



BIOL 1408.101
Biology I for Non-Science Majors
Fall 2023
MW 9:30-12:20, STEM 316

Instructor Information:

Dr. Gabrielle Henslee
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Department telephone: (409) 933-8244

Student hours and location:

Monday 12:30-1:00, 1:20-1:50, or by appointment
STEM 316

Required Textbook/Materials:

Textbooks

- Campbell Essential Biology with Physiology. Simon, Dickey, Hogan, and Reece. E-text with Modified Mastering Biology. Pearson. Accessed through Brightspace/D2L.
- BIOL 1406/1408 Lab Manual. Purchased through the COM Bookstore.

Physical resources

- Scantrons (4). 882E. Must be purchased and handed to the professor prior to the first exam. Failure to provide scantrons may result in a zero on the exam for which it is required.

Online resources

- COM Brightspace/D2L. <http://com.brightspace.com>. This will be used for online activities, class announcements, and more. All class resources are available through Brightspace/D2L.
- Mastering Biology with eText. Login will be completed through Brightspace/D2L.

Course Description: Fundamental principles of living organisms will be studied, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included. Prerequisites: CPT Reading 78/READ 0370. Successful completion of College Algebra or better-level mathematics is recommended.

Course requirements:

- Lectures/Labs: Each class period will be devoted to learning course material via lecture or lab activities.
- Homework: You will have weekly assignments in Mastering Biology to be completed for credit. There may also be practice assignments that do not count towards your grade but may help prepare you for exams.

- In class work: Throughout the semester we will have various in class activities that are linked to the course material to help reinforce the information covered in lecture.
- Lecture Exams: Exams will be taken during class time and may consist of multiple choice, true/false, diagram identification, fill-in-the-blank, and short answer questions.
- Lab Activities: You will be completing graded lab activities in class. These labs form the basis for your lab exams, so it is crucial that you complete and understand the lab activities.
- Lab Reports: During the semester, you will be required to submit lab reports for specific lab activities. You must attend the lab that the report is based on in order to receive credit for the lab report.
- Lab Practicals: Lab practicals are exams that cover the various lab experiments that are carried out. These will consist of multiple choice, fill-in-the-blank, short answer, and identification of results style questions. Each lab practical will cover six labs.
- Comprehensive Final Exam: The final exam is comprehensive and will cover all of the lecture material for the entire class. The exam may consist of multiple choice, true/false, diagram identification, fill-in-the-blank, and short answer style questions.

Determination of Course Grade:

Lecture grade (*total: 670 points*)

- Attendance/class engagement (55 points)
 - Attendance will be taken during each class (5 points per day, excluding exams).
- Lecture exams (300 points)
 - Three lecture exams, each worth 100 points, will be given throughout the semester.
- Chapter study guides (55 points)
 - For each section covered in class, you will be assigned a study guide to complete worth 5 points. These study guides also serve as review for the exams.
- Mastering Biology activities (110 points)
 - Mastering Biology activities, each worth 10 points, will be assigned for the material covered in each lecture.
- Comprehensive final exam (150 points)
 - This exam will cover ALL material presented in lecture and assigned as reading throughout the semester.

Laboratory grade (*total: 300 points*)

- Lab daily grade (120 points)
 - This course includes 12 laboratory sessions (15 pts each). You are expected to participate fully during class and complete the questions included in the lab manual. Lab manuals will be collected at the end of each lab for grading and returned during the following lecture period.
- Lab practicals (150 points)
 - Two lab practicals, each worth 75 points, will be given during the semester. Each lab practical will cover the material from the previous six labs.
- Lab project (30 points)
 - A group project will be assigned during the second half of the semester. You will be graded on your participation and teamwork in addition to the lab project itself.

Grading scale:

Letter Grade	Grade Average
A	89.5% - 100%
B	79.5% - 89.4%
C	69.5% - 79.4%
D	59.5% - 69.4%
F	0% - 59.4%

Laboratory Science Statement: The grade for this course consists of both a lecture and laboratory component. Students must earn a 70% or better in the laboratory component to successfully pass the course. Earning less than 70% in the laboratory component will result in an F for the course regardless of the lecture grade. Passing the laboratory component and failing the lecture component will not guarantee a passing grade for the course. Deviations from this policy will be at the sole discretion of the instructor.

Late Work, Make Up, and Extra Credit Policy: This course is designed to accommodate some of life's mishaps, difficulties, or tragedies by providing extended deadlines for selected assignments, as described below. After the extended deadline has passed, the assignment is closed, and the relevant submission link may be removed. Expect that no additional time will be provided. Any deviations from the policies described below are at the sole discretion of the instructor.

Late work policy

Mastering Biology activities and chapter study guides: These assignments have an extended deadline that results in a point loss of 10% for each day the assignment is late. Please use the course outline to help schedule your time for the course to assure you meet assignment deadlines.

Labs: Labs are due the day they are completed in class, unless otherwise noted. Students that are not in class for the lab will not be allowed to complete the lab activity and will receive a zero for the day's assignment.

