BIOL 2324 Human Physiology – Syllabus, SPRING 2022



Instructor: Christie L. Adkins, M.S.

Email: <u>Christie.Adkins@angelo.edu</u> Please see the information in your syllabus below (**Communication** section) to see what information should be included in the subject line and your email. If the email subject line is different from that stated in that section of the syllabus your email will not receive a reply.

Phone: (325) 486-6633 or 942-2189 (Bio. Dept. Office)

Office: 118-B, Raymond C. Cavness Science Building, first floor

Office Hours: Email Ms. Adkins (christie.adkins@angelo.edu) to request an appointment on TR 11 AM-12:30 PM AND 2-2:30 PM or W 9-10 AM (See Blackboard or my office door for my full schedule). You MUST set up any appointment via email to meet during or outside of office hours. All office hour meetings will be by APPOINTMENT ONLY.

Course Information

Course Description

Welcome to Human Physiology! In this class you will explore topics concerning the normal functions of the human body's cells, tissues, organs, and organ systems (see schedule).

Prerequisite and Co-requisite Courses

BIOL 2323 and 2321 are prerequisites for this course. PLEASE NOTE: BIOL 2124, Human Physiology Lab is a co-requisite to BIOL 2324 Human Physiology Lecture, which you are required to also be enrolled in this semester. To earn course credit, enrollment in both classes this semester is required.

Prerequisite Skills

Accessing Internet websites (such as Top Hat and Mastering A and P), using ASU Library resources, and proficiency with Microsoft Word and/or PowerPoint are expectations of the BIOL 2324/2124. Other expectations include the ability to create and upload Word/PDF documents to Blackboard. Other formats like JPG's, Links to Google Docs, etc. will not be accepted.

Student Learning Outcomes

A successful student in Human Physiology should be able to achieve the course and state core related learning outcomes listed below. Upon completion of this course, students will be able to:

- locate, identify, and functionally describe the structures of the human body at all levels of organization (i.e. recall content) = CT1, EQS1, EQS2 – Assessment = In class activities, lecture exams, embedded test questions, lab practical exams, and lab activities/reports
- develop understanding of the functional relationships of anatomical structures to one another (at all levels of organization) in health and communicate the acquired knowledge in written form. (i.e. comprehend the material). CS1 – Assessment = In class activities, lecture exams, embedded test questions, lab practical exams, and lab activities/reports
- perform laboratory investigations in which numerical physical and chemical physiological data pertaining to tissue function are collected, classified, and analyzed in order to reach an informed conclusive interpretation about relevant clinical scenarios and "real-world" applications. EQS1 Assessment = In class activities, lecture exams, embedded test questions, lab practical exams, and lab activities/reports work effectively with others to support and accomplish a shared goal = CS1, TW2 Assessment = In class activities, lecture exams, embedded test questions, lab practical exams, and lab activities/reports
- connect what she/he is learning to her/his own field (i.e. to make physiology relevant to your own academic endeavors).

In other words, you should be able to:

- describe and explain the normal function of the cells, tissues, organs, and organ systems of the human body to help prepare you for a career in your chosen field (e.g., to gain content knowledge and comprehension).
- connect what you have learned to your own academic field (e.g., to make physiology relevant to your own academic endeavors).
- apply what you have learned to evaluate various case studies, analyze controversial topics, and to solve problems relevant to physiology and to your field (e.g., to learn how to ask questions, work with others, and apply the information you have learned in different situations).

Assessment = In class activities, lecture exams, embedded test questions, lab practical exams, and lab activities/reports

For State and Accreditation purposes this course will assess your ability to:

- CT1: Gather, analyze, evaluate, and synthesize information relevant to a question or issue
- CS1: Develop, interpret, and express ideas through effective written communication.
- EQS1: Manipulate and analyze numerical data and arrive at an informed conclusion.
- EQS2: Manipulate and analyze observable facts and arrive at an informed conclusion.
- TW2: Work effectively with others to support and accomplish a shared goal.

