



**BIOL 1408.221CL**  
**Biology for Non-Science Majors I**  
**Fall 2023**  
**T/TH 6 - 8:50PM, STEAM 316 (Lecture + Lab)**

**Instructor Information: Sabrina Marmol**

**E-mail:** [smarmol@com.edu](mailto:smarmol@com.edu) (preferred method of communication)

**Office Telephone:** (409)933-8244 **Note:** this is the number of Julie Kellagher - Administrative Assistant for Department of Science and Engineering and Department of Math and Computer Science.

**Student Hours and Location:**

**Office Hours:** Tuesdays and Thursdays 5:20 – 5:50PM or by appointment.

**Office:** STEAM 316

**Required Textbook, Materials, and Resources:**

**Required Textbooks:**

- *Campbell Essential Biology with Physiology*, Simon, Dickey, Hogan, and Reece e-text with Modified Mastering Biology. Pearson. Note: The e-book and Modified Mastering Biology are purchased at the time of registration, and you will gain access to the online materials once you are in Blackboard when classes begin.
- *BIOL 1406/8 Lab Manual* – purchased through the COM Bookstore

**Required Materials:**

- **Scantrons (5)** – 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(s) for which it is required.

**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 week we will be covering material during class time and this material will involve lecture and/or lab each day.

MasteringBiology (Homework) – you will have weekly assignments in MasteringBiology to be completed for credit. There may also be assignments that are for practice and do not count towards your grade. These assignments can be completed to 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 will consist of multiple-choice questions and possibly T/F, diagram identification, and fill in the blanks questions.

Lab Activities – you will be completing lab activities in class, and these are graded activities. These labs will be what your lab exams are based off, so it is crucial that you attend lab to complete the various lab activities.

Lab Reports – during the semester, you will have lab reports that are due for specific lab activities. You must attend the lab that the report is based off 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 and will consist of multiple choice, fill-in-the-blank, short answer, and identification of results style questions.

#### **Required Online Resources:**

- COM Brightspace/D2L: <http://com.brightspace.com>. COM Brightspace/D2L will be used for online activities and more. All of the class resources are available through Brightspace/D2L.
- Modified Mastering Biology with eText – **Login will be completed through Brightspace.**
- You will have several assignments on Mastering Biology for each topic covered.

#### **Computer Requirements:**

You will need to have access to a computer with the following resources:

- Internet access through Wifi or wired Ethernet connection
- A contemporary web browser capable of viewing flash video (Chrome and Firefox usually work best)
- Java installed and updated
- COM e-mail account
- Microsoft Office (COM offers free Office 365 access to students)
- A PDF reader

You are responsible for maintaining your own online access to the course. If your computer does not allow you to complete the assignments in the course, please use the computers available on campus. Be aware that the college computers are only available during the hours of operation for the computer labs and library. It is up to you to be aware of those times and get all assignments turned in on time.

#### **Determination of Course Grade/Detailed Grading Formula:**

##### **Lecture Grade (750 points):**

1. Lecture exams (500 points) – a total of four lecture exams, each worth 125 points will be given throughout the semester during class time (see Tentative Course Outline).
2. Mastering Biology (150 points) – you will have various Mastering Biology homework assignments each week of the semester that cover topics discussed in the Learning Modules. Your lowest Mastering Biology homework score will be dropped.
3. Attendance/Participation (100 points) - points will be awarded for attending lectures and participating in in-class activities.

##### **Laboratory Grade (250 points):**

1. Lab Daily Grade (80 points) – each lab will have activities to be completed for a portion of your lab daily grade. This also counts as attendance for lab.
2. Lab Practicals (110 points) – two lab practicals will be given during the semester covering material from previous labs.
3. Lab Project (60 points) – a lab project regarding the enzyme, cell respiration, photosynthesis, and osmosis experiments will be assigned during the semester, worth 35 points. This Lab Project will be a group project and you will be graded on your participation and teamwork, in addition to the lab project itself.

### Determination of Course Grade

#### Lecture Grade (75%)

Lecture exams	500 points
Mastering Biology Homework	150 points
Attendance/Participation	100 points

#### Laboratory Grade (25%)

Lab Practical	110 Points
Lab Daily Grade	80 points
Lab Project	60 points

### Grading Scale:

Final grades assigned for this course will be based on total points earned and are assigned as follows:

Letter Grade	Grade Average
A	90% - 100%
B	80% - 89.9%
C	70% - 79.9%
D	60% - 69.9%
F	0 - 59.9%

### Late Work, Make-Up, and Extra-Credit Policy:

Any deviations from the policies described below are at the sole discretion of the instructor.

#### Late Work Policy:

No late work will be accepted.