There will be no deadline extensions for in class work, homework, lab reports, lab practicals, or lecture exams.

Make up policyLecture exams

- If you anticipate an absence on an exam day, you must inform your instructor PRIOR to the absence. Your situation will be evaluated by your instructor, and you may be allowed to take a make up exam.
- Make up exams will be allowed in the case of a death in the family or a documented student illness. You must provide legitimate proof for your excuse in the case of missing an exam. Missed/make up exams will not be allowed without documented evidence.
- The make up exam must be taken within one week of the original exam date.

Labs and lab practicals

- Due to the nature of the course, there are no make up labs or lab practicals.
- Arriving late to lab may result in not receiving full credit for completing the lab.
- You are responsible for the material covered in lab even if you are absent. It is your responsibility to obtain any information you miss from a classmate.

There will be no opportunities to make up work for Mastering Biology assignments, in class work, or lab reports. If you are absent on the day homework is due, you can scan and email the assignment to your instructor on the due date in order to receive credit. Otherwise, you will receive a zero for the homework assignment.

Extra credit policy: During the semester there will be opportunities for extra credit. Students are responsible for submitting any extra credit work by the due date. No late work for extra credit will be accepted.

Attendance Policy: Students are expected to attend all class sessions as listed on the course calendar. These attendance policies apply to both lecture and lab. Attendance will be taken at the beginning of each class. Leaving early from class (without approval from the instructor) may result in being marked absent for that day. If you do have to miss class, basic course materials will be posted on Brightspace/D2L. It is your responsibility to obtain any additional notes from a classmate.

Laboratory attendance policy: This laboratory is designed to support the information provided by the lectures and online materials. The lab course is an introduction to fundamental biology and covers important topics in each lab meeting. Attendance and participation are required and directly affect your weekly lab grade. Labs are designed to last most of the lab period, so expect to be in lab for the full time. Arriving late to lab may result in not receiving full credit for completing the lab. You are responsible for the material covered in lab, and it is your responsibility to obtain any missed notes from a classmate.

Communicating with your instructor: ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. A response can be expected within 36 hours during the week or 48 hours during the weekend.

Student Learner Outcome	Maps to Core Objective	Assessed via this Assignment
1. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.	Critical Thinking	In class activity
2. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.	Critical Thinking	In class activity
3. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.	Empirical and Quantitative Skills	Lab project

4. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.	Critical Thinking	In class activity
5. Describe karyotypes, pedigrees, and biotechnology and provide an example of the uses of each.	Critical Thinking	In class activity
6. Identify the importance of karyotypes, pedigrees, and biotechnology.	Critical Thinking	In class activity
7. Identify parts of a DNA molecule, and describe replication, transcription, and translation.	Critical Thinking	In class activity
8. Analyze evidence for evolution and natural selection.	Critical Thinking	In class activity
9. Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.	Critical Thinking, Empirical and Quantitative Skills	In class activity
10. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.	Critical Thinking	In class activity
11. Effectively communicate the results of scientific investigations.	Communication	Lab project
12. Demonstrate the ability to work effectively with others to support and accomplish a shared goal while recognizing and respecting different viewpoints.	Teamwork	Lab project

Academic Dishonesty: Any incident of academic dishonesty will be dealt with in accordance with college policy and the Student Handbook.

- Cheating on exams is an extremely serious offense and will result in a grade of **zero** on that exam. In addition, the student will be referred to the Office of Student Conduct for the appropriate disciplinary action.
- Plagiarism is using someone else's words **or ideas** and claiming them as your own. This includes using someone's words without enclosing them in quotation marks, paraphrasing information without including a proper citation, copying directly from a website and pasting it into your paper, or using computer-generated (A.I.) text of any sort. Any assignment containing plagiarized material will receive a grade of **zero**, and the student will be referred to the Office of Student Conduct for the appropriate disciplinary action.
- Resources for avoiding plagiarism: <https://owl.english.purdue.edu/owl/resource/589/01/>

Student Concerns: If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact Science and Engineering Department Chair Sheena Abernathy at sabernathy@com.edu.

Classroom conduct policy: College of the Mainland requires that students enrolled at COM be familiar with the Standards of Student Conduct, which can be found in the online Student Handbook: <https://www.com.edu/student-services/student-handbook.html>. Students should act in a professional manner at all times. Disruptive students will be held accountable according to college policy. Any violations of the Code of Conduct will result in a referral to the Office for Student Conduct and may result in dismissal from this class.

