BIOL 1406-101C3
Biology for Majors I
SPRING 2025
MW 11:00 AM-1:50 PM STEAM 320

Instructor Information: Carol Connor Email: cconnor2@com.edu; phone (409)-933-8889

Student hours and location: Monday and Wednesday 9:30 AM-11:00 AM and 2:00 PM to 3:30 PM in STEAM 325-31; Friday 10:00 AM-11:30 AM via D2L email or by appointment.

Required Textbook: Textbook and/or courseware will be available through D2L. The e-book and Mastering content are purchased at the time of registration, and you will gain access to the online materials once you are in Brightspace/D2L when classes begin. Cost of the course materials for this section will be $99.40. 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 using BibliU 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.

The **lab manual** is available through the COM Bookstore and **must be purchased prior to the first lab activity on January 22nd**. You may not participate in lab without a printed lab manual.

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. Prerequisite: 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 higher-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 **3 scantrons** for the exams from the Bookstore-type 888-E (39 cents each). You must turn them in to me by January 22.
*Mastering Biology: (online resource) Students will have several assignments in Mastering Biology for each topic covered. These assignments are accessed through D2L.

Determination of course grade:
Lecture Grade (500 pts)

1. Lecture exams (400 pts)-A total of four lecture exams will be given throughout the semester.
2. Homework (100 pts)-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 pts)

1. Lab daily grade (150 pts)-Each lab will have activities to be completed for a portion of your lab

daily grade.

2. Lab practical (100 pts each)-Two lab practicals will be given and will cover material from lab.

Final exam (150 pts)

The final exam is comprehensive and will cover all the material presented in the lecture.

Extra credit pts-Assignment on D2L is due May 4th; up to 20 points applied to the final exam.

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

Final grade for this course consists of both a lecture and laboratory component. Students must earn 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.

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.

Exams: Should you anticipate an absence on an exam day (lecture or final exam) you must contact your professor by email or in person **PRIOR to the absence**. Your situation will be evaluated by your professor and at the discretion of your professor 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. Missed exams will result in a zero on the exam. The make-up exam MUST be taken within the week of the original exam date at the Testing Center. You will be allowed one exam make up during the semester. If you arrive late to an exam (lecture, lab or final) and any student has completed the exam, you will not be allowed to take the exam. If no student has finished, you will be able to take the exam, but will not have extra time and must turn in your exam at the regularly scheduled end of the exam.

Labs: **There are no make-up labs**. Arriving late to the lab will result in not receiving full credit for completing the lab. The 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. 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. If you anticipate an absence on the day of a lab practical, arrangements must be made prior to the absence to attend a different section of the course that same week to make up the practical. If you are unable to make up the practical during that week, you will receive a zero for the lab practical. **Labs are due at the end of the class**. **A pre-lab must be submitted on time to be allowed to attend lab**.

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 others 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, or 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 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 always act in a professional manner. 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 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 unnecessary electronics-this means your phone, earbuds, headphones.** (If you need to send/receive texts or phone calls, you need to leave the room). Certain devices will be used to view content on the internet. 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 reasons, friends, spouses, and children are not allowed in lecture rooms or lab rooms.
3. 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 the Dean of Students, before being allowed to return to class.

LAB SCHEDULE

Week	Dates	Lab Activities	Pre-lab due date
1	1/13-1/16	Lab safety	N/A
2	1/22 (W)	Lab 1 – Scientific Method	**Tu 1/21**
3	1/29 (W)	Lab 2 – pH	**Tu 1/28**
4	2/5 (W)	Lab 3 – Biomolecules	**Tu 2/4**
5	2/12 (W)	Lab 4-Microscopes	**Tu 2/11**
6	2/19 (W)	Lab 5 – Cells	**Tu 2/18**
7	2/26 (W)	Lab 6 – Cell Transport	**Tu 2/25**
8	**3/5 (W)**	**Lab Practical 1 (Labs 1-6)**	N/A
9	3/12 (W)	Lab 7 – Enzymes	**Tu 3/11**
10	3/26 (W)	Lab 8 – Respiration and Fermentation	**Tu 3/25**
11	4/2 (W)	Lab 9 – Photosynthesis	**Tu 4/1**
12	4/9 (W)	Lab 10 – Mitosis and Meiosis	**Tu 4/8**
13	4/16 (W)	Lab 11 – Genetics	**Tu 4/15**
14	4/23 (W)	Lab 12 – DNA and Electrophoresis	**Tu 4/22**
15	**4/30 (W)**	**Lab Practical 2 (Labs 7-12)**	N/A

