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## GENERAL BIOLOGY I LABORATORY (BIOL 1106) Fall 2024

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**Course Objectives:** Biology 1106 is the first of two labs designed to provide a thorough introduction to biological science.

**Student Learning Outcomes:** After this class, you should be able to...

- Describe and apply the scientific method
- Proficiently use both a compound and dissecting microscope, understand and test the basic properties of water, describe the role of membranes in living organisms, conduct tests for major macromolecules, define and describe the properties of enzymes, describe respiration and photosynthesis, describe mitosis and meiosis and distinguish between their different roles in living organisms, understand Mendelian and molecular genetics, apply basic molecular genetic techniques, and describe protein synthesis.
- Have a better understanding of methods and techniques used in the biological sciences

**Lab Manual:** Coleman, Jessica L. 2021. *Cell Properties & Processes*. 6<sup>th</sup> edition. Fountainhead Press & TopHat

We will use Top Hat ([www.tophat.com](http://www.tophat.com)) to access the digital interactive textbook *Cell Properties & Processes*, which we will use in this class. For instructions on creating a Top Hat account and enrolling in our Top Hat course, please refer to the invitation sent to your school email address or consult Top Hat's Getting Started Guide (<https://bit.ly/31TGMlw>).

If you already have a Top Hat account, go to [URL] to be taken directly to our course. If you are new to Top Hat, go to <https://app.tophat.com/register/student> and search for our course with the following join code: [join code]

Bear in mind that textbook material will be made available in our course throughout the semester, so do not panic if you do not see any in the course upon entry. Should you require assistance with Top Hat at any time please contact their Support Team directly by way of email ([support@tophat.com](mailto:support@tophat.com)), the in-app support button, or by calling 1-888-663-5491. Their technical support team may require specific user information when troubleshooting issues.

**Grading:**

		Grade Distribution		
	Points Possible	Percentage	Points	Grade
Exams (2)	200	90-100%	495-550	A
Quizzes (10)	100	80-89%	440-494	B
Homework (3)	50	70-79%	385-439	C
Lab Manual	50	60-69%	330-384	D
Lab Report	150	50-59%	0-329	F
<b>Total</b>	<b>550</b>			

Letter grades will be assigned according to the following scale:

**A = above 89.5    B = 79.5 – 89.49    C = 69.5 – 79.49    D = 59.5 – 69.49    F = Below 59.5**

All your course grades will be in Canvas, so you can view your current course grade at any time. Please be aware that I cannot give you EXTRA CREDIT or WORK at the end of the semester. Your average shown in Canvas will determine your final grade in the course.

At the end of the semester, grades will be calculated in Canvas according to the syllabus. If your average is **within 0.5 points** of the next letter grade, I will round it up **automatically** (see grade scale above). The only other adjustment that will be made is if the final percentage is WITHIN ONE POINT of the next letter grade (and NO more), and the student has missed **THREE OR FEWER LECTURES, TWO or LESS WEEKLY QUIZZES** and has a **CLASS PARTICIPATION GRADE OF 80% or HIGHER**. If you meet these criteria, then I will **round up to the next letter grade**. (Mitigating circumstances will be considered at the discretion of the instructor).

**Practical Exams:** There will be two practical exams during the semester. Exams are designed to test the student's practical skills and techniques in the lab. There will typically be 33 stations (three questions at each station) where you will be required to identify the equipment and specimens or demonstrate your knowledge of techniques. You will rotate through each station and **not be allowed to return to the station**. You will be provided with a scratch piece of paper where you can make notes about each station, so you can think about it at the end of the exam. You will only be allowed approximately one and a half minutes per station. Your instructor will give you more information prior to the scheduled practical exam date.

**Make-up Exams:** Make-up exams (as well as other material) will be given **ONLY** if a student notifies the instructor in **ADVANCE** or produces a verifiable written medical excuse. The students who fail to make appropriate arrangements will receive a grade of "0" for the missed exam or other material.

