



BIOL 1406.103CL
Biology for Majors I
Fall 2021
T & TH 9:30-12:20, STEM 320

Instructor Information: Sheena Abernathy

E-mail: sabernathy@com.edu (preferred method of communication)

Office Telephone: (409)933-8330

RemindApp: Text @bio1406com to 81010 to register and be able to reach out through text and receive reminders.

Student Hours and Location:

Office Hours: Monday 10:00-1:30; Tuesday - Thursday 8:10-9:30; Or by appointment

Office: STEM 325-28

Required Textbook, Materials, and Resources:

Required Textbook:

- *Campbell Biology* e-text with Mastering Biology 11th ed. with MasteringBiology. 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. In addition, you will have access to the eBook through VitalSource.
- *BIOL 1406/8 Lab Manual* – purchased through the COM Bookstore prior to the first day of lab.

Required Materials

- Scantrons (4) – 888E given to the professor by Tuesday, September 2nd in class

Required Online Resources

- COM Blackboard: <https://de.com.edu/webapps/login/>. Training is required to access Blackboard. If you have any questions regarding course access or training, please contact the Distance Education department at ext. 8476.
- Modified Mastering Biology with eText – **Login will be completed through Blackboard.**

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: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or [IRW 0320](#) with a grade of "C" or better. Successful completion of College Algebra or a higher-level mathematics is recommended.

Course Requirements:

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

MasteringBiology – you will have weekly assignments in MasteringBiology to be completed for credit. You will also have some 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/homework – 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 and Comprehensive Final Exam – both lecture exams and the final exam will be taken during class time and will consist of multiple choice, T/F, diagram identification, and short answer style 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.

Determination of Course Grade/Detailed Grading Formula:

Lecture Grade (780 points):

1. Lecture exams (400 points) – A total of four lecture exams, each worth 100 points, will be given throughout the semester (see Tentative Course Outline). The lowest exam will be replaced with the average of the final exam before calculating the overall final grade.
2. In class work/homework (100 points) – Various in class and/or homework assignments will be given throughout the semester.
3. Mastering Biology (130 points) – you will have various Mastering Biology homework assignments throughout the semester that cover topics discussed in class.
4. Comprehensive Final Exam (150 points) The final exam covers ALL material presented in lecture and assigned as reading throughout the semester.

Laboratory Grade (260 points):

1. Lab Daily Grade (60 points) – each lab will have activities to be completed for a portion of your lab daily grade.
2. Lab Practical (150 points) – two lab practicals will be given throughout the semester, covering material from previous labs. Each practical is worth 75 points.
3. Lab Report (50 points) – a lab report regarding an unknown biological molecule will be assigned during the semester, worth 50 points. This report will be a group project and you will be graded on your participation and teamwork, in addition to the lab report itself.

Grading Formula

Lecture Grade (75%)

Lecture exams	400 points
Mastering Biology Homework	130 points
In class work/homework	100 points
Comprehensive Final Exam	150 points

Laboratory Grade (25%)

Lab Daily Grade	60 points
Lab Reports	50 points
Lab Practical	150 Points

Grading Scale: Final grades assigned for this course will be based on the overall grade averages as follows:

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%

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.

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: The course is designed to accommodate some of life's mishaps, difficulties, or tragedies by providing extended deadlines for selected assignments. In those cases, there is a deadline extension after the initial deadline. After the extended deadline has passed, the assignment is closed, and the link may be removed. Expect that no additional time will be provided.

- MasteringBiology Assignments have an extended deadline that results in a 10% loss of points for the late assignment. After missing the initial deadline, the maximum grade is 90%. The extended deadlines are listed in the course outline. Please use the course outline to help schedule your time for the course to assure that you meet the assignment and assessment deadlines.
- Lecture Exams, Lab Report, and Lab Practicals are an exception and have no extended deadline.
- Labs will be due on the day they are completed in class. Students that are not in class will not be allowed to complete the activity.
- In class work/homework if work is given during class to be completed in class, there is no extended deadline and students that are not in class will not be allowed to complete the activity. If homework is assigned, students will have ample time to complete the work and no extended deadlines are provided.

Make-Up Policy:

- MasteringBiology Assignments do not have a make-up policy due to the extended deadline.
- 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.
- Lab Report: you will have ample time to complete the lab report and no make-up work will be accepted.
- Lab Practicals: Due to the nature of the course, no make-up Lab Practical will be permitted.
- 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.
- In class work/homework If you miss class on the day an assignment is due, you will receive a ZERO for the missed assignment. To prevent a grade of ZERO, you can scan and email the assignment to your instructor on the same day the assignment is due. 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.

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 and 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 an absence for that day. IF you do have to miss class, course materials will be posted on Blackboard, 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. **Attendance:** 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.

