Arizona State University
BIO 181 – GENERAL BIOLOGY I
Spring Semester 2024

Welcome to the General Biology program at Arizona State University's Downtown Phoenix Campus! This course is the first of an integrated two-semester series that is designed to provide students with a rigorous and in-depth understanding of biological concepts and principles. BIO 181 (SUN# BIO 1181) is "small" biology; here we'll study the intricate dance of molecular components and chemical reactions that drive the cellular basis of life. The second course in the series, BIO 182 (SUN# BIO 1182), addresses the "big" biology concepts of evolution, organismal diversity, and ecology. The General Biology curriculum at the Downtown Phoenix Campus is comparable to that of the same or similar courses at other ASU campuses and non-affiliated schools.

BIO 181 provides four units of credit that satisfy the SQ general studies requirement, as well as a portion of the requirements for many life and health-related science degrees. The course is intended for students majoring in life science disciplines, though it may be of value to well-prepared individuals interested in a thorough treatment of the science of biology.

This course is offered by the College of Integrative Sciences and Arts at Arizona State University's Downtown Phoenix Campus. For more information about the college, visit our web site at http://cisa.asu.edu. If you have questions or concerns about the course, please send your inquiries to the instructor of record, Dr. Cayle Lisenbee (contact information follows).

INSTRUCTOR INFORMATION

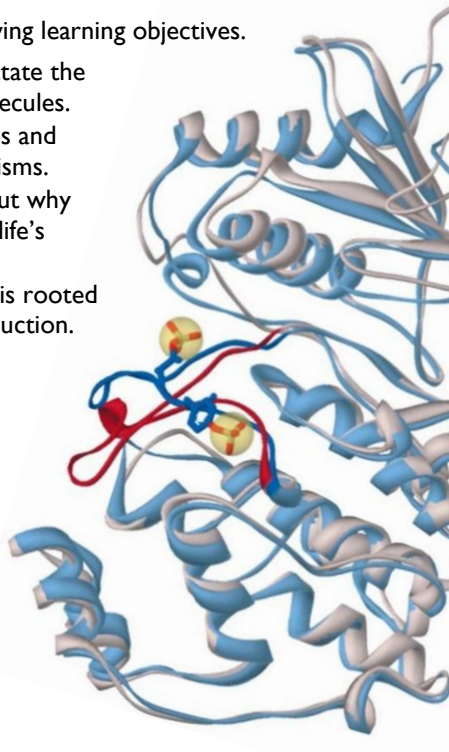
Lecturer:	Dr. Cayle Lisenbee	**E-mail:**	lisenbee.cayle@asu.edu
Office:	UCENT 355	**Telephone:**	(602) 496-0641
Instructional Aides:	Kacy Molar	**E-mail:**	kmolar@asu.edu
	Lauren Morgan	**E-mail:**	lmorga11@asu.edu
	Chau Nguyen	**E-mail:**	cnnguy12@asu.edu
	Peyton Tovey	**E-mail:**	pstovey@asu.edu
	Manli Wu	**E-mail:**	manliwu@asu.edu
Office:	UCENT 360 (Science Hub)	**Telephone:**	(602) 496-4000

Office hours and links to virtual meeting rooms for all instructors are posted on Canvas. We also are happy to schedule appointments if formal office hours do not fit your schedule. Please feel free to work with any of us!

LEARNING OBJECTIVES

Achievement of a passing letter grade in this course signifies your mastery of the following learning objectives.

- *Molecular Basis of Life* – Understand the general principles of chemistry that dictate the composition and construction of living organisms from complex biological molecules.
- *Cellular Basis of Life* – Analyze the structure of cell membranes, cells, and tissues and explain their importance to the levels of organization exhibited by living organisms.
- *Energy and Metabolism* – Explore the concept of energy and think critically about why organisms require it, how they obtain it, and how they manipulate it to satisfy life's demands.
- *Growth and Inheritance* – Examine how the interrelatedness of living organisms is rooted in the inheritance of molecules, most importantly DNA, during cellular reproduction.
- *Genetic Principles* – Comprehend how information stored in heritable DNA dictates the functions of biological molecules that determine ultimately the measurable attributes of living organisms.



Each of these five learning objectives correlates with one of the five units of material covered in the course. Detailed learning objectives within each unit may be found on the course Canvas site.