**Quizzes:** There will be **at least 10 quizzes** during the semester. Quizzes will be posted online (Canvas) for you to complete during the semester. For these quizzes, you will have 10-15 minutes to complete. Be sure to watch the clock closely, as you will not be granted extended time, you will have a point deducted for going over the time allotted for each quiz (since the quiz will auto-submit at the end of the allotted time). Each quiz will be worth 10 points. If you miss a quiz for ANY reason (including illness and excused travel absences), that quiz will be counted as one of the dropped scores. **There will be NO make-up quizzes!**

**Attendance:** Attendance is essential to success in this class. If you miss class, it is your responsibility to contact another student (not the instructor) to get notes and other announcements made during class. Be sure to keep up on your Canvas Announcements – these are here to remind you of key events that are coming up in the course. **It is your responsibility to check these DAILY.**

**NOTE: Attendance will be taken for each lab, and missed labs will result in points lost for your overall lab manual grade.**

**Lab Manual/Notebook Grade:** The lab manual grade (total of 50 points) will be broken down into two parts: 1) The lab manual (questions in TopHat) and 2) The Lab notebook (a journal you will keep for each week's lab).

1. **Lab Manual** (30 total Points) – You will be required to complete assignments in your lab manual via TopHat. To log into your section, your instructor will provide you with a join code during the first lab or via Canvas. Each lab will have a set number of available points that you can obtain by answering specific questions in the lab manual. You will receive points for both correctness and participation. You must make sure you have them completed **PRIOR** to the due date posted by your instructor!

**Late Assignments in TopHat will NOT be accepted!**

2. **Lab Notebook** (20 total points) – You are required to keep a lab notebook for the semester. You can keep this in a normal spiral notebook and tape in tables, figures, or images as needed to your notebook. It is good practice to keep a log of all your activities in the lab. If you were to work in a research lab (i.e., Molecular lab), you would need to keep track of your records. In contemporary times, they are moving to a digital platform, but for the General Biology lab, we will use a more traditional method of journal-keeping. Your instructor will provide you with additional information during the first lab period.

Keep in mind that each lab period requires you to work as a team to run experiments and answer questions. If you miss a day, then you will miss key information to add to your lab notebook. Your attendance is also part of the lab manual grade; if you are missing multiple lab periods, you will not have accurate information for your lab notebook.

**A missed class will result in points deducted from your overall lab manual grade.**

**Canvas:** Students should log onto Canvas ASAP and carefully read all announcements. Canvas and student email should be checked **DAILY** for new announcements or messages. On Canvas you will find lecture outlines, reviews for exams, videos, discussion board posts, and much more that will be very helpful for you as you take this course. Another helpful tool is that all course grades will be in **Canvas**, so students will be able to view and calculate their current course grades at any time.

**Pre-lecture Videos:** Students will be required to watch pre-lecture videos that will be posted on Canvas and in your online lab manual. To view these videos, you will need to enroll in the UT Tyler On-course Digital Toolkit and Purchase the online lab manual (Tophat). The toolkit will have your pre-lecture videos and extra study material to help you be successful in the general biology labs. Your instructors will tell you more on the first day of the lab. Please make sure you watch the lecture **BEFORE** each lab, as there may be quiz questions pulled directly from these videos!

**Lab Report Assignment:** The lab report will be written about the **Enzyme lab** this semester (**the research paper's topic is to determine the enzyme activity of Peroxidase under various environmental conditions**). You will be responsible for composing a well-thought-out paper on this lab, which will include the basic components you include in a full write-up (e.g., mimic peer-reviewed literature). See the **lab manual (on TopHat – Research Report Format)** for the details of what each section should contain. It will be your responsibility to read these sections carefully to write up the lab report correctly. Be sure to follow all directions given by your instructor to make improvements to the report throughout the semester. You will do four-part submissions of your paper throughout the semester, all of which will be **submitted on Canvas**. Each of these submissions is designed to help you improve your scientific writing, for your final report submission. Be sure to read your instructor's comments and check the similarity reports

prior to resubmitting your work. Your instructor will give you more details throughout the semester for these assignments.

**Academic Integrity:** Students should be aware that absolute academic integrity is expected of every student, in all courses taken at The University of Texas at Tyler. Failure to comply can result in strong university-imposed penalties. For instance, submitting plagiarized work to meet academic requirements including the representation of another's work or ideas as one's own; the unacknowledged word-for-word research results shall be grounds for charges of academic misconduct. **Any cheating or other types of academic misconduct will be reported to the university administration and, at minimum, will result in an automatic failure of the course.**

### **Exams**

- **TAKEN INDIVIDUALLY**, without input or assistance from anyone else, including students who have taken the exam, quiz, or course previously.
- The use of notes, texts, or any other reference material is **PROHIBITED**.
- Possession of anything containing course content will be considered cheating, whether you actually refer to them or not during the exam
- **TALKING** to anyone other than the instructor or proctor during an exam will automatically be considered cheating. It does not matter what you were talking about.
- Any use of a cell phone or any other electronic device that could be used to record or transmit test material is **PROHIBITED**. Phones must be out of sight and silenced during the exam.
- Hats worn during exams must be turned around or removed so the face is not covered in any way.