Student Learner Outcomes		
Outcomes	Core Objectives	Course Level Assessments
Students will be able to describe the characteristics of life.		
Students will be able to explain the methods of inquiry used by scientists.		
Students will be able to identify the basic requirements of life and the properties of the major molecules needed for life.		
Students will be able compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.	Critical Thinking	Exams
Students will be able to describe the structure of cell membranes and the movement of molecules across a membrane.		
Students will be able to identify the substrates, products, and important chemical pathways in metabolism.	Empirical and Quantitative Skills	In class activity
Students will be able to identify the principles of inheritance and solve classical genetics problems.	Empirical and Quantitative Skills	In class activity
Students will be able to describe the unity and diversity of life and the evidence for evolution through natural selection.	Critical Thinking	Exams
Students will be able to apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.	Empirical and Quantitative Skills	Lab activities
Students will demonstrate their ability to use critical thinking and scientific problem-solving to make informed decisions in the laboratory.	Critical Thinking	Lab exam questions
Students will demonstrate their ability to communicate effectively the results of scientific investigations.	Communication Skills	Paper/Presentation
Students will be able to identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.		
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 activity Paper/presentation

Academic Dishonesty: Any incident in violation of academic policy will be dealt with in accordance with college policy and Student Handbook. Academic dishonesty (i.e., cheating on exams) is an extremely serious offense and will result in a **grade of zero** on that exam and the student may be referred to the Dean of Students for the appropriate discipline action.

Plagiarism: Plagiarism is using someone else's words or ideas and claiming them as your own and 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 plagiarized material will receive a **grade of zero** and the student may be referred to the Dean of Students 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 Dean of Academic Programs, Dr. Barney at (409)933-8727 or rbarney@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 on-line Student Handbook. <http://www.com.edu/student-services/student-handbook.php>. 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:

1. 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; 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. **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.**
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.

Success Tips for Students:

Build Rapport If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let your instructor know as early as possible. As you will find, building rapport and effective relationships are key to becoming an effective professional. Make sure that you are proactive in informing your instructor when difficulties arise during the semester so that they can help you find a solution.

10 Tips to Succeed in Class

1. **Come to class.** In some courses all you have to do is read the book; that's not the case here. The lecture will key you in to what is important and what isn't; it will also provide a framework to stuff all the facts into. If you must miss class, get the notes from a fellow student or the web, and then go over the notes with someone who was present at the live lecture.
2. **Take notes.** Everything that really matters will be discussed in class; the book is really just for back up. The Powerpoints are posted online to help you fill in anything you missed. Taking notes helps you pay attention in class and remember the material.
3. **Form a study group or partnership.** Don't try to do it alone. Study groups are generally good because they help you go over the material, give you an opportunity to practice explaining your answers, and provide moral support.
4. **Do the problems.** Seriously and carefully. Do the problems at the back of each chapter and in Mastering Biology. In addition, Mastering Biology has a Study Area that you can take practice quizzes and watch videos and animations.
5. **Make diagrams,** pictures, summary charts, concept maps, etc. The ones in the book (and the ones handed out in class) may be good, but for best results, you should make your own.
6. **Keep up.** The current material is always based on what came before, so once you get behind it is very difficult to catch up. Some students find it is very helpful to quickly look over the notes of the previous lecture right before the current one.
7. **Read** one of the texts before class if the material is new to you. It is very hard to follow the lecture if every word and concept is unfamiliar.
8. **Ask questions.** If you don't understand something, ASK. The more effort you put into asking questions, the more you will get out of the answers.
9. **Master the vocabulary.** The stress in this course may be on *using* the vocabulary, but you won't get anywhere until you learn it first. So try to master all new terms as fast as possible.
10. **A word or two about grades** In this course you have to know how to use the material, not just repeat it or explain it in your own words. If you think your performance on the exam does not reflect your knowledge, it often means you have memorized the facts but have not practiced enough at selecting the right ones and applying them to whatever problem is presented to you.

Links and Resources on how to Succeed in Biology

<http://www.elsevier.com/connect/11-pointers-for-college-success-from-a-professor-and-dad>

The "A" Game and Get Ready for Biology books (can be found online at Amazon, Barnes & Noble, etc)

Course policies are subject to change, and it is the student's responsibility to check Blackboard for corrections or updates to the syllabus.

