

Lab for Introductory Biology I

BIO 106M: Lab for Introductory Biology I

TCCN: BIOL 1106

Course Syllabus: 2023-2024

UT Austin Faculty Lead	OnRamps Course Staff
Dr. Jennifer Fritz, Assistant Professor of Instruction	Dr. Caitlin Leslie, Senior Course Coordinator caitlin.leslie@austin.utexas.edu
	Jonathan Broussard, Implementation Coordinator jonathan.broussard@austin.utexas.edu

COURSE DESCRIPTION

Thinking like a scientist is the emphasis of this course. How do scientists think? They acquire knowledge through discovery. They critically apply the knowledge to form hypotheses and reach conclusions. Scientists communicate their conclusions to others and use critical feedback to improve their scientific thinking. Scientific thinking is a skill that grows with practice and becomes stronger with use.

In this year-long laboratory class, students will learn how to apply critical thinking and quantitative skills to real laboratory experiments and scenarios. Students will have the opportunity to develop their scientific thinking skills through active learning activities in an inclusive classroom environment. Emphasis will be placed on the integration of quantitative data and reasoning in the process of discovery as well as the ability to generate and test biological hypotheses.

Course Pre-requisites

- TEKS-based High School Biology
- TEKS-based High School Chemistry
- Concurrent enrollment in Introductory Biology I (BIO 311C)

Course Learning Outcomes

- Practice safety procedures, including proper personal protective equipment (PPE), handling of chemicals, and operation of equipment and/or instruments respective to each lab experience.
- Follow and execute experimental procedures by demonstrating knowledge of lab terminology and hands-on techniques.

- Record experimental data and observations.
- Represent data through appropriate graphing techniques.
- Analyze and interpret data and observations.
- Perform quantitative calculations.
- Execute appropriate quantitative and qualitative reasoning.
- Clearly communicate scientific results and understanding.
- Work as a productive and collaborative group member to execute the lab, record data, and discuss experimental results.

Course Format and Procedures

All of the course materials are posted in Canvas and are organized chronologically by the learning activities that will help students to prepare for the assessments. The laboratory activities will reinforce concepts from the lecture learning modules. Laboratory activities will allow students to observe the biological concepts in action.

Lab Timeline and Procedures

Laboratory activities may span multiple class sessions. Students prepare for each lab by completing the pre-lab **prior to the first day** of the lab. During class, students conduct laboratory experiments that include hands-on activities, collaborative group work, and lab simulations, with guidance and instruction provided by the High School Instructor.

When the lab activities are complete, students complete a post-lab quiz in class. The post-lab quiz is focused on content related to the laboratory topic. After class, students will have seven days to complete the post-lab conclusion, which is focused on developing the reasoning skills related to the lab.

University Course Staff

Title	Description
UT Austin Faculty Lead	A UT Austin faculty member who designs and oversees delivery of the OnRamps college distance course and ensures its alignment to the course as it is delivered at the residential university campus.

Title	Description
OnRamps Course Staff	<p>A UT Austin staff member and designee of the UT Austin Faculty Lead who serves as a primary subject-matter expert in the academic discipline of the OnRamps course and provides yearlong support to high school Instructors to ensure the course is delivered with fidelity.</p> <p>As a designee of the UT Austin Faculty Lead, Course Staff assist with academic integrity investigations, send official University communication to students, and ensure students have access to all course resources and policies.</p>
UT Austin Instructor of Record	<p>The UT Austin Instructor of Record grades or oversees grading of college course work and determines student eligibility and credit award.</p> <p>The UT Austin Instructor of Record also investigates and resolves suspected incidents of academic integrity violations in the distance college course.</p> <p>The UT Austin Instructor of Record meets departmental and university criteria prior to appointment. The UT Austin Faculty Lead, Course Staff, or other UT Austin-appointed staff member may also serve as the UT Austin Instructor of Record.</p>

Course Outline

Unit & Topic
Unit 0: Lab Safety
Unit 1: Microscope Skills
Unit 2: Biomolecules
Unit 3: Osmosis and Diffusion
Unit 4: Enzyme Action
Unit 5: Cellular Respiration and Photosynthesis
Unit 6: DNA Structure
Unit 7: Mitosis
Unit 8: Inheritance

COURSE REQUIREMENTS

Technology Access and Expectations

Accessing technology is part of your OnRamps course requirements. You may only access OnRamps course technology using your own UT EID and password or other designated login credentials. You are forbidden from substituting for another person or permitting another person to use your login credentials to substitute for yourself to take a class, a test, or any class-related assignment.