### **Lab Reports**

- Students may **NOT** plagiarize any part of the lab report, it must be written individually.
- The methods may be similar since the same labs will be conducted; however, they may not be identical since everyone writes differently.
- The results may contain similar data to those of your group members; however, you should prepare your own tables and figures and create your own titles.
- You will submit this to a plagiarism checker via Canvas (Unicheck), which will check for all forms of plagiarism. Your similarity report should be less than 40%, if it is not, you better double-check your work!
- All submissions should be in a Word document.

## **WHAT IS PLAGIARISM AND HOW CAN IT BE AVOIDED?**

Plagiarism may be defined as (1) presenting work, ideas, or phrasing of another, in whole or part, as one's own without giving credit and proper documentation of sources; (2) copying material directly from sources (including electronic media) except when the material is enclosed in quotation marks and the source is clearly identified; (3) paraphrasing too closely to the original, even when the source is identified; and (4) claiming credit for work in any media (electronic, digital, artistic, etc.) where the student is not the original creator of said work. Work that is plagiarized will receive an automatic grade of "F". If you are unsure about this subject, please take the time to talk to your instructor and /or read this:

<https://www.ox.ac.uk/students/academic/guidance/skills/plagiarism>

You will also be required to turn in all written assignments (lab report assignments) in a Word document on **CANVAS** which will use **UNICHECK** to assess your paper for Plagiarism. You will find this on your Canvas page for this lab course; each assignment will be compared to previous student work and the work of your classmates! You will only need to turn in a copy of your assignment via the CANVAS Link.

Use of an AI Generator such as ChatGPT, iA Writer, MidJourney, DALL-E, etc. is **explicitly prohibited** unless otherwise noted by the instructor. The information derived from these tools is based on previously published materials. Therefore, using these tools without proper citation constitutes plagiarism. Additionally, be aware that the information derived from these tools is often inaccurate or incomplete. **It is imperative that all work submitted should be your own.** Any assignment that is found to have been plagiarized or to have used unauthorized AI tools may receive a zero and/or be reported for academic misconduct.

**Corrupted File Policy:** Any student who turns in a corrupted file will be given 24 hours to turn in a file that can be opened successfully by the instructor. Failure to do so will earn a grade of “0” (Zero) for the paper.

**Laboratory Safety and Dress Code:** Food and drink are **NOT** allowed in the labs at any time. Students are also required to wear the following PPE during all lab sections:

- **Clothes-toed shoes;** absolutely **NO open-toed shoes** are allowed. If you show up to lab with flip-flops, sandals, or other open-toed shoes, you will be asked to leave OR must wear departmental rubber boots or waders during the lab time.
- **Long pants must always be worn during the lab. Please do not show up in shorts; you will be asked to leave or wear full waders.**
- **Some labs require gloves.** If you leave the lab, you must remove your gloves and obtain new ones upon return.
- **Lab coats** will also be provided if you would like to wear them. They will be new and cleaned each week.

**NOTE: You will need to complete & pass (70% or better) the Biosafety Module and Quiz!**

## **UNIVERSITY POLICIES AND INFORMATION**

**Withdrawing from Class:** Students may [withdraw](#) (drop) from this course using the [Withdrawal Portal](#). Withdrawing (dropping) this course can impact your Financial Aid, Scholarships, Veteran Benefits, Exemptions, Waivers, International Student Status, housing, and degree progress. Please speak with your instructors, consider your options, speak with your advisor, and visit the One-Stop Service Center (STE 230) or email [enroll@uttyler.edu](mailto:enroll@uttyler.edu) to get a complete review of your student account and the possible impacts to withdrawing. We want you to make an informed decision. UT Tyler faculty and staff are here for you and often can provide additional support options or assistance. Make sure to carefully [read the implications for withdrawing from a course and the instructions](#) on using the [Withdrawal portal](#).

Texas law prohibits students from dropping more than six courses during their entire undergraduate career\*. The six courses dropped include those from other 2-year or 4-year Texas public colleges and universities. Consider the impact withdrawing from this class has on your academic progress and other areas, such as financial implications. We encourage you to consult your advisor(s) and Enrollment Services for additional guidance. CAUTION #1: Withdrawing before census day does not mean you get a full refund. Please see the [Tuition and Fee Refund Schedule](#). CAUTION #2: All international students

must check with the [Office of International Programs](#) before withdrawing. All international students are required to enroll full-time for fall and spring terms. CAUTION #3: All UT Tyler Athletes must check with the Athletic Academic Coordinator before withdrawing from a course. CAUTION #4: All veterans or military-affiliated students should consult with the [Military and Veterans Success Center](#).

