



BIOL 1408-103CL
Biology for Non-Science Majors I
Fall 2021
T R 1:30-4:20, STEAM 316

Instructor Information:

Christopher Hall

E-mail: chall23@com.edu

Office Telephone: (409)933-8328

Office Hours and Location:

Office Hours

Monday and Wednesday 1:20 – 4:00

Friday (Online) 8 - 10:10

Or by appointment

Office: STEAM 325-26

Course Communication: Email preferred method of communication. Responses can be expected within 24 hours during the week or the following Monday if it is the weekend.

Course Information

Required Textbook:

- *Campbell Essential Biology with Physiology*, Simon, Dickey, Hogan, and Reece, ISBN:0321967674. You may also purchase any recent edition of Campbell Essential Biology with Physiology as long as you have an access code for the Mastering Biology content. **Textbooks and/or courseware will be available through VitalSource digitally. Cost of the course materials: \$56.25. 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 of the class. The materials are not refundable after the census day. You will receive an email with more information about the use of the course materials closer to the start of the semester.**

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.

Required Online Resources

1. COM Blackboard: <https://de.com.edu/webapps/login/>. **COM Blackboard will be used for labs, online activities, quizzes, and more.** In addition, 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 any questions regarding course access or training, please contact the Distance Education department (www.com.edu/de/index.cfm) at extension 8476.
2. Mastering Biology Course – **Login will be completed through Blackboard**
Each student must purchase an access code in order to complete the assignments through the Mastering Biology website. These access codes may be purchased at the COM Bookstore or through the Mastering Biology website which is linked to your Blackboard course page. You will have several assignments on Mastering Biology for each topic covered.

Required Materials

- Scantrons (5) – 888E Must be purchased before the first exam. Computing resources, and reliable internet access.

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.

Determination of Course Grade/Detailed Grading Formula:

Lecture Grade (810 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 final exam will be comprehensive, and you can replace your lowest exam grade with your Comprehensive Final score.
2. Additional Assignments (100 points) – There will be (10) assignments focusing on different topics like mitosis, cells, and genetics, with questions and activities related to that topic. Each is worth 10 points.
3. Chapter Reviews (100 points) - There will be chapter reviews over the topics covered during the course. I split them into 4 separate reviews. Each review is worth 25 points.

- Comprehensive Final Exam (100points) – There will be a comprehensive final exam at the end of the semester. This exam score can be used to replace your lowest lecture exam from the semester.
- Mastering Biology (~110 points) – you will have various Mastering Biology homework assignments throughout the semester that cover topics discussed in class.

Laboratory Grade (480 points):

- Lab Practical (200 points) – (2) Two lab practicals will be given during the semester, covering material from previous labs. Each practical is worth 100 points.
- Lab Reports (100 points). A lab report, worth 100 points, will be written regarding the experiments performed for cellular respiration and fermentation.
- Labs (110 points) – You will be required to complete and submit all labs related to the topics that we are covering during the semester. Each lab has a corresponding section in your lab manual that needs to be completed. For the labs that you attend, you will complete the lab and submit them during lab. Due dates will be in the course calendar. 10 points each.
You may not submit any lab that you missed in person. If you do not attend the lab, you will not be allowed to turn in the lab at a later time.

The final exam is comprehensive and will cover material presented in lecture for the entire semester.

Points:

Lecture Grade (810 points)

Lecture exams	400 points
Mastering Biology Homework (10)	~110 points
Additional Assignments (10)	100 points
Chapter Reviews (4)	100 points

Final Exam 100 points

Comprehensive Final Exam	100 points
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810 total points

Laboratory Grade (410 points)

Labs (11)	110
Lab Report/Paper	100 points
Lab Practical	<u>200 points</u>
	410 total points

Total Possible Points

1220 Points

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.