Behavioral expectations: Each student is entitled to an environment conducive to learning. Any situation that prevents students from learning or the instructor from teaching is considered to be a disruption. Please be respectful of your fellow students and the instructor by adhering to the following:

- Cell phones can be used sparingly during class, but if the use begins to be a disruption to yourself, other students, or the instructor, you will be asked to put the device away.
- Certain devices can be used to view content on the internet at the discretion of the instructor.
- Laptops (and similar) are ONLY permitted during class to take notes. Surfing the internet, scrolling through social media, checking email, etc. from your laptop is not permitted. **If your laptop appears to be a distraction to you or the students around you, you will be asked to put it away and will be given a sheet of paper and a pen for taking notes.**
- During exams, no electronics are allowed to be out. This includes but is not limited to cell phones, laptops, tablets, ear buds, and headphones. If a student has any of these devices out during an exam, the exam will be taken from the student, and they will receive a zero for that exam.
- Students may be removed from class at the discretion of the instructor if they are exhibiting disruptive behavior, and a Conduct Referral Form may be submitted to the Dean of Students. Repeated incidents will result in automatic withdrawal from the class.

Course policies are subject to change. It is the student’s responsibility to check Brightspace/D2L for corrections or updates to this syllabus. Any changes will be posted in the “Announcements” section as well as being updated in the syllabus itself.

Fall 2023 Tentative Course Outline

Week	Date	Lecture/Lab Topic	Assignments Assigned	
1	8/28	Intro to Course Chapter 1: Biology Today	Student Info Sheet	due 8/30
			Mastering Biology: Introduction to Mastering Biology and how Dynamic Study Modules (DSMs) Work	due 8/30
			Mastering Biology HW1: Chapter 1	due 9/1
			Chapter 1 study guide	due 9/6
			Buy and turn in four scantrons	due 9/6
	8/30	Lab: Lab Safety	Read Lab 1	

2	9/4	<i>No class – Labor Day</i>		
	9/6	Lab 1: Scientific Method	Read Chapter 2	
3	9/11	Chapter 2: Essential Chemistry for Biology	Mastering Biology HW 2: Chapter 2 Chapter 2 study guide Read Lab 2	due 9/15 due 9/18
	9/13	Lab 2: Determining pH	Read Chapter 3	
4	9/18	Chapter 3: The Molecules of Life	Mastering Biology HW 3: Chapter 3 Chapter 3 study guide Read Lab 3	due 9/22 due 9/25
	9/20	Lab 3: Biomolecules	Read Chapter 4	
5	9/25	Chapter 4: A Tour of the Cells	Mastering Biology HW 4: Chapter 4 Chapter 4 study guide Read Lab 4	due 9/29 due 10/2
	9/27	Lab 4: Microscopy	Read Chapter 5	
6	10/2	Chapter 5: The Working Cell	Mastering Biology HW 5: Chapter 5 Chapter 5 study guide Read Lab 5	due 10/6 due 10/9
	10/4	Lab 5: Visualizing Cells		
7	10/9	EXAM 1: Chapters 1-5	Read Lab 6	
	10/11	Lab 6: Cellular Transport	Read Chapter 6	
8	10/16	Chapter 6: Cellular Respiration and Fermentation	Mastering Biology HW 6: Chapter 6 Chapter 6 study guide	due 10/20 due 10/23
	10/18	LAB PRACTICAL 1: Labs 1-6	Read Chapter 7	
9	10/23	Chapter 7: Photosynthesis	Mastering Biology HW 7: Chapter 7 Chapter 7 study guide Read Lab 7	due 10/27 due 10/30
	10/25	Lab 7: Enzymes	Read Chapter 8	
10	10/30	Chapter 8: Cellular Reproduction	Mastering Biology HW 8: Chapter 8 Chapter 8 study guide Read Lab 8	due 11/3 due 11/6
	11/1	Lab 8: Respiration and Fermentation	Read Chapter 9	
11	11/6	Chapter 9: Patterns of Inheritance	Mastering Biology HW 9: Chapter 9 Chapter 9 study guide Read Lab 9	due 11/10 due 11/13
	11/8	Lab 9: Photosynthesis		
	11/13	EXAM 2: Chapters 6-8	Read Lab 10	

12	11/15	Lab 10: Cell Division	Read Lab 11	
13	11/20	Lab 11: Genetics	Read Chapters 10 and 12	
	11/22	Chapters 10 and 12: Structure and Function of DNA; DNA Technology	Mastering Biology HW 10: Chapters 10 and 12 Chapters 10 and 12 study guide Read Chapter 13	due 11/26 due 11/29
14	11/27	Chapter 13: How Populations Evolve	Mastering Biology HW 11: Chapter 13 Chapter 13 study guide Read Lab 12	due 11/30 due 12/4
	11/29	Lab 12: DNA and Electrophoresis		
15	12/4	LAB PRACTICAL 2: Labs 7-12		
	12/6	EXAM 3: Chapters 9-10, 12-13		
16	12/11	Final Exam Review		
	12/13	COMPREHENSIVE FINAL EXAM		

Note: Details regarding the lab project will be discussed later in the semester.

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook https://www.com.edu/student-services/docs/Student_Handbook_2023-2024_v2.pdf. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.*

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact Kimberly Lachney at 409-933-8919 or klachney@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a “W” grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is October 11. The last date to withdraw from the 16-week session is November 28. The last date to withdraw for the 2nd 8-week session is December 7.

FN Grading: The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress: If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here: <https://www.com.edu/community-resource-center/>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.