Fall 2023 **Biology 1A - HYBRID** Dr. Leslie Blackie

Email: lblackie@peralta.edu or through Canvas inbox for this class
Office hours: by appointment via Canvas or Mon/Weds from 12:30 – 1:30 in B201
Webpage: www.laney.edu/wp/leslie_blackie/
Department website: https://laney.edu/biology
Lectures delivered online through recorded videos, Labs Mon/Weds in B201 from 9:30 am to 12:20 pm

Course Description: Biology 1A is the first semester of a 2 semester series designed for students who are majoring in the Biological or health sciences. College level chemistry (Chem 1A) is a prerequisite. This course is a general overview of the many topics in biology. It will serve as a base for learning more about the specific areas of biology in other courses.

Discussion Topics: (both semesters are listed here)

Bio 1A	Bio 1B
Cell Biology and biochemistry (Ch 1-12)	Biodiversity (Ch 26-34)
DNA and Genetics (Ch 13-21)	Plants form & function (Ch 35-39) Animals, form and function (Ch 40-51)
Animals, form and function (Ch 40, 42-44)	Evolution (Ch 22-25) Ecology (Ch 52-56)

Materials and Technology required:
Textbook:Biology by Campbell, 11 or 12th edition OR use the OER textbook chapter readings
Lab Book: on Canvas site for BIOL 1A and using Labster
"The Double Helix, A personal Viewpoint" by J.D. Watson, published in 1968
Computer with access to Canvas – must have ability to upload files, take exams, record video
Reliable internet (If you have difficulties with any of these let me know)

Student Learning Outcomes Bio 1A
Define the functions of organelles and explain cellular processing including respiration, photosynthesis, mitosis, meiosis and transcription/translation in class discussion and on exams.

Describe the chemical makeup of macromolecules and their importance in the structure and function of the cell.

Explain the importance of DNA as the genetic info and define how it directs the functions of the cell. Integrate knowledge of DNA with the concepts of genetics and biotechnology.

Appraise ethical issues involved with the study of genetics, biotechnology and medicine and express this reasoning in classroom discussions..

Write clear, well organized lab reports. Analyze the results of laboratory experiments and evaluate sources of experimental error.

Format and General Information

Biology is a complex and interconnected subject. Sometimes questions in lecture will lead us to explore topics that do not seem directly related to the subject matter at hand, but are important to explore. Sometimes topics cannot be fully covered until we learn more and can connect things we learned earlier in the semester to things we learn later in the semester

Although most of this course material is based on European science, which was mainly conducted by white men, we value and honr the information gathered by people outside of what might be reflected in your text book. We will be highlighting Biologists and other reserachers with a variety of backgrounds and perspectives. We also encourage you to bring your own thoughts to the discussions and class chats. Science is not with out bias, in fact much of science has been used to justify biases of dominant culture. We will be discussing scientific bias from the first day of class. If you come across information taht you think would be valuable to this class, we encourage you to share it. We (like many people) are still in the process of learning about diverse perspectivew and identities. If something is said (by anyone) that made you feel uncomfortable, please talk to me about it. And again, anonymous feed back is always an option

Assessment (1000 points):

Exams (400 points)

Midterm exams: (300) There will be 4 exams worth 100 points each Exams will cover material for lecture and lab. You must be able to recognize and define the terms learned in class, synthesize information from the lecture and answer T/F, multiple choice, fill in or short essay questions. Lab Practicals will form part of the lecture exam grades. You will have images to identify and correctly answer questions about microscope slides, figures or models. The lowest midterm exam score will be dropped.

Exams will be in perons.

In case of emergency/school closure and there is need to conduct exams online this will be announced. . You can use textbook, lab manual and all learning materials posted on canvas but you CANNOT search online, discuss with other people or copy answers from others. Cheating will results in a zero for the exam, possible notification of the Dean and/or failure of the course.

Cumulative Final (100 points)
There will be a cumulative final given during finals week. This will cover material over the whole semester.

Quizzes (120 points)

- Syllabus quiz (10 pts) covers material in this handout and in the orientation module
- Microscope quiz (10 pts) is a review of your microscope knowledge

- Practice quizzes To help you prepare for midterm exams quizzes (5 pts each) for each topic.

Lab Reports (240 points)

Lab reports will be turned in throughout the semester involving sketches, answers to questions, and observations and data analysis of results obtained in class. Late lab reports will be accepted (with a penalty) only until the Exam covering that material is given. Lab reports are due at the beginning of the class or they will be considered late. If you look down a microscope, you are expected to provide a sketch of what you see in the lab report. The expected information to be included in the lab report will be explained at the beginning of class.