Course Delivery

Biology 2324 and 2124 are face-to-face courses with online components that students are expected to access in <u>Blackboard</u>.¹ Students will also be required to purchase and be able to access both Top Hat and Mastering A and P via the internet. In other words, we will be meeting physically on campus AND will be completing much of the course work online (see the Required Course Materials section of your syllabus for the necessary technology).

Required Texts and Materials

- Required Human Physiology: An Integrated Approach, 8th Ed. Silverthorn (2019), Prentice-Hall. The electronic version of this textbook is accessed through Mastering A and P (MAP)
- **Required** Lab Protocols which are accessed through the Lab Blackboard Course Page.
- Required An inexpensive calculator that does basic math functions. Cell phone calculator use will not be permitted during exams.
- **Required** Cell phone for attendance in lab.
- Encouraged Masks at all times.
- Optional, but encouraged Laptop or tablet for use in lecture.

Technology Requirements

To successfully complete this course, students are required to:

- purchase access to the *Top Hat Response System* Mobile/Electronic device-driven platform that we will use in both lecture and lab for attendance, quizzes, readings, AND homework activities. There is an app for both android and apple-based smartphones and tablets so that you can take physiology anywhere! It also works well with and without Wi-Fi, although Wi-Fi is required. Your lecture or lab instructor will have more information on how to join the lecture and lab sections through the Top Hat Monocle.
- purchase *Mastering A and P* access MAP is an effective and widely used online homework, tutorial, and assessment system for human physiology. You will use MAP in both lecture and lab. From MAP you will be able to access the following from the "My A&P Study Area":
 - electronic textbook version of Human Physiology: An Integrated Approach, 8th Ed. Silverthorn (2019), Prentice-Hall.
 - PhysioEx: Laboratory Simulations which will be used in lab.
 - Interactive Physiology (IP) assignments for lecture and as a reference in lab.
- have reliable Wi-Fi and broadband internet access either on campus, off campus, or both.
- have access to a desktop computer or laptop (must be able to run the Google Chrome browser)
- have in class (both lecture and lab) access to a laptop or a smartphone/tablet (either Apple or Android-based)
- have access to a web camera (either on a desktop computer/laptop or smartphone/tablet)
- check Blackboard regularly. Announcements, grades, some course materials, and assignments for lectures will be distributed this way. Most lab resources will be distributed via the LECTURE Blackboard course page.
- complete the Biosafety Training AND Lab Chemical Safety and Hygiene
 Courses on Bb. You cannot attend lab unless you take and pass the required safety training with at least a 90%. It must be completed by the 2nd lab meeting.
- NOT Required Chromebooks are NOT allowed for the technology that we use in lecture (or lab). The technology that we use CANNOT be accessed by a Chromebook.

^{***}Note: lecture presentations, handouts, outlines, exam checklists, and study tips are posted on Top Hat or Blackboard.***

Communication

Class communication will be routinely distributed via email. Students are required to have an ASU email account that is MUST be checked DAILY and is the prefer method of communication for BIOL 2324/2124. **This is NOT an option.** Call the ASU IT Department if you need one or have forgotten how to access it (325-942-2911).

All private communication will be done exclusively through your ASU email address, which should be checked frequently for announcements and policy changes. In your emails, you are required to include the course name and section number/day and time in your subject line. In the body of your email clearly state your name, ASU (campus) ID number, and a detailed reason for your email. Email messages will receive a response within 24 hours during working hours Monday through Friday. Weekend and late Friday afternoon messages may not be returned until Monday. However, if the email subject line is different from that stated above AND you do not include the information previously stated, your email will not receive a reply in a timely manner or it may not receive a reply at all. Any email not originating from an ASU email account will NOT receive a reply.

Virtual communication is available: Office hours and/or advising may be done with the assistance of the telephone, Collaborate, etc. Please email me for more information on these modes of communication.

Grading

Evaluation and Grades

Course grades will be determined as indicated in the table below.

Assessments	Points Available
Laboratory Exams (3 @ 150 each)	450
Lecture Exams (4 @ 125 each)	500
*Lecture based MAP activities, in class activities, Top Hat homework, quizzes, etc.	*150
Total	1100

^{*} Cumulatively this is equal to a lecture exam plus 25 more points. These are required, not to be considered as bonus points.