TENTATIVE COURSE OUTLINE

	DAY	Topic(s)	Readings	Course Assignment(s)
1	8/24	Intro to Course Introduction: Biology Today	<ul style="list-style-type: none"> • Read syllabus • Chapter 1 	<ul style="list-style-type: none"> • Student Orientation
	8/26	Lab Safety		<ul style="list-style-type: none"> • Mastering HW 1 (Due 9/17)
2	8/31	Chapter 1 - Continued Essential Chemistry for Biology	<ul style="list-style-type: none"> • Chapter 2 	
	9/2	Lab 1: Scientific Method		<ul style="list-style-type: none"> • Mastering HW 2 (Due 9/17)
	9/7	Continue - Essential Chemistry for Biology	<ul style="list-style-type: none"> • Chapter 2 	
3	9/9	Lab 2: The Composition of Living Things: Understanding Basic Chemistry		
	9/14	The Molecules of Life	<ul style="list-style-type: none"> • Chapter 3 	<ul style="list-style-type: none"> • Mastering HW 3 (Due 9/17)
4	9/16	Lab 3: Carbon and the Molecular Diversity of Life: The Structure and Function of Large Biological Macromolecules		
	9/21	EXAM 1 (Ch 1-3)		
5	9/23	Lab 4: Microscopes		
	9/28	A Tour of the Cell	<ul style="list-style-type: none"> • Chapter 4 	<ul style="list-style-type: none"> • Mastering HW 4 (Due 10/8)
6	9/30	Lab 5: Cells		
	10/5	The Working Cell	<ul style="list-style-type: none"> • Chapter 5 	<ul style="list-style-type: none"> • Mastering HW 5 (Due 10/8)
7	10/7	Lab 6: Cell Transport: Diffusion and Osmosis		
	10/12	EXAM 2 (Ch 4, 5)		
8	10/14	LAB PRACTICAL I (Labs 1-6)		
	10/19	Cellular Respiration and Fermentation	<ul style="list-style-type: none"> • Chapter 6 	<ul style="list-style-type: none"> • Mastering HW 6 (Due 11/5)
9	10/21	Lab 7: Understanding Enzymes and Cellular Transport		
	10/26	Photosynthesis	<ul style="list-style-type: none"> • Chapter 7 	<ul style="list-style-type: none"> • Mastering HW 7 (Due 11/5)
10	10/28	Lab 8: Understanding Fermentation and Respiration		
	11/2	Cellular Reproduction	<ul style="list-style-type: none"> • Chapter 8 	<ul style="list-style-type: none"> • Mastering HW 8 (Due 11/5)
11	11/4	Lab 9: Photosynthesis		
	11/9	EXAM 3 (Ch 6-8) Patterns of Inheritance	<ul style="list-style-type: none"> • Chapter 9 	<ul style="list-style-type: none"> • Mastering HW 9 (Due 11/26)
12	11/11	Lab 10: Mitosis and Meiosis		
	11/16	The Structure and Function of DNA & DNA Technology	<ul style="list-style-type: none"> • Chapter 10 • Chapter 12 	<ul style="list-style-type: none"> • Mastering HW 10 (Due 11/26)
13	11/18	HAPPY THANKSGIVING!!! NO LAB		
	11/23	The Structure and Function of DNA & DNA Technology Continued		
14	11/25	Lab 11: DNA and Genetics Understanding Genetics and DNA and Gel Electrophoresis		
	11/30	EXAM 4 (Ch 9, 10, & 12) Evolution	<ul style="list-style-type: none"> • Chapter 13 	<ul style="list-style-type: none"> • Mastering HW 11 (Due 12/3)
15	12/2	LAB PRACTICAL II		
	12/7	Final Exam Review Day		
16	12/14	COMPREHENSIVE FINAL EXAM		

Grading Scale:

Final grades assigned for this course will be based on total points earned and are assigned as follows: To determine your grade in Lecture or Lab. Just divide points earned in either one, lecture or lab by the total points possible and that will give you your average.

Letter Grade	Number of Points
A	90 - 100
B	80 - 89
C	70 - 79
D	60 - 69
F	0 - 59

Make-Up Policy:

- **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. Make-up exams will be allowed for a death in the family or a documented illness. Your situation will be evaluated by your instructor and at the discretion of your instructor you may be allowed to take a make-up exam. You must provide legitimate proof for your excuse in the case of missing an exam. Only one make-up exam is allowed during the semester. The make-up exam MUST be taken at the end of the semester, after you complete all your other course work. No lab exams can be made up. If you have a legitimate excuse, as outlined above, then we will discuss your options should the situation arise.
- **Assignments:** If you miss class on the day an assignment is due, you will receive a ZERO for the missed assignment. 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.
- **Online Assignments:** Ample time is given for each student to complete the online assignments (Mastering Biology assignments, additional assignments, exam reviews, etc.). 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. Contact must be made with your instructor within 24 hours of the problem. All assignments are available online, but for the most part, you will be turning your assignments into me at the beginning of each lab and lecture period, in person.
- **Labs:** There are NO MAKE-UP LABS. Arriving late to lab will 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

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.

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. If you are unable to successfully complete the course requirements, you may wish to drop this class. It is **YOUR** responsibility to initiate a request for withdrawal from any course. It is in your best interest to visit with me before making that decision. However, if you decide to drop this class, it is **YOUR** responsibility to withdraw by **November 19th**. You are still enrolled in the course until you have submitted this form. If you do not withdraw by this date, you will receive a grade of “0” (zero) for all remaining work that you did not complete, which may result in a grade of “F” or “F/N” for the class. Students are only permitted to withdraw six times during their college career by State law.

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.