CLASS MEETING TIMES & LOCATIONS

BIO 181 is a standard in-person (face-to-face) course for spring 2024. *This is not an online course that you can complete fully on your own time. Per university policy, you are expected to attend both the lecture and the lab in person during regularly scheduled class times.* Many elements of the course, including assessments, will be available and/or delivered in class only, so regular attendance in both lecture and lab is critical to your success!

The university's COVID-19 management policies (https://eoss.asu.edu/health/announcements/coronavirus) no longer require the wearing of face covers in classrooms and teaching laboratories. Of course, you are welcome to wear a face covering and/or distance yourself at your discretion, and you are encouraged to do so if you are feeling ill, if you are recovering from an illness, or if you need to protect yourself. As always, we will adhere strictly to ASU's safety standards. Let's all work together to care for ourselves and each other. Go Devils!

Lecture: Mon/Wed/Fri 9:05–9:55 am, HLTHN 110

Labs: You must attend the lab section for which you are enrolled. If you would like to attend a different lab section, please change your enrollment during the add/drop period at the start of the term.

Lab Sxns:

Class	Day	Start	End	IA	Room
11920	Wed	1:30 pm	4:20 pm	Tovey	UCENT 360B
12952	Thu	10:30 am	1:20 pm	Morgan	UCENT 360B
13242	Thu	1:30 pm	4:20 pm	Nguyen	UCENT 360B
15422	Fri	10:30 am	1:20 pm	Wu	UCENT 360B
24818	Fri	1:30 pm	4:20 pm	Molar	UCENT 360B

COURSE MATERIALS

Lecture Text: *Biological Science* 7th ed. by Scott Freeman *et al.* (2019). Pearson Education, New York, NY. An active subscription to the textbook's online resource, MasteringBiology, is a required component of the course. Please see the course Canvas site for instructions *before* registering! Hard copies of the textbook (not required) may be purchased from the publisher, from the DPC bookstore, and from other third-party vendors.

Lab Manual: *Investigating Biology* 9th ed. by Judith Morgan and Eloise Carter (2019). Pearson Education, New York, NY. Each student requires an unused, hard (paper) copy of the manual to complete the laboratory portion of the course.

PPE: Lab coat and lab safety glasses or goggles.

Technology: PC or Apple desktop or laptop computer equipped with a reliable network connection (broadband preferred), webcam, and microphone. Mobile devices typically are not sufficient for completing all course activities. Software requirements include a reliable web browser (*e.g.*, Chrome), Microsoft Office (Word, Excel, and PowerPoint), and Adobe Acrobat Reader. All of these tech resources are free for ASU students at ASU's dedicated IT sites, libraries, and tutoring centers, and at https://myapps.asu.edu.

Canvas: Class announcements, lecture notes, assignments, lab handouts, study materials, and more will be posted online on a dedicated course Canvas site. To access it, log in at http://my.asu.edu with your ASURITE ID and password and then click on the course name "General Biology I" within the "My Classes" section. Please check the site regularly!

ASSIGNMENTS, EXAMS, & GRADING

Lecture	Points
Lecture Preps (LP)	25
Lecture Tasks (LT)	75
Homework (HW)	25
Exam Preps (EP)	25
Unit Exams (5)	375
Final Exam	75
Total	600

Lab	Points
Pre-Lab Quizzes	50
Post-Lab Exercises	150
Drawings	50
Oral Presentation	75
Poster Presentation	75
Total	400

Assignments

Lecture – A carefully-designed series of lecture assignments will help you build strong study skills that encourage independent learning before, during, and after our class sessions.

- Lecture Preps (LP) – Pre-class work will be encouraged with lecture prep activities. These low-stakes adaptive learning tasks will familiarize you with the lecture material and show you in real time (*i.e.*, while you're completing the assignments) the specific topics that require further attention in your studies. Note carefully the due dates for lecture prep activities; we'll complete a lot of them, so it is to your benefit to establish a routine for submitting them by their due dates.
- Lecture Tasks (LT) – Class sessions frequently will include collaborative tasks and problem-solving activities to encourage your regular attendance and engagement in the classroom. Lecture tasks will be assigned and collected randomly. This category is weighted more heavily than the other assignment categories because I value greatly the time you spend with me in class!
- Homework (HW) – Mastery requires practice. Homework assignments will provide this practice with interactive modules and real-world scenarios delivered online through MasteringBiology. These tasks should be completed progressively (*i.e.*, as we progress through a unit) after attending lectures.
- Exam Preps (EP) – Exam prep activities will be assigned prior to each unit test to allow you to practice exam-style questions under test-taking (time-limited) conditions. These practice exam-like assignments should be completed after you finish the bulk of your studying for the unit exams.