#### Make-Up Policy:

- In class work: If you are absent for an in-class assignment, there are no make-ups, and you will receive a ZERO for the in-class work (will count against attendance/participation grade)
- Mastering Biology Assignments: No make-ups due to ample time to complete assignments and the lowest grade being dropped.
- Lecture Exams: Should you anticipate an absence on an exam day you must contact your instructor by phone, email or in person 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 for 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. The make-up exam MUST be taken within one week of the original exam date. Missed exams will not be allowed without documented evidence.
- Labs: There are **NO MAKE-UP LABS**. Arriving late to lab may result in not receiving full credit for completing the lab. You are still responsible for the material covered in lab and it is YOUR responsibility to obtain the information from a classmate.
- Lab Project: you will have ample time to complete the lab project and no make-up work will be accepted. If you are absent for the lab, no make-ups will be accepted.
- Lab Practicals: Due to the nature of the course, no make-up Lab Practical will be permitted.

#### Extra-Credit Policy:

During the semester, there may be opportunities for extra credit. Students are responsible for submitting any extra credit work by the due date and no late work for extra credit will be accepted.

### **Lab 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.

### **Attendance Policy:**

Students are expected to attend **ALL** class sections listed on the course calendar. These attendance policies apply to **BOTH lecture and lab.** Failing to log into Brightspace (D2L), failing to log in to Mastering Biology, or failing to complete your work as scheduled demonstrates insufficient progress towards obtaining the course goals (objectives) and is detrimental to learning course material.

- Attendance will be taken at the beginning of each class. Leaving early from class (without approval from the instructor) may result in an absence for that day. On days where there are in-class activities, completion of the activity will count as attendance for that day. Failure to participate or complete the in-class activities may result in an absence for that day.
- If you do have to miss class, course materials will be posted on Brightspace (D2L), but 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. This lab course is an introduction to fundamental biology, that covers important topics in each lab meeting. Labs are designed to last most of the lab period, therefore 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 notes from a classmate.

- Lab attendance and participation are **REQUIRED** and directly affect your weekly lab grade. Any deviations from this policy are at the sole discretion of the instructor.

### **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. Responses can be expected within 24 hours during the week or 48 hours if it is the weekend. Do not email the instructor to ask why they have not responded prior to the 24-hour mark of the original email.

### **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 on-line 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 (this applies to both lecture and lab):

1. Cell phone use during class is not permitted unless approved by the instructor. Certain devices can be used to view content on the internet; however, this is at the discretion of the instructor. Laptops are **ONLY** permitted during class to take notes; surfing the internet or checking email from your laptop is not permitted. Ear

buds/headphone use during class is not permitted. **During exams, no electronics will be allowed out. Items not allowed include, but are not limited to, cell phones, laptops, tablets, ear buds, headphones. If the 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.** On exam days, students must silence or turn off their phones and put them in their bags/backpacks/purse which will be put into cubbies or at the front of the classroom along with any other electronic devices. Failure to do so may result in a zero on the exam.

2. Students can be removed from the class if they are exhibiting disruptive behavior as deemed by the instructor. Repeated incidents will result in automatic withdrawal from the class. Students who display this conduct will be removed from the class and a Conduct Referral Form may be submitted to the Dean of Students.

### **Academic Dishonesty:**

Any incident of academic policy will be dealt with in accordance with college policy and the Student Handbook. Academic dishonesty – such as cheating on exams - is an extremely serious offense and will result in a **grade of zero** on that exam and the student will be referred to the Office of Student Conduct for the appropriate discipline action.

**Plagiarism:** Plagiarism is using someone else's words or ideas and claiming them as your own. Plagiarism is a very serious offense. Plagiarism includes paraphrasing someone else's words without giving proper citation, copying directly from a website and pasting it into your paper, using someone else's words without quotation marks. Any assignment containing any plagiarized material will receive a **grade of zero** and the student will be referred to the Office of Student Conduct for the appropriate discipline action. **Link(s) to resource(s) about 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 the Department of Science and Engineering Chair Mrs. Sheena Abernathy at (409)933-8330 or [sabernathy@com.edu](mailto:sabernathy@com.edu).