Early Alert Program:

The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention is 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.

Disclaimers/Additional Policies:

Honors Credit

Students wishing to receive honors credit for this class must discuss this with the professor before the eighth week of classes.

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/Questions Statement:

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 Mrs. Sheena Abernathy at ext. 8330, and sabernathy@com.edu

Student Learner Outcomes:

Student Learner Outcomes	Core Objectives	Course Level Assessments
1. Students will be able to describe the characteristics of life.		
2. Students will be able to explain the methods of inquiry used by scientists.		
3. Students will be able to identify the basic requirements of life and the properties of the major molecules needed for life.		
4. Students will be able compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.	Critical Thinking	Exams – Selected Questions
5. Students will be able to describe the structure of cell membranes and the movement of molecules across a membrane.		
6. Students will be able to identify the substrates, products, and important chemical pathways in metabolism.	Empirical and Quantitative Skills	In class activity
7. Students will be able to identify the principles of inheritance and solve classical genetics problems.	Empirical and Quantitative Skills	In class activity
8. Students will be able to describe the unity and diversity of life and the evidence for evolution through natural selection.	Critical Thinking	Exams – Selected Questions
9. 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
10. 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
11. Students will demonstrate their ability to communicate effectively the results of scientific investigations.	Communication Skills (CS1 and CS2)	Paper/Presentation
12. Students will be able to identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.		
13. 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

QEP (Quality Enhancement Plan):

This class has been selected to include oral communication in its curriculum, as part of College of the Mainland's Quality Enhancement Plan (QEP) on oral communication across the curriculum. A small percentage of classes will also be video recorded for institutional purposes.

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

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:

- a. Cell phone use during class is not permitted. If I see repeated violations of this rule, you will be asked to leave the class and you will not get credit for that day's work. Lap tops are ONLY permitted during class to take notes. *First offense:* a warning and you will be allowed to stay in class.
 - b. *Additional Offenses:* you will be asked to leave the class/lab and receive an absence for the day.
 - c. *During exams, no electronics will be allowed out. 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. Due to safety reasons, friends, spouses, and children are not allowed in lab.
 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 who display this conduct will be removed from the class and required to meet with Kris Kimbark, Associate VP for Student Success and Conduct, before being allowed to return to class if the instructor allows it.

Success Tips for Students:

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. **See Me.** Talk to me if you're having trouble in the course either in person or by email. Don't let things pile up. Address them early.

Links and Resources on how to Succeed in Biology

<http://courses.ttu.edu/biol1403-mdini/Regular/howtostudybiology.html>

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

The "A" Game book (available in the COM bookstore)

Get Ready for Biology book (can be found online at Amazon, Barnes & Noble, etc)

The Tutoring Center:

The Tutoring Center provides free tutoring services to students, staff and faculty seeking assistance for writing, reading and oral presentations for academic and non-academic assignments/projects. Located in the Technical Vocational Building, Room 1306, the center provides face-to-face and online tutoring sessions in a welcoming environment. Appointments can be made in person, or on the center scheduler at com.mywconline.com, or by clicking the SRWC icon on the COM website.

Hours:

Monday 8:00 AM – 6:00 PM face-to-face and online 6:00 PM – 8:00 PM online only

Tuesday 8:00 AM – 6:00 PM face-to-face and online 6:00 PM – 8:00 PM online only

Wednesday 8:00 AM – 6:00 PM face-to-face and online 6:00 PM – 8:00 PM online only
Thursday 8:00 AM – 6:00 PM face-to-face and online 6:00 PM – 8:00 PM online only
Friday 8:00 AM – 12:00 PM face-to-face and online
Saturday 9:00 AM – 1:00 PM online only
Sunday CLOSED

Speaking Reading and Writing Center:

The Speaking, Reading and Writing Center provides free tutoring services to students, staff and faculty seeking assistance for writing, reading and oral presentations for academic and non-academic assignments/projects. Located in the Technical Vocational Building, Room 1306, the center provides face-to-face and online tutoring sessions in a welcoming environment. Appointments can be made in person, or on the center scheduler at com.mywconline.com, or by clicking the SRWC icon on the COM website.

ADA Statement:

Any student with a documented disability needing academic accommodations is requested to contact Holly Bankston at 409-933-8520. The Office of Services for Students with Disabilities is located in the Student Success Center.

Counseling Center Website: <http://www.com.edu/student-services/counseling.php>

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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. Counseling services are available on campus in the student center for free and students can also email counseling@com.edu to setup their appointment. Appointments are strongly encouraged; however, some concerns may be addressed on a walk-in basis.

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.

Course policies are subject to change. It is the student's responsibility to check Blackboard for corrections or updates to the syllabus. Any changes will be posted in Blackboard.