Technology System	Description and Expectations
<p>UT EID</p> <p>URL: https://utexas.edu/eid</p>	<ul style="list-style-type: none"> You must obtain a UT EID and password, which will create a unique account with the University of Texas at Austin, to register for OnRamps courses and access coursework. You must create a strong UT EID password in order to ensure uninterrupted technology access. The guidelines for creating a strong password are available here. Do not share your UT EID password with anyone. Sharing your password could allow unauthorized access to your educational information and may result in account suspension or an academic integrity investigation.
<p>Canvas Learning Management System</p> <p>URL: https://onramps.instructure.com</p>	<ul style="list-style-type: none"> OnRamps provides an online learning environment in Canvas Learning Management System (LMS) for all students in this class. You will have access to two (2) Canvas courses for the purpose of the dual-enrollment experience: the OnRamps high school course and the OnRamps college course. You may only access Canvas using your own UT EID and password. You are expected to access Canvas daily for pre-labs, post-lab conclusions, and post-lab quizzes. You will get many of your assignments and turn in your college work in Canvas. You are responsible for reading course information, including assignment instructions and due dates, that is posted in Canvas. You are responsible for frequently checking your Canvas Inbox and viewing course

Technology System	Description and Expectations
	<p>announcements. Failure to read announcements or failure to check your Inbox is not an acceptable reason for missed communication or missed deadlines.</p>
<p>OnRamps Portal</p> <p>URL: https://onramps.utexas.edu/portal</p>	<ul style="list-style-type: none"> You will access the OnRamps Portal to manage your contact information and current OnRamps distance college course enrollment(s), including viewing your college credit eligibility status and accepting or declining college credit, if earned. You may also view prior enrollment and credit information in the OnRamps Portal. You may only access the OnRamps Portal using your own UT EID and password. You must use the OnRamps Portal to request accommodations for your distance college course in order for eligible IDEA, 504, or ADA accommodations to be approved and applied. You may view requested accommodations, approval status, and update accommodations at any time in the OnRamps Portal.
<p>Email</p> <p>Use a personal email address that you check regularly and will have access to after you graduate high school.</p>	<ul style="list-style-type: none"> Email is an official means of communication at UT Austin. OnRamps uses the email address you provide in the OnRamps Portal to communicate enrollment and credit information to you. It is your responsibility to keep your email address updated in the OnRamps Portal at all times. You are expected to check email frequently in order to stay current with OnRamps-related communications, recognizing that certain communications may be time-critical. Updating your email address in the OnRamps Portal automatically updates your email address in Canvas. Communication about your grades and course experience will be sent to you via Canvas Inbox, which may be forwarded to your email address based on your Notification settings in Canvas.

Technology System	Description and Expectations
	<ul style="list-style-type: none"> Failure to check email or Canvas Inbox is not an acceptable reason for missed communication or missed deadlines.

Safety Guidelines

There is a **ZERO TOLERANCE POLICY** for unsafe practices and behavior when you are in the laboratory – you are expected to adhere to the following set of guidelines to ensure the personal safety and of those working around you. These safety requirements are also addressed in the Unit 0 Laboratory Safety assignments. For more information, see the College Lab Canvas course. Additionally, you must adhere to your High School Instructor's expectations.

- Safety goggles and lab coats or aprons must be worn in the laboratory **when specified in the lab handout or by your High School Instructor**.
- Eating, drinking, and chewing gum are not permitted in the laboratory.
- You must immediately notify your High School Instructor of a spill, fire, broken glassware, or other emergency.
- You should never taste or directly inhale any chemicals in the laboratory. If necessary, waft a substance instead.
- Do not remove chemicals or equipment from the laboratory.
- You must dispose of lab-generated waste in the appropriate containers according to the High School Instructor's directions, and DO NOT overfill them.
- You must maintain a safe and clean workspace – label all containers, re-cap chemical containers (including waste) when you are finished with them, and return borrowed (cleaned) equipment to the shared containers.
- You should always wash your hands after finishing a laboratory session – doing so will help avoid chemical exposure through skin contact, eye contact, and/or ingestion later in the day.

How to Succeed in this Course

- Complete OnRamps Orientation to prepare for college expectations.
- Take careful notes while completing your pre-labs, as the information presented will be critical for the following labs and post-lab assignments.
- Pay close attention to the guidelines for collaboration and resource use on each assignment to ensure you maintain academic integrity.
- Manage your time carefully. Many assignments in this course are to be completed outside of class, and assignments can have overlapping due dates. Budget plenty of time outside of class to complete these assignments.
- Engage with lab activities. Work with your group members and contribute to discussions while completing these assignments.