Grading System

Course grades will depend on completing course requirements and meeting the student learning outcomes.

This course uses the following grading scale:

A = 900.00-100 points

B = 800.00-899.99 points

C = 700.00-799.99 points

D = 600.00-699.99 points

F = 0.599.99 points (Grades are not rounded up)

Please note exams, quizzes, or final grades are not curved, nor are they negotiable (i.e., an 899.9 pts = B; 599.9 pts = F, etc.). Grades will be changed only if you can demonstrate (with verifiable evidence) that there was an error in how the grade was calculated or an incorrect grade was entered. Once the grade is posted on Blackboard, you have only 48 hours to challenge it...(the end of the semester is too late). See 'Re-grading Procedures' below for a complete explanation of how to do this. All students will be treated equally and fairly, and all grades will be calculated in the same way, regardless of extenuating circumstances or any reason not related to your actual performance in the course. However much I may sympathize with your (personal) circumstances, I never consider them to be a basis for grade assignments. The activity points in the lecture component of this course serve as an incredibly generous, built-in curve. You are required to complete ALL activity points when they become available because once assigned; they cannot be made up. Therefore, you should always attend class and strive to do your best so that you may earn the grade you want. It is your responsibility to keep up with your point total. Don't worry; I will help if you just ask!

Assignment and Activity Descriptions

Class Participation Activities & Homework (150 points):

- The volume of material covered in this course makes it necessary for you to dedicate a sufficient amount of time each day, not only to attending class but to studying material outside of class.
- To encourage you to keep up with this material and to provide a means of self-assessment, activity quizzes, activities, and assignments will be made periodically during the semester via Top Hat and Blackboard. Participation in ALL of these activities is expected and required.
- A maximum of 150 points is allowed from Top Hat and Blackboard (Bb) activities and other homework. Because there are no make-ups or late credit for these activities, if you miss the deadline, these points cannot be made up. It is in your best interest to complete all activities correctly and on time.
- If you do not earn points on a given assignment or miss a deadline, you will have an opportunity to earn them on another but are still responsible for the material covered in the assignment. Top Hat Module assignments are online so that you can work on them at your convenience.

- The maximum number of points you can earn in this category is 150.
 Remember these are equivalent to 25 points more than 1 lecture exam, so DO NOT miss an activity point assignment. They are required, not bonus.
- Also, please note that Blackboard is merely a repository for grades and cannot calculate them. For example, the maximum number of points you can earn in this category is 150, even though you may have more showing in your total.

Laboratory Assessment (450 points):

Your lab performance will be assessed using 3 lab exams over materials located on Blackboard and Top Hat. These will be discussed in more detail by your lab instructor and posted in your lab syllabus.

Lecture Exams (500 points):

Your performance will be assessed by 4 lecture exams (see schedule) worth 125 points each for a total of 500 points in the lecture. You are required to take all 4 exams, no exceptions.

- Lecture exams will assess your knowledge, comprehension, and application of the material presented via Top Hat and Blackboard, and other in-class or online assignments made since the previous exam.
- The exams will also assess your application of the content in the form of problems that will be assigned in advance from your *summary checklists* discussion application questions (See Top Hat) (~25%).
- The format of all the exams will be multiple-choice. Tentative exam dates are given in the schedule. Exams are designed to be completed in a 1-hour time frame.
- Student conferences are required for any freshman who fails any exam, quiz, or assignment or who has a combined lecture/lab grade of less than 60%.
 Upperclassmen are also invited to meet with me at their discretion.
- Tentative lecture exam dates are located in the Tentative Course Schedule at the end of the syllabus and on the Lecture Blackboard Course page.
- All students are required to take Exam 4. If you missed one exam (1-3) then you
 must take the final and the comprehensive make-up exam in order to replace the
 missed exam. This is only if approved by the instructor.

Note: Those students with documented special accommodations must meet with me at least 3 days prior to the exam in order to make arrangements. Failure to follow these instructions may not have accommodations available.