  All LP, HW, and EP assignments will be administered via MasteringBiology, so please be certain that you purchase and activate your subscription before the end of the first full week of classes! *Please note that these opportunities may be assigned, completed, and collected in class if time constraints and/or the availability of MasteringBiology resources prevent me from administering these items online.*

Lab – Four types of assignments will be utilized in the laboratory.

- Pre-Lab Quizzes – Pre-lab quizzes will be administered online via the course Canvas site. These brief assignments are designed to encourage pre-reading of the lab exercises so that you attend each lab period prepared for class and aware of all safety and procedural details. *The importance of pre-reading the lab exercises cannot be overemphasized!*
- Post-Lab Exercises – Bring a physical copy of the assigned lab exercise in your lab manual to every lab meeting; this is where you will record your data and observations (a formal lab notebook is not required). These entries will constitute weekly post-lab exercise assignments that will be collected by your lab instructor at the start of the following week's lab period.
- Drawings – Several lab exercises also will require you to produce high-quality biological drawings. Your drawings will be scored separately according to their ability to convey accurately the biological specimens and/or concepts under study.
- Presentations – At separate times during the semester you will be asked to produce and present both a scientific talk and a scientific poster that exhibit respectively the essential elements of oral and visual methods of disseminating biological research findings. Further details will be discussed in lab.

Exams

Lecture – Five unit exams will be administered on paper at regular intervals throughout the semester. Each exam will consist of multiple choice questions on topics covered in the assigned reading and lecture. All five unit exams will count towards the final grade. Your score for Unit Exam 5 may "resurrect," or replace, the lowest of your first four unit exam scores if both of the following apply: a) your score for Unit Exam 5 is higher than your lowest unit exam score, and b) the score to be replaced is greater than zero (Unit Exam 5 cannot replace a score of zero that was received due to an unexcused absence). Unit Exam 5 will be held on the date specified by the university's final exam schedule. It will be accompanied by a cumulative Final Exam that will be scored separately.

The following guidelines will be enforced to encourage fairness and honesty for paper exams:

- No materials of any kind are to be visible at your desk during testing. Please place all book bags, purses, textbooks, and notes under your desk and out of sight.
- Turn off or mute and stow all cell phones and other electronic devices, including laptops, tablets, earbuds, smart watches, and music players, prior to the start of an exam. These devices may not be used for any reason during the testing period. You may forfeit your right to finish an exam if you fail to abide by this policy.
- No student will be permitted to start an exam late after the first person finished has left the testing room. Please arrive on time for your exams!

- You will not be allowed to leave the testing room if you intend to return during the testing period. Be sure to grab a snack and visit the restroom before you arrive.
- Bring your ASU ID card to each exam – you may be asked to enter your ASU ID number on your test papers until we get to know you individually.

A few additional words of advice are necessary for online assessments:

- Pay close attention to all instructions and due dates, and add the latter to your personal calendars. Retakes or resets will not be allowed for students that miss deadlines for unexcused reasons!
- Ensure that your connection to the Internet is stable *before* starting an online assessment. You may have only one attempt to complete an online task and therefore may forfeit your ability to submit it if your connection fails.
- If necessary, be sure to download and/or print all handouts *before* starting an online assessment to avoid being locked out of the task if you navigate to a different page to open associated materials. If you need to follow links and/or refer to materials online, be sure to open them in a new window or tab in your web browser.
- Academic integrity policies (see below) also apply to online tasks. All instances of cheating, copying, or any other form of covert or blatant dishonesty will be treated the same as for paper assessments.