\* Students who began college for the first time before 2007 are exempt from this law.

**Artificial Intelligence Statement:** UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy. Refer to the About This Course section of the UT Tyler Syllabus Module for specific information on appropriate use of AI in your course(s).

**Final Exam Policy:** Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the Dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty members must maintain student final examination papers for a minimum of three months following the examination date.

**Incomplete Grade Policy:** If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an Incomplete (I) for the course. The "I" may be assigned in place of a grade only when all of the following conditions are met: (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all coursework or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor, and (c) the student presents these reasons before the time that the final grade roster is due. The semester credit hours for an Incomplete will not be used to calculate the grade point average.

The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to meet all of the work for the course within the time limit, then the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has yet to be assigned within one year, then the Incomplete will be changed to an F, or NC. If the course was initially taken under the CR/NC grading basis, this may adversely affect the student's academic standing.

**Grade Appeal Policy:** Disputes regarding grades must be initiated within sixty (60) days from the date of receiving the final course grade by filing a Grade Appeal Form with the instructor who assigned the grade. A grade appeal should be used when the student thinks the final course grade awarded does not reflect the grades earned on assessments or follow the grading scale as documented in the syllabus. The student should provide the rationale for the grade appeal and attach supporting document about the grades earned. The form should be sent via email to the faculty member who assigned the grade. The faculty member reviews the rationale and supporting documentation and completes the instruction section of the form. The instructor should return the form to the student, even if a grade change is made at this level. If the student is not satisfied with the decision, the student may appeal in writing to the Chairperson of the department from which the grade was issued. In situations where there is an allegation of capricious grading, discrimination, or unlawful actions, appeals may go beyond the Chairperson to the Dean or the

Dean's designee of the college from which the grade was issued, with that decision being final. The Grade Appeal form is found in the [Registrar's Form Library](#).

NOTE: The Grade Appeal Form is different from the Application for Appeal form submitted to the Student Appeals Committee, which does not rule on grade disputes as described in this policy.

**Disability/Accessibility Services:** In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA), the University of Texas at Tyler offers accommodations to students with learning, physical, and/or psychological disabilities. If you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler/> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with the Assistant Director Student Accessibility and Resources/ADA Coordinator. For more information, including filling out an application for services, please visit the SAR webpage at <https://www.uttyler.edu/disability-services>, the SAR office located in the Robert Muntz Library, LIB 460, email [saroffice@uttyler.edu](mailto:saroffice@uttyler.edu), or call 903.566.7079."

**Military Affiliated Students:** UT Tyler honors the service and sacrifices of our military-affiliated students. If you are a student who is a veteran, on active duty, in the reserves or National Guard, or a military spouse or dependent, please stay in contact with your faculty member if any aspect of your present or prior service or family situation makes it difficult for you to fulfill the requirements of a course or creates disruption in your academic progress. It is important to make your faculty member aware of any complications as far in advance as possible. Your faculty member is willing to work with you and, if needed, put you in contact with university staff who are trained to assist you. The [Military and Veterans Success Center \(MVSC\)](#) has campus resources for military-affiliated students. The MVSC can be reached at [MVSC@uttyler.edu](mailto:MVSC@uttyler.edu) or via phone at 903.565.5972.

**Students on an F-1 Visa:** To remain in compliance with Federal Regulations requirements you must do the following:

- Traditional face-to-face classes: Attend classes on the regular meeting days/times.
- Hybrid Classes: Attend all face-to-face classes convened by the instructor according to the schedule set for your specific course.
- Online course: Only one online course can count toward your full-time enrollment. Students are expected to be fully engaged and meet all requirements for the online course.

**Academic Honesty and Academic Misconduct:** The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy](#) in the Student Manual Of Operating Procedures (Section 8).

**FERPA:** UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in [University Policy 5.2.3](#). The course instructor will follow all requirements to protect your confidential information.

**Absence for Official University Events or Activities:** This course follows the practices related to [Excused Absences for University Events or Activities](#) as noted in the Catalog.

**Absence for Religious Holidays:** This course follows the practices related to [Excused Absences for Religious Holy Days as noted in the Catalog](#).