Make-Up Exams:

If you miss a lecture exam for any legitimate reason you will be required to take a comprehensive make-up exam or a grade of zero (0) will be entered for the exam missed. The grade earned on the comprehensive exam will serve as the replacement for the missed exam. There will be one, and only one, comprehensive exam given during the final exam period. This exam will cover any/all material presented and assigned from the beginning of the semester, and thus includes any material covered on the first three major exams. The format will be 85-100 multiple choice questions.

Re-grading Procedures:

An answer "key copy" of each lecture exam will be made available (in my office ONLY) after it has been graded. You are encouraged to review the "key copy" (in my office ONLY) to learn from your mistakes. You are also encouraged to confer with me via the outlined procedure below if you have concerns regarding your exam once you have compared your work to the key. To report calculation or grading errors on your exam, you are required to follow the *Procedures for Re-grading* shown below. Activity quizzes and assignments are not subject to re-grading.

If you believe you have found a grading error:

- remember that a 1-point error is at best only .0025 pts on your final course average.
- study the key in my office before you request that any question(s) be re-graded. You must clearly state your reason(s) for thinking the question has been graded incorrectly in a neatly written, note. "Question X is graded wrong, or I deserve more points on question Y" are not reasons. This means I expect a clearly delineated/rational reason based on verifiable factual information that your answer is correct (i.e., from a reputable source like your text or lab manual). This means I expect a short paragraph for each error along with specific "page" references.
- Email or turn in to me your justification. Understand I will be very fair and accurate, but the entire exam will be re-graded, AND if the resulting grade is lower than the previous, the second grade will replace the first.
- The deadline for requesting any recalculating or re-grading is 48 hours following the posting of the grade on Black board...No Exceptions.

Attendance and Withdrawal from the Course

Attendance will affect your grade in the course. You are required to be in class every day that it is scheduled (announcements will be made frequently via Blackboard and Email, if assignments are strictly online.) You are responsible for all information given both in lecture, as well as outside of class. ASU requires that attendance be

checked at each class meeting. Via Top Hat a randomly generated attendance code will be generated at the beginning of each class meeting. You must enter this attendance code into your Top Hat application. If you arrive late, it is your responsibility to locate and enter the attendance code. Anyone who does not enter the attendance code at each day's meeting will be counted absent. You must stay for the entire lecture to get credit for attendance. Other means of taking attendance will also be used to cross reference your presence in class. I do not give points for perfect attendance nor do I subtract points for excessive absences.

Attendance will affect your grade in this course however. You penalize yourself on exams when you miss class simply because you are missing learning opportunities. For example, activity point opportunities given in-class cannot be made up. Plus on average, students who miss a single lecture class score 6-8% lower than the class average on exam scores. This decreases about another 6-8% for missing two classes. Missing more than two lecture classes virtually guarantees a very poor exam score. In general, it is true that students who exhibit erratic attendance do not perform to their full potential and may be perceived as having a lack of interest in completing the course. If a situation exists which is causing you to miss class excessively, I encourage you to discuss the situation with me.

Excessive absences are required by the university to be reported to the Registrar's Office, the Dean of Student Life and/or the department head of your declared major. If you are an athlete, the NCAA compliance officer and your coach will be contacted. Contrary to popular belief, a student who fails to attend class is not automatically withdrawn from a course and will receive a grade that represents their performance throughout the entire semester.

You will also be expected to meet the attendance requirements, by completing all posted assignments by the deadlines on Top Hat and Blackboard. This means you are required to have internet access for the entire course. Accommodations will not be made for a lack of internet access. Please inform me well ahead of time if you will need to miss an assignment for any reason, including religious holy days.

NOTE: You are NOT automatically dropped if you stop attending class or stop completing assignments. If you wish to discontinue participation in human physiology, you must formally withdraw by first seeing your instructor. After visiting with your instructor and you still wish to drop the course, you must complete and submit the *Course Drop Request Form* located on RamPort (Under the Registration link). Requests for drops after the established drop date will not be processed and you will

receive a grade in the class. The last day to drop the course is Thursday, 28 April 2022. The appropriate form must be submitted by 5:00 p.m. Central Time.

