



**BIOL 1406-102CL**  
**Biology for Majors**  
**Spring 2022**

**M/W 2:00 PM-4:50 PM**

**STEAM Building Room 320**

**Instructor Information:** Carol Connor Email [cconnor2@com.edu](mailto:cconnor2@com.edu)

**Student hours and location:** 5:00 PM Monday/Wednesday; STEAM Building; Room 320; or by appointment

**Required Textbook:** **Textbook** and/or courseware will be available through VitalSource digitally. Cost of the course materials for this section will be \$68.75. The course materials will be available on the first day of class and you will be given the opportunity to opt-out of the e-book prior to the census day of the class. If you choose not to use the course materials, you will be reimbursed after census day. The materials are not refundable after the census day. You will receive an email with more information about the use of the course materials. Additional documents will be made available on Blackboard.

**Lab Manual** is available through the COM Bookstore and **must be purchased prior to the first lab activity on January 26**

**Course Description:** Fundamental principles of living organisms will be studied, including physical and chemical properties of life, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included. Prerequisites: TSI Reading 351 or IRW 0320 with a grade of "C" or better. Successful completion of College Algebra or better level mathematics is recommended.

**Course requirements:**

\*Closed toe shoes are REQUIRED for lab. Students will not be permitted to enter the lab without proper attire.

\*Shorts are not allowed on lab days.

\*You must purchase 4 scantrons for the exams from the Bookstore-type 888-E (39 cents each). Please turn them in to me by January 31<sup>st</sup>.

**Online Resources:**

- COM Blackboard: <https://de.com.edu/webapps/login/> COM Blackboard will allow students to communicate with each other and the instructor. Many class resources will be available through Blackboard. Training is required to access Blackboard. If you have questions regarding course access or training, please contact the Educational Technology Services <http://edtech.com.edu/> or 409-933-843.
- Mastering Biology: Students will have several assignments on Mastering Biology for each topic covered.

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

### **Lecture Grade (500 points)**

1. Lecture exams (400 points)-A total of four lecture exams will be given throughout the semester.
2. Homework (100 points)-Homework assignments will be given throughout the semester. For each topic covered in the lecture, you will have assignments in Mastering Biology.

### **Laboratory Grade (350 points)**

1. Lab daily grade (150 points)-Each lab will have activities to be completed for a portion of your lab daily grade.
2. Lab practical (200 points)-One lab practical will be given toward the end of the semester and will cover material from each lab.

**Final exam (150 points)**-The final exam is comprehensive and will cover all of the material presented in lecture

**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.

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

Letter grade	Number of points
A	900-1000
B	800-899
C	700-799
D	600-699
F	0-599

**Make-up policy:** **Online assignments:** Ample time is given for each student to complete the online assignments. Failure to meet these deadlines will result in a ZERO for the assignment and no extra time will be allowed to make up the assignment. In the event of an internet outage or other internet issue, at the discretion of your instructor, your assignment may be reset to allow you to take it again. Contact must be made with your instructor within 24 hours of the problem.

**Attendance (labs):** There are no make-up labs. 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 will 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. Labs are due at the end of the class.

**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.

## **Student Learner Outcomes:**

Student learner 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 to compare and contrast the structure, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells	Critical thinking	Exam
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	Lab activities
Students will be able to identify the principles of inheritance and solve classical genetics problems	Empirical and quantitative skills	Lab activities
Students will be able to describe the unity and diversity of life and the evidence for evolution through natural selection	Critical thinking	Exam
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 lab	Critical thinking	Lab practical
Students will demonstrate their ability to communicate effectively the results of scientific investigations	Communication skills	Paper

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	Discussion board

**Academic Dishonesty:** Disciplinary actions will be taken for students that cheat on exams, submit plagiarized work (see below) or are involved in collusion (helping other cheat or plagiarize) as defined in the Student Handbook under the heading “Discipline and Penalties”. The maximum penalty imposed for violations will be an F in the course. The student will also be referred to the Dean of Students for further disciplinary action. Please read through the “Standards of Conduct” in the Student Handbook for a more complete discussion of these issues and your rights and responsibilities.

**Plagiarism:** Plagiarism is using someone else’s words or ideas and claiming them as your own. Plagiarism is a very serious offense. It 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 disciplinary action.

**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 please contact Sheena Abernathy, Chair of the Science Department at [sabernathy@com.edu](mailto:sabernathy@com.edu) or (409)933-8330

**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. 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 professor from teaching is considered to be a disruption. Please be respectful of your fellow students and the professor by adhering to the following:

1. **For on campus instruction: put away all electronics.** Certain devices can be used to view content on the internet; however, this is at the discretion of the professor. **Laptops are ONLY permitted during class to take notes.** Surfing the internet or checking email from your laptop is not permitted.
2. Due to safety reason, friends, spouses, and children are not allowed in lecture rooms or lab rooms.