**\*\*\* Course policies are subject to change.** It is the student's responsibility to check Brightspace (D2L) for corrections or updates to the syllabus. Any changes will be posted on Brightspace. **\*\*\***

**Student Learner Outcomes:**

<b>Student Learner Outcomes</b>	<b>Core Objectives</b>	<b>Course Level Assessments</b>
1. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.		
2. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.		
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.		
5. Describe karyotypes, pedigrees, and biotechnology and provide an example of the uses of each.		
6. Identify the importance of karyotypes, pedigrees, and biotechnology.		
7. Identify parts of a DNA molecule, and describe replication, transcription, and translation.		
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.		
10. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.		
11. Communicate effectively the results of scientific investigations.	Communication	Lab Project
12. Students will demonstrate the ability to work effectively with others to support and accomplish a shared goal while recognizing and respecting different viewpoints.	Teamwork	Lab Project

**Fall 2022 Tentative Course Outline: NOTE- LAB DAYS (EVERY THURSDAY) ARE SHADED AND IN BOLD**

<b>Week</b>	<b>Dates</b>	<b>Topics</b>	<b>Reading</b>	<b>Assignment(s)</b>
1	Tues, 8/29	Intro to Course <b>Chapter 1</b> – Learning About Life	Syllabus Chapter 1	<b>Intro to Mastering Biology HW AND Mastering HW 1 (Due 9/5)</b>
	Thurs, 8/31	Lab Safety		
2	Tues, 9/5	Continue Chapter 1 <b>Chapter 2</b> – Essential Chemistry for Biology	Chapter 2	<b>Mastering HW 2 (Due 9/7)</b>
	Thurs, 9/7	<b>Lab 1</b> – Scientific Method		
3	Tues, 9/12	Continue Chapter 2 <b>Chapter 3</b> – The Molecules of Life	Chapter 3	<b>Mastering HW 3 (Due 9/14)</b>
	Thurs, 9/14	<b>Lab 2</b> – pH		Exam Review
4	Tues, 9/19	<b>Exam 1 (Ch. 1-3)</b>		
	Thurs, 9/21	<b>Lab 3</b> – Biomolecules		
5	Tues, 9/26	<b>Chapter 4</b> – A Tour of the Cell	Chapter 4	<b>Mastering HW 4 (Due 9/28)</b>
	Thurs, 9/28	<b>Lab 4</b> - Microscopes		
6	Tues, 10/3	Continue Chapter 4 <b>Chapter 5</b> – The Working Cell	Chapter 5	<b>Mastering HW 5 (Due 10/5)</b>
	Thurs, 10/5	<b>Lab 5</b> - Cells		
7	Tues, 10/10	Continue Chapter 5 <b>Chapter 6</b> – Cellular Respiration	Chapter 6	<b>Mastering HW 6 (Due 10/12)</b>
	Thurs, 10/12	<b>Lab 6</b> – Cell Transport		Exam Review Lab Practical Review
8	Tues, 10/17	<b>Exam 2 (Ch. 4-6)</b>		
	Thurs, 10/19	<b>LAB PRACTICAL 1 (Labs 1-6)</b>		
9	Tues, 10/24	<b>Chapter 7</b> - Photosynthesis	Chapter 7	<b>Mastering HW 7 (Due 10/26)</b>
	Thurs, 10/26	<b>Lab 7</b> – Enzymes		
10	Tues, 10/31	Continue Chapter 7 <b>Chapter 8</b> – Cellular Reproduction	Chapter 8	<b>Mastering HW 8 (Due 11/2)</b>
	Thurs, 11/2	<b>Lab 8</b> – Respiration and Fermentation		
11	Tues, 11/7	Continue Chapter 8 <b>Chapter 9</b> – Patterns of Inheritance	Chapter 9	<b>Mastering HW 9 (Due 11/9)</b>
	Thurs, 11/9	<b>Lab 9</b> – Photosynthesis		Exam Review

12	Tues, 11/14	<b>Exam 3 (Ch. 7-9)</b>		
	Thurs, 11/16	<b>Lab 10</b> – Mitosis and Meiosis		<b>Lab Project Due*</b> (This date may change) <b>Present Day 1</b>
13	Tues, 11/21	<b>Lab 11</b> – Genetics		<b>Present Day 2</b>
	Thurs, 11/23	Happy Thanksgiving!!!		
14	Tues, 11/28	<b>Chapter 10</b> – The Structure and Function of DNA	Chapter 10	
	Thurs, 11/30	<b>Lab 12</b> – DNA and Electrophoresis		<b>Mastering HW 10 (Due 11/30)</b> Lab Practical Review
15	Tues, 12/5	<b>Chapter 12</b> – DNA Technology <b>Chapter 13</b> - How Populations Evolve	Chapter 12 Chapter 13	
	Thurs, 12/7	<b>LAB PRACTICAL 2 (Labs 7-12)</b>		<b>Mastering HW 12 (Due 12/7)</b>
16	Tues, 12/12	Continue Chapter 13		<b>Mastering HW 13 (Due 12/12)</b> Exam Review
	Thurs, 12/14	<b>Exam 4 (Ch. 10, 12, &amp; 13)</b>		



## 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](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](mailto: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 1<sup>st</sup> 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 2<sup>nd</sup> 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](mailto:deanofstudents@com.edu) or [communityresources@com.edu](mailto:communityresources@com.edu).