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- Angelo State University Student Handbook²
- Angelo State University Catalog³

Academic Integrity

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university's <u>Statement of Academic Integrity</u>⁴ (Page 97).

Accommodations for Students with Disabilities

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the Student Disability Services website. The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dr. Dallas Swafford Director of Student Disability Services Office of Student Affairs 325-942-2047

dallas.swafford@angelo.edu

Houston Harte University Center, Room 112

Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures⁶ for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU's <u>Academic Integrity Statement</u>⁷ in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the <u>ASU Writing Center</u>.⁸

Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day⁹ for more information.

Title IX at Angelo State University

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Miller, J.D. You may submit reports in the following manner:

Online: Incident Reporting Form¹⁰

Face to Face: Mayer Administration Building, Room 210

Phone: 325-942-2022

Email: michelle.miller@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit the <u>Title IX website</u>.¹¹

Information About COVID-19

Please refer to ASU's <u>COVID-19</u> (<u>Coronavirus</u>) <u>Updates</u>¹² web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

Modifications to the Syllabus

This syllabus, including grade evaluation and course schedule, is subject to modification on potentially short notice based on developing circumstances.

Tentative Course Schedule

Week	DATE (Approx. Week of)	TOPICS in Approximate order in which they will be covered on Top HAT and the Silverthorn text	Top Hat Module Assignments	Textbook Chapter References 8th Edition of Silverthorn
1	17 Jan	Course Policies, Tips and Intro to Science & Physiology	1	1
2	24 Jan	Tissues/Organ Systems ^, Characteristics of Life and Homeostasis	3, 6	3, 6

3	31 Jan	Cell Physiology: Organization^ & Biochemistry ^, Cell Structure and Function^	2, 3	2, 3
		Membrane Transport Processes	5	5
4	7 Feb	Cell Metabolism & Metabolic Principles	4, 22	4, 22
5*	14 Feb	Digestive Physiology	21	21
6	21 Feb	Nervous System Physiology: Nervous Tissue & Organization Overview^	8	8
	21100	Membrane Potentials and Impulse Communication, Nerve Impulse Conduction	5, 8	5, 8
7	28 Feb	Central Nervous System (Functional Regions)^	9	9
0	7 Mar	Sensory Physiology: General and Special	10	10
8	/ IVIAI	Peripheral Nervous System (Somatic, Enteric, Autonomic)	11	11
9	14 Mar	Spring Break	Study	Study
10	21 Mar	Muscle Physiology and Control of Body Movement	12, 13	12, 13
11*	28 Mar	Cardiovascular Physiology: Cardiac Physiology, Blood Flow and Pressure, Blood	14, 15, 16	14, 15, 16
12	4 Apr	Cardiovascular Physiology: Cardiac Physiology, Blood Flow and Pressure, Blood continued	14, 15, 16	14, 15, 16
13	11 Apr	Respiratory Physiology, Gas Exchange & Transport	17, 18	17, 18
14	18 Apr	Kidney Physiology, Fluid & Electrolyte Balance	19, 20	19, 20
15	25 Apr	Reproductive Physiology	26	26
16*	2 May	Endocrine and Immune Systems Overview	7, 23, 24	7, 23, 24
17	9 May	Finals Week		
		Exam Schedule	TR 8 AM	MWF 10 AM
		Exam 1 (Topics for Weeks 1-4)	R 10 Feb	F 11 Feb
		Exam 2 (Topics for Weeks 5-8)	R 10 Mar	F 11 Mar
		Exam 3 (Topics for Weeks 10-13)	R 14 Apr	F 15 Apr
		Exam 4 (Topics for Weeks 14-16)	Tue 10 May 8-10 AM	Mon 9 May 10:30 AM - 12:30PM
		^This content is assumed knowledge covered in BIOL 2323/2123 (or prior coursework) ^ Independent review of this material in conjunction with class work is highly recommended		

How to Pass the Class

Physiology requires a deeper conceptual understanding of the material rather than the simple memorization of facts you may have encountered in anatomy. If you find yourself struggling use this section to assist you in achieving the course objectives and maximize your learning of the materials.