Grading

Your letter grade will be determined entirely by the number of points you earn. Point totals may be tallied periodically throughout the semester, but these totals will not be converted to letter grades until all points have been distributed in the course. I will perform these conversions very carefully according to the following grading scale, but please note that this scale provides a reference only and may be adjusted at my discretion if aggregate scores suggest it to be inadequate. The +/- system may be utilized to distinguish levels of academic achievement.

Content	Course %	Grade %	Letter
Lecture	60	90-100	A
Lab	40	80-90	B
		70-80	C
		60-70	D
		below 60	E

Please speak with one of my aides (for laboratory matters) or with me directly to discuss disputed scores and/or letter grades. If our review does not provide a suitable resolution, you may proceed with the university's formal grade appeal process. Appeals must be submitted and addressed in the regular semester immediately following the issuance of the disputed score or letter grade, regardless of whether you are enrolled at the university. Complete details on the grade appeal process are available online at http://catalog.asu.edu/appeal. Please note that it is a violation of the university's academic integrity policy (see below) to ask an instructor to "bump up" a letter grade or provide additional opportunities for obtaining credit in a course.

A Gentle Warning . . .

I work very, very hard to be an approachable, professional science instructor that knows his students on a first-name basis. There are at least two drawbacks to this teaching style.

First, I receive an extremely large number of student inquiries, most of which arrive via e-mail. I very much welcome these communications, but it may take me a week (or sometimes longer) to respond to your e-mail messages, so it often is most efficient to address urgent matters in person before or after class or during my office hours. Do not assume that a simple e-mail message has resolved your issue! Please take the initiative to locate the answers to common course administration questions on your own; you're almost certain to find the answers faster than I can reply! **When you do send me a message via e-mail, please include in the subject line the course prefix and number, your name, and a brief phrase explaining the purpose of your message (e.g., Subject: BIO 181, Jane Doe, Exam Prep 3 Scoring Issue).**

Second, my easy-going tone may tempt you to develop a "sugar-coated" view of my expectations and standards. Let me be clear: this will not be a watered-down version of BIO 181, but rather an immersive, fun, in-depth treatment of the discipline at the same (or higher?) level of rigor afforded to students at other campuses and institutions. Consistent study routines are essential for success!

COURSE POLICIES & RESOURCES

Lecture Attendance

Attending lecture is an important component of successfully mastering the content presented in a majors-level science course. My presentations frequently will include material that you may not be able to locate readily in the assigned reading, and they always will provide clear indications of the material that I feel is most important for learning key concepts. My lectures also will incorporate a great deal of discussion-based learning, but this is effective only when students are present in the classroom! Please let me know if you need to miss a lecture so that I can help you stay current with missed material.

Lab Attendance

Completing all of the lab exercises is essential to performing well in this course. Please arrive for lab on time, and *plan on remaining in the lab for the entire lab period.* Attendance will be monitored at each lab meeting. Students that arrive unprepared (*e.g.*, without PPE and hard copies of the appropriate lab exercise(s)) and/or more than 15 minutes late indicate to us that they are not fit to complete the exercise safely; they will not be allowed to enter the lab room. I will defer to your lab instructor's decisions on all aspects of the lab, so please treat him/her with the same respect that you extend to me!

Absence & Make-up Policies

The lecture portion of the course includes multiple opportunities for acquiring points such that missed assignments rarely require special accommodations. Lecture Prep (LP) and Lecture Task (LT) activities, in particular, will not be eligible for make-ups; no exceptions to this rule will be offered. MasteringBiology provides lots of additional opportunities for studying the material that appears on missed assignments. The "resurrection" policy that may improve your lowest unit exam score in most cases prevents the need for make-up exams. Likewise, make-up opportunities for labs typically are not available because most exercises include group activities, complicated materials, and/or extensive setups that can't be replicated for individual students.

You will receive a score of zero if you fail to complete a graded lecture assignment, lecture exam, pre-lab quiz, post-lab exercise, or lab drawing by its due date. Lab attendance is pre-requisite for acquiring credit on post-lab tasks. Lab presentation assignments may be accepted beyond their submission deadlines at the discretion of the instructors; late submissions will incur credit deductions. Missing more than one exam or more than three lab exercises typically will result in a failing grade (not an incomplete) for the course.