**Absence for Pregnant Students:** This course follows the requirements of Texas Laws SB 412, SB 459, SB 597/HB 1361 to meet the needs of pregnant and parenting students. Part of the supports afforded pregnant students includes excused absences. Faculty who are informed by a student of needing this support should make a referral to the Parenting Student Liaison. NOTE: Students must work with the

Parenting Student Liaison in order to receive these supports. Students should reach out to the Parenting Student Liaison at [parents@uttyler.edu](mailto:parents@uttyler.edu) and also complete the [Pregnant and Parenting Self-Reporting Form](#).

**Campus Carry:** We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>.

## Student Resources:

### Resources to assist you in this course

- [UT Tyler Student Accessibility and Resource \(SAR\) Office](#) (provides needed accommodations to students with document needs related to access and learning)
- [UT Tyler Writing Center](#)
- [The Mathematics Learning Center](#)
- [UT Tyler PASS Tutoring Center](#)
- [UT Tyler Supplemental Instruction](#)
- [Upswing \(24/7 online tutoring\) - covers nearly all undergraduate course areas Links to an external site.](#)
- [Robert Muntz Library](#) , and [Library Liaison](#)
- [Canvas 101](#) (learn to use Canvas, proctoring, Unicheck, and other software)
- LIB 422 -- Computer Lab where students can take a proctored exam
- [The Career Success Center](#)
- [UT Tyler Testing Center](#)
- [Office of Research & Scholarship Design and Data Analysis Lab](#)

### Resources available to UT Tyler Students

- [UT Tyler Counseling Center](#) (available to all students)
- [My SSP App](#) (24/7 access to Student Support Program counseling through phone or chat and online wellness resources available in a variety of languages)
- [Student Assistance and Advocacy Center](#)
- [Military and Veterans Success Center](#) (supports for all of our military-affiliated students)
- [UT Tyler Patriot Food Pantry](#)
- [UT Tyler Financial Aid and Scholarships](#)
- [UT Tyler Registrar's Office](#)
- [Office of International Programs](#)
- [Title IX Reporting](#)
- [Patriots Engage](#) (available to all students. Get engaged at UT Tyler.)



I RESERVE THE RIGHT TO MODIFY THIS SYLLABUS AT ANY TIME. THEREFORE, YOUR ATTENDANCE AND ATTENTION TO THE ANNOUNCEMENTS ON CANVAS ARE CRUCIAL BECAUSE THEY WILL ASSIST YOU IN REMAINING CURRENT ON THE MATERIAL AND KNOWING WHEN THE SYLLABUS MAY BE MODIFIED.

<b>General Biology I Laboratory Schedule – Fall 2024</b>			
<b>Week of</b>	<b>Topic</b>	<b>Quiz Schedule</b>	<b>Assignments Due</b>
Aug 26 <sup>th</sup>	Intro to Lab / Scientific Method	Biosafety Q1 & Q2 (syllabus)	
Sept 2 <sup>nd</sup>	Measurements	Q3	Primary Article (HW1), Topic, Questions, and Hypothesis
Sept 9 <sup>th</sup>	Microscopes	Q4	
Sept 16 <sup>th</sup>	Basic Chemistry	Q5	Methods section
Sept 23 <sup>rd</sup>	Organic Molecules	Q6	
Sept 30 <sup>th</sup>	Membranes	Q7	
<b>Oct 7<sup>th</sup></b>	<b>PRACTICAL I</b>	Q8 (review)	Title, Introduction, Methods, Literature Cited
Oct 14 <sup>th</sup>	***Enzymes***		
Oct 21 <sup>st</sup>	Cell respiration / Photosynthesis	Q9	
Oct 28 <sup>th</sup>	Mitosis / Meiosis	Q10, Q11	First Draft (complete paper)
Nov 4 <sup>th</sup>	Genes and Chromosomes	Q12	Photosynthesis Hw2
Nov 11 <sup>th</sup>	Molecular Biology	Q13	Genetics Hw3
Nov 18 <sup>th</sup>	Protein Synthesis	Q14	Final Paper
<b>Nov 25<sup>th</sup></b>	<b>THANKSGIVING BREAK – NO LABS</b>		
<b>Dec 2<sup>nd</sup></b>	<b>PRACTICAL II</b>	Q15 (Review) & Q16 (Pedigree)	

\*\*\* Lab Report will be written over this lab. | Last day to Drop with a “W”: **Nov. 4<sup>th</sup>, 2024**