring semester, the lab experiments will be done at your home.

Student learning outcomes:

Upon course completion, with a grade of “C” or better, 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)
2. Communicate an understanding of the various patterns of inheritance of genetic traits. (ILO1 & ILO2)
3. Explain how the processes of natural selection influence evolution. (ILO1 & ILO2)
4. Perform lab activities properly, and correctly analyze lab data. (ILO1 & 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 subcellular 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.

Textbooks & Other Resources or Links

Lecture Textbook: Biology Concepts and investigations (3rd edition) by Marielle Hoefnagels –
SBN: 9781308487663

Publisher: McGraw-Hill.

Laboratory: Lab activities in this online class will not be done in the school lab. Instead, the experiments will be modified to accommodate for online course and be posted on Canvas.

Course Requirements and Instructional Methods

Prerequisite - MATH 091 or MATH 090 with a grade of "C" or better.

Lecture information- This Spring 2021 Biol-100 class will be totally online and asynchronous, which means that there are no set hours for the class. Lecture materials, such as Power point (PPT) slides, and chapter summary will be posted on Canvas on Tuesdays every week during the course for the students to study. Course materials covered in this online class will be the same as the regular on-campus classes, and students will gain as much information from this online class as any other biology classes. It is the responsibility of the students to manage their time and learn the class materials. We can have three Zoom meetings (all optional) for short discussions and answer any question about the course.

Lab assignments – The lab assignments basically supplement the lecture PPT materials and students will learn a lot of information from their lab reports. The lab exercises will mostly be based on the lab manual that we used in previous semesters, but the experiments will be modified for online class. The instruction for each lab will be posted on Canvas weekly. For the experiments that require wet lab, and we cannot perform them online, we may use short videos that demonstrate the experimental procedures. Students should work on lab assignments, and answer all the questions, and post the complete work on Canvas on a weekly basis. Students will get 4 to 6 points for each completed lab assignment. Lab assignments will be posted online on Tuesdays in every week during the course. The due dates for posting the lab reports are shown in the table on the last page.

Research project: Each student will be assigned a topic related to biology to research. The research projects will develop your scientific research capability and will expand your knowledge about Biology beyond the textbook. The information about research projects will be discussed later during the course.

Extra credit: There may be extra homework related to biology for extra credit. This can allow students to gain more information about different aspects of biology beyond the class activities.

Quizzes and exams: There will be 8 quizzes and 5 exams during the course. The online class schedule, and the information about the lesson plans, lab assignments, quizzes and exams dates are listed in the last page in this syllabus. Questions in the quizzes and exams come from the materials from lectures power points, chapter summary, Lab assignments, and information from any video clips assigned to the class. A variety of testing methods will be employed, including but not limited to true/false, multiple choice, and short essays.

Missing tests and lab assignments; any missed quiz, exam or lab assignment will not be allowed to retake. In case of emergencies or excused situations (with written documentation), a quiz or a test may be taken, but there will be 20% deductions from any retake test.

Course Grading is Based on Course Objectives

Total of 8 quizzes, each 20 points	160 points
Total of 5 Exams, each 100 points	500 points
Total of 15 Lab assignments (5 points each)	75 points
Written assignments	50 points
Research project	40 points

Total Points 825 points

Grading scale: >90% = A, 80% - 89% = B, 70% - 79% = C, 60% - 69% = D, <60% = F

Grade point calculation = Total points earned divided by 825 x 100. Example; if your total earned points is 750, your grade point will be calculated as $750 : 825 \times 100$ equals 90.1 % = “A” grade.

The grades for all class assignments and tests will be posted on Canvas weekly and will be available to you monitor your progress during the course, and will be updated weekly.

Attendance

- Attendance is critical to student success and for IVC to use federal aid funds. Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absence 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.
- 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.
- Absences attributed to the officially approved events (conferences, contests, and field trips) will be counted as ‘excused’ absences.

- Acceptable indications of attendance include - submission of assignments, quizzes, exams, participation in online class discussions and responding to emails from the instructor. Logging onto Canvas alone is NOT adequate to demonstrate academic attendance by the student.