BIOL 1406.103CL FALL 2021 TENTATIVE COURSE OUTLINE

Week	DAY	Lecture/Lab Topic(s)	Due Dates for Course Assignment(s)
1	8/24	Intro to Course	○ 8/26-Student Info Sheet ○ 8/26-Introduction to Mastering Biology and How DSMs (Dynamic Study Modules) Work ○ 8/27-Mastering HW 1: Ch. 1 (<i>Extended Deadline 8/29</i>)
	8/26	Chapter 1: Evolution, the Themes of Biology, and Scientific Inquiry Lab: Lab Safety	
2	8/31	Chapter 2: The Chemical Context of Life Chapter 3: Water and Life	○ 9/2-Four (4) scantrons ○ 9/3-Mastering HW 2: Ch. 2/3 (<i>Extended Deadline 9/5</i>)
	9/2	Lab 1: Scientific Method	
3	9/7	Chapter 4: Carbon and the Molecular Diversity of Life Chapter 5: The Structure and Function of Large Biological Molecules	○ 9/10-Mastering HW 3: Ch. 4/5 (<i>Extended Deadline 9/12</i>)
	9/9	Lab 2 : pH	
4	9/14	EXAM 1 (Chapters 1-5)	
	9/16	Lab 3: Biomolecules	
5	9/21	Chapter 6: A Tour of the Cell Chapter 19: Viruses	○ 9/21-Draft of Unknown Paper ○ 9/24-Mastering HW 4: Ch. 6/19 (<i>Extended Deadline 9/26</i>)
	9/23	Lab 4: Microscopes	
6	9/28	Chapter 7: Membrane Structure and Function	○ 10/1-Mastering HW 5: Ch. 7 (<i>Extended Deadline 10/3</i>)
	9/30	Lab 5: Cells	
7	10/5	Chapter 8: An Introduction to Metabolism	○ 10/8-Mastering HW 6: Ch. 8 (<i>Extended Deadline 10/10</i>)
	10/7	EXAM 2 Lab 6: Cellular Transport	
8	10/12	Chapter 9: Cellular Respiration and Fermentation	○ 10/15-Mastering HW 7: CH. 9 (<i>Extended Deadline 10/17</i>) ○ 10/15-Final Unknown Paper
	10/14	LAB PRACTICAL I (1-6)	
9	10/19	Chapter 10: Photosynthesis	○ 10/22-Mastering HW 8: Ch. 10 (<i>Extended Deadline 10/24</i>)
	10/21	Lab 7: Enzymes	
10	10/26	Chapter 16 Molecular Basis of Inheritance Chapter 20 DNA Tools and Biotechnology	○ 10/29-Mastering HW 9: Ch. 16/20 (<i>Extended Deadline 10/31</i>)
	10/28	EXAM 3 (Chapters 8-10) Lab 8: Respiration and Fermentation	
11	11/2	Chapter 12 The Cell Cycle Chapter 13 Meiosis and Sexual Life Cycles	○ 11/5-Mastering HW 10: Ch. 12/13 (<i>Extended Deadline 11/7</i>)
	11/4	Lab 9: Photosynthesis	
12	11/9	Chapter 14 Mendel and the Gene Idea Chapter 15 The Chromosomal Basis of Inheritance	○ 11/12-Mastering HW 11: Ch. 14/15 (<i>Extended Deadline 11/14</i>)
	11/11	Lab 10: Mitosis/Meiosis	
13	11/16	Chapter 17 Gene Expression	○ 11/19-Mastering HW 12: Ch. 17 (<i>Extended Deadline 11/21</i>)
	11/18	Lab 11: Genetics	
14	11/23	Lab 12: DNA and Electrophoresis	
	11/25	THANKSGIVING HOLIDAY	
15	11/30	Chapter 22: Descent with Modification	
	12/2	LAB PRACTICAL II (Labs 7-12)	
16	12/7	COMPREHENSIVE FINAL EXAM	
	12/9	Grade Review	

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://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.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.* https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf

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 Holly Bankston at 409-933-8520 or hbankston@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Counseling Statement: Any student needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or hbankston@com.edu. Counseling services are available on campus in the student center for free and students can also email counseling@com.edu to set up their appointment. Appointments are strongly encouraged; however, some concerns may be addressed on a walk-in basis.

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 6. The last date to withdraw from the 16-week session is November 19. The last date to withdraw for the 2nd 8-week session is December 2.

F_N Grading: The F_N grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The F_N 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 F_N grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an F_N 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.

COVID-19 Statement: All students, faculty, and staff are expected to familiarize themselves with materials and information contained on the College of the Mainland's Coronavirus Information site at www.com.edu/coronavirus. In compliance with Governor Abbott's May 18 Executive Order, face coverings/masks will no longer be required on COM campus. Protocols and college signage are being updated. We will no longer enforce any COM protocol that requires face coverings. We continue to encourage all members of the COM community to distance when possible, use hygiene measures, and get vaccinated to protect against COVID-19. Please visit com.edu/coronavirus for future updates.