I do understand that some absences are unavoidable. Excused absences will be accommodated without penalty to the grade in the case of a) university-sanctioned events [see ACD 304-02], b) religious holidays [see ACD 304-04; a list can be found at https://eoss.asu.edu/cora/holidays], c) active duty military deployments [see SSM 201-18], and d) illnesses, quarantines or self-isolations. Anticipated absences for university-sanctioned events, religious holidays, and military deployments must be cleared with me at least one week before the expected absence. All absences for illnesses, quarantines or self-isolations must be documented by a health professional and communicated to me as soon as possible. Please make sure your documentation includes a date, your name, your physician's signature, and a statement indicating that your absence is deemed medically necessary for a specific period of time.

Excused absences do not relieve you from responsibility for any part of the course work missed during the period of absence. Please note that it is your duty to consult with me, your lab instructor, the Canvas site, and/or your peers in a timely manner to obtain missed lecture and lab materials and other important information. Fair and appropriate accommodations will be determined on a case-by-case basis.

Course Withdrawal

Please note that unless you withdraw from the course, a letter grade will be reported at the end of the semester, even if you stop attending class without initiating a proper withdrawal. The last day to withdraw from the course and receive a letter grade of W on your transcript is March 31st. The deadline for complete withdrawal from all spring semester courses is April 26th.

Academic Integrity

Arizona State University and the College of Integrative Sciences and Arts maintain strict standards of academic integrity. All forms of subtle or overt dishonesty will not be tolerated. Academic honesty is expected of all students in all course assignments, laboratory activities, exams, and academic transactions and records.

In this course, all assignments must be completed by the student. Artificial Intelligence (AI), including ChatGPT and other related tools used for creating text, images, graphs, tables, computer code, or other media, are not

permitted for use in any of the work you will complete in this class. Use of generative AI tools will be considered a violation of the ASU Academic Integrity Policy, and students may be sanctioned for confirmed, non-allowable use in this course. For more information, please review the policy at http://provost.asu.edu/academic-integrity.

Academic dishonesty includes, but is not limited to, cheating on an academic evaluation or assignment, plagiarizing published literature (including Internet content), deceiving others (*e.g.*, by fabricating data or information), using unapproved study materials (*e.g.*, generative AI tools, exams from previous semesters, etc.), or falsifying academic records. Turning in an assignment (all or in part) that you completed for a previous class is considered self-plagiarism; self-plagiarism infractions are subject to the same penalties as copying someone else's work without proper citations. Please speak with me directly if you have taken this class previously and would like to use work from your prior attempts. Students also must refrain from uploading to any course shell, discussion board, forum, or website material that is not the student's original work, unless the students first comply with all applicable copyright laws. Faculty members reserve the right to delete materials on the grounds of suspected copyright infringement.

If you fail to meet the standards of academic integrity in any of the criteria listed on the university policy website, sanctions will be imposed by the instructor, college, and/or dean. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification, and/or dismissal.

Please strive to utilize your own creativity in all of your academic endeavors. Resources and strategies for completing your work with integrity and avoiding plagiarism are available at https://provost.asu.edu/academic-integrity/resources/students. If you have any questions about your work and the academic integrity policy, please discuss your concerns with me and/or my aides in advance of submitting an assignment.

Use of Course Materials

University policy dictates that you must obtain my written permission if you intend to sell, publish, or post online any of my course materials, including your own notes taken during my oral lectures. I realize that some of these intentions may improve student outcomes in this course, so please grant me the courtesy of discussing them with you *before* you risk violating university policy. Thank you!

Trigger Warning

Please be advised that biology discussions, writings, images, and graphics, particularly those that relate directly to the human condition, may include content that is considered offensive by some students. It most certainly is not my intention to offend anyone! I will do my very best to provide warnings when this kind of material emerges and to maintain an appropriate level of respect and professionalism in the course at all times. If I fail to provide an adequate warning, or if you would like to report or discuss material that is offensive to you, please see me during office hours or contact me via e-mail at lisenbee.cayle@asu.edu.

Safe Environments

Learning is most effective when a safe environment is established in the classroom, regardless of whether that space is physical or virtual. The success of the course rests on your ability to create a safe environment where everyone feels comfortable to share and explore ideas. In accordance with university policies, students enrolled in this course have a responsibility to support an environment that nurtures individual and group differences and encourages engaging, honest discussions. We also must be willing to take risks and ask critical questions, especially if we are to probe the most interesting and sometimes ethically challenging aspects of biology. Doing so will contribute positively to your own and others' intellectual and personal growth and development. I welcome disagreements in the spirit of critical academic exchange, but *please remember to be respectful of others' viewpoints, whether you agree with them or not*.