Academic Honesty

- **Plagiarism** - is to use and present the writings or ideas of others as one's own, without citing the source. You should understand the concept of plagiarism and keep it in mind when preparing written materials and taking exams.
- **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, which are prohibited or inappropriate in the context of the academic assignment in question. Please refer to the General School Catalog for more information on academic dishonesty or other misconduct.

Additional Help – Discretionary Section and Language

- Canvas support center: Imperial Valley College has switched from Blackboard to Canvas.
- Power point presentations, class materials, assignments, and grades can be posted on Canvas and be accessible to the students during the course.

Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313 if you feel you need to be evaluated for educational accommodations.

Student information, Rights and Responsibilities

Students have the right to experience a positive learning environment. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762
 Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at <http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/>

Anticipated Class Schedule / Calendar during the Spring 2021 semester (subject to change)

Week	DATE	Lecture topics and exam schedule	Lab report topic and exam due dates
1	Feb. 15 - 21	Ch. 1 Scientific study of life (page 2) Zoom meeting at 1 pm on Wednesday 2/17/2021	Lab report 1 part A due by 2/18/2021
2	Feb. 22 - 28	Ch. 2 The Chemistry of life	Lab report 2 due by 2/25/2021 Quiz 1(Ch. 1, 2) - 2/26/2021

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3	Mar. 1- 7	Ch. 3 Cells	Lab report 3 due by 3/4/2021 Quiz 2(Ch. 3) - 3/5/2021
4	Mar. 8- 14	Ch. 4 The energy of life Results of the bean project to be posted	Lab report 4 due by 3/11/2021 Exam 1 (from Ch. 1 to 4) - 3/12/2021
5	Mar. 15- 21	Ch. 5 Photosynthesis Zoom meeting at 2pm, on Mon. 3/15/2021	Lab report 5 due by 3/18/2021
6	Mar. 22-28	Ch. 6 How cells release energy	Lab report 6 due by 3/25/2021 Quiz 3(Ch. 5, 6) - 3/26/2021
7	Mar. 29 -Apr. 4	Ch. 7- DNA Structure- Gene function. Ch. 8 DNA Replication and cell division	Lab report 7 due by 4/1/2021 Exam 2 (from Ch. 5 to 8) - 4/2/2021
8	Apr. 5- 11	Spring Break	No class
9	Apr. 12- 18	Ch. 9 Sexual reproduction and Meiosis Research projects due	Lab report 8 due by 4/15/2021 Quiz 4(Ch. 9) - 4/16/2021
10	Apr. 19- 25	Ch. 10 Patterns of Inheritance Zoom meeting at 2 pm on Mon. 4/19/2021	Lab report 9 due by 4/22/2021 Quiz 5 (Ch. 10) - 4/23/2021
11	Apr. 26 -May 2	Ch. 12 Forces of evolution Ch. 13 Evidence of Evolution	Lab report 10 due by 4/29/2021 Exam 3 (Ch. 9, 10, 12) 4/23/2021
12	May 3- 9	Ch. 17- Evolution-diversity of animals	Lab report 11 due by 5/6/2021 Quiz 6 (Ch. 13, 17) – 5/7/2021
13	May 10- 16	Ch. 24 The nervous system and the senses	Lab report 12 due by 5/13/2021 Exam 4 (Ch. 13, 17, 24) 5/14/2021
14	May 17- 23	Ch. 27 Circulatory /Respiratory system	Lab report 13 due by 5/20/2021 Quiz 7 (Ch. 27) - 5/21/2021
	May 24- 30	Ch. 28 Regulating temperature, Nutrients	Lab report 14 due by 5/27/2021 Quiz 8 (Ch. 28) – 5/28/2021
15	May 31- June 6	Ch. 30 Animal reproduction	Lab report 15 due by 6/2/2021
16	June 10	Exam 5- Final Exam (Ch. 27, 28, 30)	

Holidays: Monday Feb. 15th, April 5 – 10, Monday May 31st