Informal Reports: You are required to turn in 10 informal reports throughout the semester. They are graded at 10, 7 or 5 points. These will include sketches and/or questions from the lab manual. Informal reports will be due at the end of the week they were assigned. You are expected to turn in at least 2 informal labs per each exam section.

Formal Reports: You are required to turn in 4 formal reports throughout the semester. These lab reports will be typed and submitted through Canvas. The grading rubric is provided. The expected lab report format includes 4 sections of Purpose, Materials and Methods, Results and Discussion. Formal lab reports are noted on the syllabus with an asterisk (*). They are due 1 week after the lab was completed. Formal lab reports are up to 25 points.

Peer review Prelabs (5 pts) - as a part of the Formal lab report you will be turning in a prelab. You will be paired to review each other's prelabs before you complete the lab(5 pts) . You will do this at least four times throughout the semester.

Other Assignments (180 pts)

Scientist Spotlights (40 points)
Scientists come from a diverse set of backgrounds and work on a variety of problems. You will turn in one scientist spotlight assignment for each unit

Field Trip Report (25 points)
There will be a field trip to UC Berkeley Electron Microscope Lab. A report due in the form of a "newspaper article" reporting what you learned on the trip. It will be due 1 week after the field trip.

Seminar Paper (20 points)
There will be a seminar paper due discussing "The Double Helix". The paper will be graded at 20,15, or 10 points. Read the guidelines for the seminar paper.

Genetic Problem Set (50 points)
A genetics problem set that requires you to solve genetics problems and learn concepts given in lecture will be turned in and graded up to 50 points This is a challenging

assignment that is similar to a take home test. No late genetics problem sets will be accepted.

Article and Video Analysis AVA (40 points) Four assignments involve reading an article or watching a video and then answering questions about the information. These articles may address issues of bias in science, science history or interesting new developments. These assignments are noted in Canvas as AVA and the topic. Be sure you turn in the by the "due" date in Canvas.

Grades Page (5 pts) You have a "Keep Track of your Progress Grades Page" to be able to calculate your grade at any time throughout the semester. Do not rely on Canvas. You are encouraged to check your calculations with my records. You are to turn this page in twice. The first time will be complete/incomplete, and the second time for 5 pts.

Discussions: (60 points)

As part of our online learning community participation, you have Discussions to take part on in Canvas. Some are with the whole class and some are within your group. You will be taking a survey so I can get an idea of your schedule. From this, I will be setting up groups after the first week of classes. You can also set up Conferences with each other to create study groups. You will see directions for each discussion with a grading rubric.

Meet your Colleagues (10 pts)
So we can build community in the class, introduce yourself to the class and reply to at least two of your colleagues

Review Discussion posts (40 pts)
As part of our learning community participation, you have Discussions to take part in Canvas. Two per unit section for 5 points each.

Seminar Discussion: (10 pts)
You will participate in a discussion of your seminar paper on the double helix. This may be online or in person

Grading Scale Your grade is based on points

90 – 100 %	A
80 – 89 %	B
70-79 %	C
60-69 %	D
below 59 %	F

Participation/Class Expectations:

Each person is expected to participate in class regularly through office hours, discussions and virtual interactions with your fellow students and professors. Setting up a schedule when you regularly work on the class is important to your success in the class.

Lectures will be recorded and delivered asynchronously (meaning you can view them whenever works best in your schedule. This portion of the class will be "self paced" within a weekly structure of set due dates for completing review of videos before the related lab experiments.

Labs: this portion of the course will in person in B201 although there may be some simulations to be accessed online in support of the material

Important Notes about Contacting Me and Assistance

If you feel lost or confused in this course, please let me know via Canvas email. I will make every attempt to reply within 24- 28 hours except on weekends.

It is our goal to make our courses as accessible as possible to students all of our students. We encourage you to chat with us by the second week of the course regarding any accommodations that will improve your experience in this course. You can also contact the Student Accessibility Services (SAS) Programs for Students at 464-3428 for assistance.

If you have any concerns about the class, please feel free to discuss them with me. If the situation calls for it, the biology department cochairs may be contacted through email. Check out the department website for more information.

Peralta Mask Policy: There is no requirement for masking indoors. However, if you feel more comfortable wearing a mask we encourage you to do so.

Careers in allied health, biotechnology, research and clinical labs and other biology fields often require wearing a mask as part of the health and safety regulations of that workplace. Thus, wearing masks is for workplace training as well as health and safety in the ongoing pandemic.