- 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 will need to meet with Dr. Kris Kimbark, Dean of Students, before being allowed to return to class.

### LAB SCHEDULE-Wednesdays

WEEK	DATE	LAB ACTIVITY
1	1/19	Lab safety
2	1/26	Lab 1-Scientific Method
3	2/2	Lab 2-pH
4	2/9	Lab 3-Biomolecules
5	2/16	Lab 4-Microscopes
6	2/23	Lab 5-Cells
7	3/2	Lab 6-Cell Transport
8	3/9	Lab Practical 1 (labs 1-6)
9	3/23	Lab 7-Enzymes
10	3/30	Lab 8-Respiration/Fermentation
11	4/6	Lab 9-Photosynthesis
12	4/13	Lab 10-Mitosis/Meiosis
13	4/20	Lab 11-Genetics
14	4/27	Lab 12-DNA/Electrophoresis
15	5/4	Lab Practical 2 (labs 7-12)
16		No lab

### Course outline:

WEEK	TOPIC	Reading Assignment	Course Assignment
1 1-19 W	Intro to course; Themes of Biology Lab safety	Entire syllabus; Ch. 1	MB Ch. 1 due Sun., Jan. 23 at 11:59 PM
2 1-24 M 1-26 W	Chemical Context of Life Water and Life	Ch. 2 and Ch. 3	MB Ch. 2 and 3 due Sun., Jan. 30 at 11:59 PM
3 1-31 M 2-2 W	Carbon and Molecular Diversity of Life Structure and Function of Large Biomolecules	Ch. 4 and Ch. 5	MB Ch. 4 and 5 due Sun., Feb. 6 at 11:59 PM
4 2-7 M 2-9 W	A Tour of the Cell	Ch. 6	<b>EXAM 1: Ch. 1-5; Feb. 7</b> MB Ch. 6 due Sun., 2/13 at 11:59 PM
5 2-14 M 2-16 W	Viruses	Ch. 19	MB Ch. 19 due Sun., 2/20 at 11:59 PM
6 2-21 M 2-23 W	Membrane Structure and Function An Introduction to Metabolism	Ch. 7 and Ch. 8	MB Ch. 7 and 8 due Sun., 2/27 at 11:59 PM
7 2-28 M 3-2 W	Cellular Respiration	Ch. 9	<b>EXAM 2: Ch. 6,7,8,19; Feb. 28</b> MB Ch. 9 due Sun., 3/6 at 11:59 PM
8 3-7 M 3-9 W	Photosynthesis	Ch. 10	<b>LAB PRACTICAL #1 (labs 1-6) Mar. 9</b> MB Ch. 10 due Sun., 3/13 at 11:59 PM
9 3-21 M 3-23 W	The Molecular Basis of Inheritance	Ch. 16	MB Ch. 16 due Sun., 3/27 at 11:59 PM

10 3-28 M 3-30 W	DNA Tools and Technology	Ch. 20	MB Ch. 20 due Sun., 4/3 at 11:59 PM
11 4-4 M 4-6 W	The Cell Cycle Meiosis	Ch. 12 and Ch. 13	<b>EXAM 3: Ch. 9,10,16,20; Apr. 4</b> MB Ch. 12 due 4/10 at 11:59 PM
12 4-11 M 4-13 W	Mendel and the Gene Idea	Ch. 14	MB Ch. 13 and 14 due 4/18 at 11:59 PM
13 4-18 M 4-20 W	The Chromosomal Basis of Inheritance	Ch. 15	MB Ch. 15 due 4/24 at 11:59 PM
14 4-25 M 4-27 W	Gene Expression	Ch. 17	<b>EXAM 4: Ch. 12,13,14,15; Apr. 25</b> MB Ch. 17 due 5/1 at 11:59 PM
15 5-2 M 5-4 W	Evolution	Ch. 22	<b>LAB PRACTICAL #2 (labs 7-12) May 4</b> MB Ch. 22 due 5/8 at 11:59 PM
16 5-9 M 5-11 W			<b>FINAL EXAM-ALL CHAPTERS; MAY 11</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://build.com.edu/uploads/sitecontent/files/student-services/Student\\_Handbook\\_2019-2020v5.pdf](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](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 career. 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](mailto:hbankston@com.edu). The Office of Services for Students with Disabilities is located in the Student Success Center.

**Counseling Statement:** Any student that is needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or [hbankston@com.edu](mailto:hbankston@com.edu). Counseling services are available on campus in the student center for free and students can also email [counseling@com.edu](mailto:counseling@com.edu) to setup 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 only permitted to withdraw six times during their college career by State law. **The last day to withdraw is April 25<sup>th</sup>.**

**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.

**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](http://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 [www.com.edu/coronavirus](http://www.com.edu/coronavirus) for future updates.