All incidents and allegations of violent or threatening conduct by an ASU student (whether on- or off-campus) must be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students. If either office determines that the behavior poses or has posed a serious threat to personal safety or to the welfare of the campus, the student will not be permitted to return to campus or reside in any ASU residence hall until an appropriate threat assessment has been completed and, if necessary, conditions for return are imposed. ASU PD, the Office of the Dean of Students, and other appropriate offices will coordinate the assessment in light of the relevant circumstances.

Health & Allergen Warning
Please be advised that the laboratory portion of this course includes exposures to whole organisms and/or fractions of bacteria, protists, fungi, plants, and animals. Some of these biologicals may contain antigens that can provoke allergic reactions in certain individuals. Please let me know immediately if you have a history of chronic allergies, if you are immunocompromised or pregnant, or if you have general questions or concerns about your health and safety in a laboratory environment.

Student Resources
My Instructional Aides are your first and most relevant resource for this course. If you would like additional assistance with course material, I encourage you to visit, call (602-496-4ASU), or e-mail (askdpc@asu.edu) the Student Success Center on the first floor of the University Center building to schedule an appointment with a subject area tutor. These friendly folks are ready to help and are a highly-trained, very valuable resource! In some semesters, the Center also offers a Supplemental Instruction (SI) program, online tutoring sessions, and additional study resources that may be coordinated through a separate Canvas site. Do not mistake this site for the official course Canvas site!

If you require special considerations to enable your full potential in this class, please see me during the first week of classes so that appropriate accommodations may be arranged. If you have a disability that requires assistance in lectures, labs, or during exams and presentations, please contact Student Accessibility and Inclusive Learning Services (Post Office Building Suite 201, 602-496-4321, drcdowntown@asu.edu). Instructors are not allowed to provide disability accommodations without authorization from SAILS.

Military students with mandatory line-of-duty activities that conflict with course obligations are eligible for make-up assignments and/or examinations without penalty. Please discuss these concerns with me at your earliest convenience. For more information, consult the university's Student Services Manual (SSM), Section 201–18 – Accommodating Active Duty Military (https://www.asu.edu/aad/manuals/ssm/ssm201-18.html).

Hints for Success
University lab science courses can be a bit daunting for the unsuspecting and unprepared. If you find yourself falling behind, try one or more of the following:

- Browse our lecture notes, review the appropriate chapters/sections of the textbook, and complete the assigned lecture prep activities *before* coming to class. You may find this approach uncomfortable and difficult, but don't get discouraged! It's very likely that this method will challenge your study skills and routines, and that's exactly what it should be doing! Over time, diligent pre-class work should improve your level of engagement during lecture and ease your preparation for exams. This tactic is especially important for lab, too! Your ability to complete exercises safely and efficiently demands that you *pre-read the lab exercises*.
- Though it can help visual learners with memorization tasks, it's typically not productive to copy the information on my slides word-for-word during lecture because I post my notes on Canvas as the semester progresses. Instead, take *general* notes digitally or on paper. Keywords are better than full sentences, especially if you're having trouble keeping up. Focus on writing down the examples and problems we discuss in class, especially if they don't appear in my notes. It's perfectly acceptable to avoid note-taking completely, too!
- Review your notes and/or my lectures after class and fill in important details *in your own words* that highlight the key concepts. Use these reviews and your performance on the MasteringBiology tasks as guides for more in-depth study.

And last, but certainly not least . . .

- I am known for focusing on conceptualization and application in BIO 181. Try to incorporate the following ordered routine into your study sessions: *familiarize, organize, and conceptualize.* It's very important to realize that you can't organize material with which you're not familiar, and you can't fully understand and apply concepts that aren't organized. Most common study strategies involve *familiarization* efforts: listening to a lecture, re-reading notes, memorizing facts, reviewing flash cards, etc. *Organization* tasks include re-writing notes in your own words (this forces you to interpret the information rather than simply copy it verbatim to another location), preparing outlines/study guides, building concept maps, preparing compare/contrast tables, etc. *Conceptualization* is demonstrated by your ability to use information in a new context to solve a problem, and it is the most difficult aspect to grasp and prepare. Try having a study partner ask you "What if . . ." questions that challenge you to think about the material you've learned in a new way. I'm very happy to help you develop these and other study strategies this semester! Please come see me during office hours!