HOW SHOULD I STUDY?

Because everyone learns in different ways, there are lots of ways to learn the material. This is how I would suggest that you approach the course.

- 1. Start with the Required Videos, if assigned. Watch the short video 9-12 minutes. It will give you an introduction to the topic.
- 2. Next, complete the Top Hat reading assignments, study the accompanying slides, and complete accompanying questions and/or quizzes assigned.
- After reading through a Module on Top Hat, reference the slides for a visual representation. Learn the terms mentioned on Top Hat that are visible on the slides.
- 4. After reading through the Module and reviewing the corresponding slides, answer the discussion/checklist application questions. These will not be graded but will appear on the exam. Use the Selected PowerPoint Presentations (if available) on Bb for reference to assist you.
- 5. Complete any assignments on Blackboard (Bb) or Top Hat (TH).
- 6. Now comes the fun. You will need to commit to memory the items on Top Hat, Slides, and Discussion/Checklist Application Questions to memory. There are lots of different ways to do this, and I will help.
- 7. Every 2-3 days, I will update you on all assignments and due dates.

WHAT DO I NEED TO STUDY?

AGAIN...This is a face-to-face course with a large online component of the course. Therefore, much of your learning will occur outside of the classroom. Simply stated, these are the things you need to work on EVERY DAY. Start by organizing all your materials and making a study plan. Then implement and stick to it. See me if you need help.

For Lecture:

- Required access to Blackboard for announcements, scores or grades, and other course materials
- Posted lecture slides and activities via Top Hat

- Handwritten or typed lecture notes that you take from PowerPoint slides, along with various other lecture activities (notes, clinical applications, & activities we actually do in class or online)
- Cell phones, tablets OR laptops are a requirement in face-to-face lectures.
 These will be required with the Top Hat Response System (or for typing your notes).
- Online Lessons with lecture notes and activities on Top Hat or Blackboard (these are notes or materials that we will not have time to cover in lecture, but you are still responsible for on exams (these will be announced or assigned well in advanced of an exam)
- Top Hat Modules These reading exercises, accompanying slides, and homework activities that should be your primary focus for learning
- Exam Checklist Discussion Application questions Located on Top Hat. These are application questions that will help you review the material for exams. Some will be verbatim on the lecture exams.
- Lecture Videos on Blackboard (if assigned) Located under "Required Videos" on Bb, they will introduce some topics.
- PowerPoint Presentations on Top Hat or Blackboard Located under "Modules" or "Lessons" on Bb. These are primarily for reference. We will use these occasionally to review material not available by other means. They will also help you in answering Exam Checklist Application Discussion questions.

For Lab:

- Complete the ASU.BioSafety: BioSafety Training course, along with the Lab Safety and Chemical Hygiene Traning on Blackboard. You cannot attend lab unless you take and pass the required safety training with at least a 90%. It must be completed by the 2nd lab meeting.
- Lab Protocols on Blackboard (read them BEFORE attending lab)
- Lab Activities and Exercises on Bb and Top Hat (complete these as assigned in lab)
- Lab PowerPoints with Images on Bb and Top Hat
- Lab Videos on Bb and Top Hat (if assigned)
- Expected results PowerPoints and Handouts on Bb and Top Hat
- More information will be provided in your lab syllabus
- All lab safety policies must be followed.

¹ https://blackboard.angelo.edu/

² https://www.angelo.edu/current-students/student-handbook/

³ https://www.angelo.edu/academics/catalog/

⁴ https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=97

⁵ https://www.angelo.edu/current-students/disability-services/

⁶ https://angelo.policystat.com/policy/10659448/latest/

⁷ https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=97

⁸ https://www.angelo.edu/current-students/writing-center/academic_honesty.php

⁹ https://angelo.policystat.com/policy/10659368/latest/

¹⁰ https://www.angelo.edu/incident-form

¹¹ https://www.angelo.edu/title-ix

¹² https://www.angelo.edu/covid-19/