- Carefully read the grader feedback that you receive on every lab, and reach out with questions or concerns.
- Always ask for help if you are struggling to understand a concept. Your High School Instructors is a valuable resource. You can also reach out to OnRamps Support to ask Course Staff content-related questions.

Assignments & Grading

The following assignments and assessments contribute to your college grade. Detailed instructions and due dates for assignments are posted in your Canvas college course.

Assessment	Description	Frequency	Assignment Type	% Course Grade
Post-Lab Quizzes	Timed assessments taken following laboratory experiments.	One per lab, 10 total	Quiz	35%
Post-Lab Conclusions	Critical thinking and reflection questions following laboratory experiments.	One per lab, 10 total	Quiz	35%
Pre-Labs	Readings and questions that introduce content for upcoming laboratory experiments.	One per lab, 10 total	Quiz	30%
Total				100%

College Course Grading Scale

A	92.50 – 100.00	<i>Minimum Eligibility Grade</i>
A-	89.50 – 92.49	
B+	86.50 – 89.49	
B	82.50 – 86.49	
B-	79.50 – 82.49	
C+	75.50 – 79.49	
C	68.50 – 75.49	
C-	64.50 – 68.49	
D+	61.50 – 64.49	
D	54.50 – 61.49	
F	0 – 54.49	

- Pre-Labs
 - Pre-Labs can be submitted twice and the highest grade is recorded.
 - Pre-Labs are designed to be completed outside of class, and collaboration is encouraged.
 - Please carefully read the instructions shown at the top of the assignment for more details.
- Post-Lab Quizzes
 - Post-Lab Quizzes are to be taken in class, proctored by an Instructor, without collaboration and without the use of additional resources.
 - Please carefully read the instructions shown at the top of the assignment for more details.
- Post-Lab Conclusions
 - Post-Lab Conclusions are designed to be completed outside of class. Collaboration is encouraged, and the use of additional resources is allowed.
 - Please carefully read the instructions shown at the top of the assignment for more details.
- Missed Work
 - Students who miss in-class laboratory experiments must work with their High School Instructor to make up the work.
 - UT assignments must be submitted by the due date to receive credit. If you are unable to complete a college assignment on time, please reach out to your High School Instructor to request that late work be accepted. Late work will only be accepted due to excused absences.
 - Missed assignments due to unplanned and excused absences will convert to zero if work not made up within seven school days after the return to school. When possible, students missing assignments due to approved appointments or extracurricular activities should make arrangements to reschedule the assignment with the High School Instructor of Record prior to the absence.
 - If you encounter technical issues while completing an assignment, you have 24 hours to notify your High School Instructor and reach out through OnRamps Support. If an extension is granted, you will have two days to resubmit the assignment.

COLLEGE CREDIT

This is a distance college course delivered via a dual enrollment model which means you may earn credit for Lab for Introductory Biology I (BIO 106M) in addition to earning high school credit.

Eligibility for the Opportunity to Earn College Credit

Eligibility refers to whether or not you meet criteria to be eligible for the opportunity to earn college credit.

You may become eligible for the opportunity to earn college credit in the following ways:

Eligibility Pathway	Requirements
College grade	<p>Meet the minimum eligibility grade of D (54.50) on selected college assignments and assessments.</p> <p>Pre-lab, Post-lab quiz, and Post-lab conclusion grades from Units 0-4 contribute to your eligibility grade.</p>
Texas Success Initiative (TSI)	Submit proof of scores on certain standardized assessments, as shown in the Requirements for Eligibility by TSI table.

Requirements for Eligibility by TSI

Assessment	Subject Area	Minimum Score
TSI	Math	350
TSIA 2.0	Math	Math score of 950 or diagnostic level of 6
SAT	Math	530
ACT (prior to February 15, 2023)	Composite and Math	23 (Composite) and 19 (Math)
ACT (after February 15, 2023)	Math	22

College Credit Decision Period

If you are eligible for the opportunity to earn college credit, you may accept or decline college credit earned during the five-day college credit decision period, which will occur during a Monday – Friday window after you receive your final college grade. You will receive an email notification from OnRamps when your credit decision period begins, a reminder email during the credit decision period, and an email when the credit decision period ends.

If you do not make a decision during the credit decision period, OnRamps will determine course credit as follows:

- **C- or above.** You earned credit and *will* be issued a UT Austin transcript unless you decline credit in the OnRamps Portal.
- **D or D+.** You earned credit but *will not* be issued a UT Austin transcript unless you accept credit in the OnRamps Portal.
- **F.** You did not earn credit and will not be issued a UT Austin transcript.

Credit Transferability & College Transcript

OnRamps recommends that you research credit transfer policies at colleges or universities you may attend in order to inform your decision to accept or decline credit at the end of the course. Each higher education institution has its own degree plan requirements and policy about whether transfer credit is factored into a student's GPA. OnRamps course grades will be factored into your cumulative GPA if you attend UT Austin as an undergraduate.