Labs are worth 12.5 points (150 total) W=Wednesday Tu=Tuesday

WEEK	TOPIC	READING ASSIGNMENT	COURSE ASSIGNMENT
1 1-13:M 1-15:W	Intro to course; Themes of Biology(1); Chemical Context of Life(2)	Entire syllabus; Ch. 1 and Ch. 2	MB Ch. 1 and 2 and extra credit due Sun., Jan. 19 at 11:59 PM
2 1-22: W	Water and Life(3); Carbon and the Molecular Diversity of Life(4)	Ch. 3 and Ch. 4	MB Ch. 3 and 4 due Sun., Jan. 26 at 11:59 PM
3 1-27:M 1-29:W	Structure and Function of Large Biomolecules(5)	Ch. 5	EXAM 1 Ch. 1-4 **1-27** MB Ch. 5 due Sun., Feb. 2 at 11:59 PM
4 2-3:M 2-5:W	A Tour of the Cell(6)	Ch. 6	MB Ch. 6 due Sun., Feb. 9 at 11:59 PM
5 2-10:M 2-12:W	Membrane Structure and Function(7)	Ch. 7	MB Ch. 7 due Sun., Feb. 16 at 11:59 PM
6 2-17:M 2-19:W	An Introduction to Metabolism(8)	Ch. 8	MB Ch. 8 due Sun., Feb. 23 at 11:59 PM
7 2-24:M 2-26:W	Cellular Respiration(9)	Ch. 9	EXAM 2 Ch. 5,6,7,8 **2-24** MB Ch. 9 due Sun. Mar. 2, at 11:59 PM
8 3-3:M 3-5:W	Photosynthesis(10)	Ch. 10	**LAB PRACTICAL #1 (labs 1-6) 3-5** MB Ch. 10 due Sun. Mar. 9, at 11:59 PM
9 3-10:M 3-12:W	The Cell Cycle(12) Meiosis(13)	Ch. 12 and 13	MB Ch. 12 and 13 due Sun., Mar. 23 at 11:59 PM
10 3-24:M 3-26:W	Mendel and the Gene Idea(14); The Chromosomal Basis of Inheritance(15)	Ch. 14 and 15	EXAM 3 Ch. 9,10,12,13 **3-24** MB Ch. 14 and 15 due Sun., Mar. 30 at 11:59 PM
11 3-31:M 4-2:W	Molecular Basis of Inheritance(16)	Ch. 16	MB Ch. 16 due Sun., Apr. 6 at 11:59 PM
12 4-7:M 4-9:W	Gene Expression(17)	Ch. 17	MB Ch. 17 due Sun., Apr. 13

13 4-14:M 4-16:W	DNA Tools and Biotechnology(20)	Ch. 20	EXAM 4 Ch. 12,13,14,15 **4-14** MB Ch. 20 due Sun., Apr. 20 at 11:59 PM
14 4-21:M 4-23:W	Evolution(22)	Ch. 22	MB Ch. 22 due Sun., Apr. 27 at 11:59 PM
15 4-28:M 4-30:W	Review exams 1-4; review for LP 2; review for final exam		**LAB PRACTICAL #2 (labs 7-12) 4-30**
16 5-5:M	Comprehensive final exam		**FINAL EXAM 5-5**

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_2024-2025_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 accommodation is requested to contact:
Kimberley Lachney, Student Accessibility Service Coordinator
Phone: 409-933-8919
Email: AccessibilityServices@com.edu
Location: COM Doyle Family Administration Building; 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 16-week session is April 21.**

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.

Nondiscrimination Statement: The College District prohibits discrimination, including harassment, against any individual on the basis of race, color, religion, national origin, age, veteran status, disability, sex, sexual orientation, gender (including gender identity and gender expression), or any other basis prohibited by law. Retaliation against anyone involved in the complaint process is a violation of College District policy.