Laney College does not discriminate on the basis of age, race, religion, color, gender identity, gender expression, sexual orientation, ancestry, citizenship, national origin, military or veteran status, disability, marital status, pregnancy, medical condition and immigration status

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Aug 14	Aug 15	Aug 16 PROFESSIONAL DAY	Aug 17 PROFESSIO	Aug 18 PROFESSIONAL DAY	Aug 19
Aug 21 Lec Intro, Getting Familiar with science labs **Syllabus Quiz Due**	Aug 22	Aug 23 Lec Ch2 Chem Rev Lab Process of Science	Aug 24	Aug 25 Meet colleagues Disc	Aug 26
Aug 28 Lec Ch 3 water Lab: Acids and Bases	Aug 29 AVA:Scientific Bias	Aug 30 Lec Ch 4 Carbon Lab: Enzymes	Aug 31	Sep 1 study guide discu	Sep 2 **Sep 4**: Last day to add drop w/o W; Census due
Sep 4 HOLIDAY (Labor Day)	Sep 5	Sep 6 Lec Ch5 Macromolecules Lab: Enzymes part 2	Sep 7	Sep 8 Last day to file PASS/NO	Sep 9
Sep 11 Lec Ch 8 Metabolism Lab: Macromolecules*	Sep 12 study guide discussion	Sep 13 Scientist spotlight # 1 **Exam # 1**	Sep 14	Sep 15	Sep 16
Sep 18 Lec Ch 6 Cells Lab Microscopy/ **Micro quiz due**	Sep 19 AVA Cells	Sep 20 Lec Ch 6 Cells, Tissues Lab Plant and Animal cells	Sep 21	Sep 22	Sep 23
Sep 25 Lec Ch 7 Membranes Lab: Membranes*	Sep 26	Sep 27 Lec Ch 11 Cell Communication Lab: Membranes/properties of water	Sep 28	Sep 29 study guide discussion	Sep 30
Oct 2 Lec Ch 9 Cell respiration Lab:Cell Respiration&Fermentation	Oct 3	Oct 4 Lec Ch 10 Photosynthesis Lab Photosynthesis	Oct 5	Oct 6	Oct 7
Oct 9 Lec Ch 12 Mitosis Lab Mitosis	Oct 10 study guide discussion	Oct 11 Scientist spotlight #2 **Exam # 2**	Oct 12	Oct 13	Oct 14
Oct 16 Lec Ch 13 Meiosis Lab Meiosis	Oct 17 AVA impact telomeres	Oct 18 PROFESSIONAL DAY	Oct 19	Oct 20 Last day to file for AA/AS	Oct 21
Oct 23 Lec Ch 14 Genetics Lab Genetics	Oct 24	Oct 25 Lec Ch 14,15 Genetics Lab Genetics Genetics Prob set disc	Oct 26	Oct 27	Oct 28
Oct 30 Lec Ch16 DNA Lab: DNA	Oct 31	Nov 1 Lec Ch17 DNA&proteins Lab: DNA &protein synthesis	Nov 2	Nov 3	Nov 4
Nov 6 Lec Ch 20 DNA technology Lab: Biotech techniques	Nov 7	Nov 8 Lec Ch 20 DNA technology Lab: PCR*	Nov 9	Nov 10	Nov 11
Nov 13 Lec Ch 19 Viruses **Field Trip**	Nov 14 study guide discussion	Nov 15 Scientist spotlight # 3 **Exam # 3**	Nov 16	Nov 17 Attend. Verif. Day Last day to drop with W	Nov 18
Nov 20 Lec Ch 43 Immune Lab Antibodies & Elisa*	Nov 21	Nov 22 Ch 43 Immune Lab: Biotech Ethics	Nov 23 HOLIDAY Thanksgiving	Nov 24 HOLIDAY Thanksgiving	Nov 25
Nov 27 Lec 46 Reproduction Lab:Reproduction	Nov 28 AVA: vaccines	Nov 29 Lec 46 Reproduction, Ch 42 Circulation Lab:Circulation	Nov 30	Dec 1 study guide discu	Dec 2 NO SAT. CLASSES
Dec 4 Lec Ch 42 Circulatory Lab Seminar Discussion	Dec 5 study guide discussion	Dec 6 **Scientist spotlight # 4** **Exam # 4**	Dec 7	Dec 8 **Seminar Discus**	Dec 9 Finals (Sat. classes)
Dec 11 **Cumulative Final 9am-12 noon** Finals	Dec 12 Finals	Dec 13 Finals	Dec 14 Finals	Dec 15 Finals	Dec 16
		AVA/dis/exams Canvas for due dates		formal lab	