Additional Information
Appendix A includes a list of university policies and additional resources that the institution has asked me to include in my course syllabi. Please review these items carefully. I am happy to provide further clarification and answer questions about them at any time during the semester.

Disclaimer
The contents of this syllabus, particularly the lecture and lab schedules, may require revision during the semester due to unforeseen circumstances. If updates are necessary, they will be announced in class and posted to the course Canvas site. Please note that the date and time of our last exams is set by the University to avoid scheduling conflicts during final exam week and thus cannot be changed.

LABORATORY SCHEDULE (TENTATIVE)

Week	Date	Lab Topic	Exercise
1	Jan 10-12	Lab Safety and Database Research	*
2	Jan 17-19	Scientific Investigation	1
3	Jan 24-26	Isolation of Biological Macromolecules	*
4	Jan 31-Feb 2	Microscopes and Cells	2
5	Feb 7-9	**Oral Presentations**	*
6	Feb 14-16	Diffusion and Osmosis	3
7	Feb 21-23	Enzymes	4
8	Feb 28-Mar 1	Cellular Respiration and Fermentation	5
9	Mar 6-8	*Spring Break – No Lab*	
10	Mar 13-15	Photosynthesis	6
11	Mar 20-22	*No Lab*	
12	Mar 27-29	Mitosis and Meiosis	7
13	Apr 3-5	Mendelian Inheritance	*
14	Apr 10-12	**Poster Presentations**	*
15	Apr 17-19	Recombinant DNA Technology	*
16	Apr 24-26	Molecular Biology	8

* These elements do not appear in your lab manual; additional information will be provided.

LECTURE SCHEDULE (TENTATIVE)

	Wk.	Date	Lecture Topic	Text Support	Mastering*	
UNIT 1 Molecular Basis of Life	1	Jan 8	Introduction	Syllabus, 1.1, 1.2, 1.3		HW Unit 1
		Jan 10	The Chemical Foundation of Life	2.1, 2.2	LP Ch. 2	
		Jan 12	Biological Macromolecules	2.5		
	2	Jan 15	*MLK, Jr. Day – No Class*			
		Jan 17	Lipids	6.1		
		Jan 19	Carbohydrates	5.1, 5.2, 5.3	LP Ch. 5	
	3	Jan 22	Proteins	3.1, 3.2, 3.3, 3.4	LP Ch. 3	
		Jan 24	Nucleic Acids	4.1, 4.2, 4.3, 4.4	LP Ch. 4	
		Jan 26	**Unit Exam 1**		**EP Unit 1**	
UNIT 2 Cellular Basis of Life	4	Jan 29	Cell Structure	7.1, 7.2	LP Ch. 7	HW Unit 2
		Jan 31	Cell Structure	7.3, 7.4		
		Feb 2	Cell Structure	7.5, 7.6		
	5	Feb 5	Membrane Structure	6.2	LP Ch. 6	
		Feb 7	Membrane Transport	6.3, 6.4		
		Feb 9	Cellular Connections	11.1	LP Ch. 11	
	6	Feb 12	Cell Signaling	11.2		
		Feb 14	Cell Signaling	11.3		
		Feb 16	**Unit Exam 2**		**EP Unit 2**	
UNIT 3 Energy and Metabolism	7	Feb 19	Energy and ATP	2.3, 8.1, 8.2	LP Ch. 8	HW Unit 3
		Feb 21	Enzymes	8.3, 8.4, 8.5		
		Feb 23	Cellular Respiration	9.1, 9.2	LP Ch. 9	
	8	Feb 26	Cellular Respiration	9.3, 9.4		
		Feb 28	Cellular Respiration	9.5		
		Mar 1	Fermentation	9.6		
	9	Mar 4	*Spring Break – No Class*			
		Mar 6	*Spring Break – No Class*			
		Mar 8	*Spring Break – No Class*			
	10	Mar 11	Photosynthesis	10.1, 10.2	LP Ch. 10	
		Mar 13	Photosynthesis	10.3, 10.4, 10.5		
		Mar 15	**Unit Exam 3**		**EP Unit 3**	
UNIT 4 Growth and Inheritance	11	Mar 18	Cell Reproduction and Mitosis	12.1, 12.2	LP Ch. 12	HW Unit 4
		Mar 20	Cell Cycle Control	12.3		
		Mar 22	Cancer Biology	12.4		
	12	Mar 25	Sexual Reproduction and Meiosis	13.1, 13.2	LP Ch. 13	
		Mar 27	Mendelian Inheritance	14.1	LP Ch. 14	
		Mar 29	Mendelian Inheritance	14.2, 14.3		
	13	Apr 1	Chromosomal Inheritance	14.4, 14.5		
		Apr 3	Pedigrees	14.6		
		Apr 5	**Unit Exam 4**		**EP Unit 4**	
UNIT 5 Genetic Principles	14	Apr 8	Historical Basis of DNA Function	15.1	LP Ch. 15	HW Unit 5
		Apr 10	DNA Replication	15.2, 15.3		
		Apr 12	DNA Replication	15.4		
	15	Apr 15	DNA Repair	15.5		
		Apr 17	Gene Function	16.1, 16.2	LP Ch. 16	
		Apr 19	Gene Function	16.3		
	16	Apr 22	Transcription	17.1, 17.2	LP Ch. 17	
		Apr 24	Translation	17.3, 17.4, 17.5		
		Apr 26	Regulation of Gene Expression	18.1, 19.1, 19.6		
		Apr 28			**EP Unit 5**	
	17	**May 1**	**Unit Exam 5 + Final Exam (7:30-9:20 am), HLTHN 110**			