If you earn and accept college credit, you may request an official UT Austin transcript through the UT Austin Office of the Registrar. You will receive an email notification from OnRamps when your transcript is available with instructions for ordering a transcript.

POLICY INFORMATION

Students with Disabilities

If you receive high-school accommodations related to a disability under the Individuals with Disabilities Education Act (IDEA) or Section 504 of the Rehabilitation Act, you may also receive certain accommodations in your OnRamps college course. Accommodations in an OnRamps course must follow accommodations in your Individual Education Plan or 504 Individual Accommodation Plan and be allowable under the university assessment practices. Accommodations are individualized and based on need and disability.

You must use the OnRamps Portal to request accommodations for your distance college course in order for eligible IDEA, 504, or ADA accommodations to be approved and applied. You must request accommodations prior to the due date for an assignment in order to access accommodations for that assignment. You are strongly encouraged to provide information about your need for accommodations during registration at the beginning of the course or immediately following changes to your Individual Education Plan or 504.

Academic Integrity

OnRamps students are subject to the University's academic integrity policies. Academic integrity is honesty in your academic work. Each student in the course is expected to abide by the University's Student Honor Code:

"As a student of The University of Texas at Austin, I shall abide by the core values of the University and uphold academic integrity."

Upholding the University's Student Honor Code means following all directions for completing each assignment and assessment. You cannot use unauthorized materials to complete assignments. You cannot substitute or allow another student to substitute for you to complete an assignment, in addition to the prohibitions on academic misconduct found in The University of Texas catalog, Chapter 11, Student Conduct and Academic Integrity: <https://catalog.utexas.edu/general-information/appendices/appendix-c/student-conduct-and-academic-integrity/>

To learn more about academic integrity standards, tips for avoiding a potential academic misconduct violation, and the overall conduct process, please visit the Student Conduct and Academic Integrity website at: <https://deanofstudents.utexas.edu/conduct>

Statement on Generative Artificial Intelligence

Use of generative Artificial Intelligence (AI), AI-content generators (such as ChatGPT) or other unauthorized tools is a form of academic dishonesty. The UT Austin Instructor of Record or the assignment instructions will make clear for each college assignment whether collaboration is allowed and what types of tools may be utilized. Refer to the **Assignments and Grading** section for further details about assignment types in your course.

Communication Expectations

You must respond to messages and requests within Canvas Inbox from OnRamps staff for investigations of potential academic integrity incidents. If you fail to respond to Canvas Inbox messages about potential academic integrity incidents from OnRamps staff, you may receive an academic disciplinary action, including a grade impact.

More information about academic integrity may be found in the OnRamps Orientation in Canvas.

Student Code of Conduct

As a participant in the UT Austin OnRamps program, you are expected to uphold a high standard of integrity and ethical behavior. This includes using UT Austin resources in an appropriate, ethical manner for the purpose of learning. Prohibited behavior includes:

- Unauthorized use of institutional technology and services
- Providing false or misleading information about an academic record
- Engaging in violent or disruptive conduct, including hazing, stalking, or behavior that impedes, interferes with, or disrupts any University teaching, research, administrative, disciplinary, public service, learning, or other authorized activity.

Failure to abide by the student code of conduct may result in an academic sanction or removal from the course. For more information about standards of behavior, refer to The University of Texas catalog, Chapter 11, Student Conduct and Academic Integrity: <https://catalog.utexas.edu/general-information/appendices/appendix-c/student-conduct-and-academic-integrity/>

FERPA

All students in OnRamps are college students and subject to the federal Family Educational Rights and Privacy Act (FERPA). As a participant in the UT OnRamps program, it is important that you understand these rights as they apply to you.

Under FERPA, university staff may not share information regarding your college coursework or academic standing (grade point average, academic transcript, academic probation, or discipline records).

Exceptions:

- If you sign a waiver stating that FERPA-protected information may be released to your parent/guardian, university staff may share the FERPA-protected information with the parent/guardian.
- If university staff share FERPA-protected information with high school staff, including the high school Instructor, and you are under 18 years of age, then the high school staff may share that information with your parent or guardian.
- If university staff suspect you present a significant risk of harm to self or others, university staff may disclose FERPA-protected information with your parent/guardian, high school Instructor, principal, or other appropriate authority to ensure the safety of the student and/or other individuals.

For more information about FERPA, refer to The University of Texas catalog, chapter 9, Educational Records: <https://catalog.utexas.edu/general-information/appendices/appendix-c/educational-records/>