* MasteringBiology tasks. LP – Lecture Prep, HW – Homework, EP – Exam Prep. All assignments are due by 8:00 am on the date specified.

APPENDIX A: UNIVERSITY POLICIES AND ADDITIONAL RESOURCES

Student Code of Conduct

Students are required to adhere to the behavior standards listed in the Arizona Board of Regents Policy Manual, Chapter V Campus and Student Affairs – Code of Conduct (http://students.asu.edu/srr/code) and the university's Academic Affairs (ACD) Manual, Section 125 – Computer, Internet, and Electronic Communications (http://asu.edu/aad/manuals/acd/acd125.html).

Students are entitled to receive instruction free from interference by other members of the class. I do have the authority to withdraw a student from a course with a mark of "W" or "E" when the student's behavior disrupts the educational process (see http://asu.edu/aad/manuals/ssm/ssm201-10.html). It is my duty to determine which behaviors are deemed disruptive to the classroom environment and/or learning process.

Harassment

ASU policy prohibits harassment based on race, sex, gender identity, age, religion, national origin, disability, sexual orientation, Vietnam era veteran status, and other protected veteran status. Violations of this policy may result in disciplinary action, including termination of employees or expulsion of students. Please contact me if you are concerned about harassment of any kind.

Title IX

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at the following web site: https://sexualviolenceprevention.asu.edu/faqs. As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, https://eoss.asu.edu/counseling, is available if you wish to discuss any concerns confidentially and privately.

Mental Health

As a student, like anyone else, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These emotional health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. ASU Counseling Services provides counseling and crisis services for students who are experiencing a mental health concern. Any student may call or walk in to any ASU counseling center for a same day or future appointment to discuss any personal concern (http://eoss.asu.edu/counseling). ASU's dedicated crisis line is available for consultations after office hours at any time by calling 480-921-1006.

Statement on Inclusion

Arizona State University is deeply committed to positioning itself as one of the great new universities by seeking to build excellence, enhance access and have an impact on our community, state, nation and the world. To do that requires our faculty and staff to reflect the intellectual, ethnic and cultural diversity of our nation and world so that our students learn from the broadest perspectives, and we engage in the advancement of knowledge with the most inclusive understanding possible of the issues we are addressing through our scholarly activities. We recognize that race and gender historically have been markers of diversity in institutions of higher education. However, at ASU, we believe that diversity includes additional categories such as socioeconomic background, religion, sexual orientation, gender identity, age, disability, veteran status, nationality and intellectual perspective.