



BIOL 1408.001 – Intro to General Biology I (Non-majors)

Course Syllabus: Fall 2023

Class Meets: T-R 9:30-10:50am; Room MS 132

Lab Meets: R 1:30-4:20pm; Room MS 128

“Northeast Texas Community College exists to provide personal, dynamic learning experiences empowering students to succeed.”

Professor: Chris T. McAllister, Ph.D. (Univ. North Texas, 1989)
Office: UHS 163
Office Phone: 903.434-8286
Email: cmcallister@ntcc.edu

Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday
	9:30-11:30am; 3:00-4:00pm	8:30-9:30am; 1:30-3:30pm	8:30-11:30am	8:30-9:30am	None

This syllabus serves as the documentation for all course policies and requirements, assignments, and instructor/student responsibilities.

Disclaimer: The instructor reserves the right to alter this syllabus as necessary with full disclosure to the student. This syllabus and schedule is articulated as an expectation of class topics, learning activities, and expected student learning. However, the instructor reserves the right to make changes in this schedule at any time that, within his professional judgment, would result in enhanced or more effective learning on the part of the students. These modifications will not substantially change the intent or objectives of this course and will be done within the policies and procedures of NTCC. *This may include the test schedule or topics of discussion in either lecture or laboratory. Should that happen, the student will be notified.*

Course Description: 4 credit hours. Lecture/Lab/Clinical: Three hours of lecture and three hours of lab each week. Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. Lab activities support these topics.

Note: Additional course fee(s) required.

Prerequisite(s): None

Student Learning Outcomes:

1. Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data. *
2. Use critical thinking and scientific problem solving to make informed decisions in the laboratory. *

3. Communicate effectively the results of scientific investigations. *
4. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
5. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
6. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
7. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
8. Identify the importance of karyotypes, pedigrees, and biotechnology.
9. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
10. Analyze evidence for evolution and natural selection.

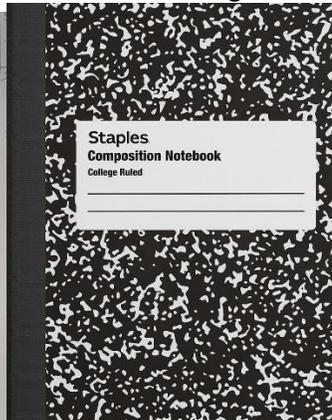
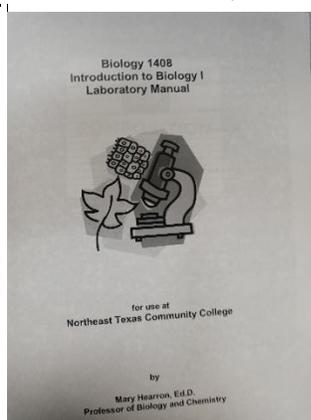
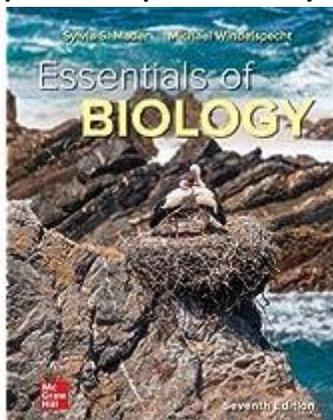
Required Lecture Instructional Materials: Mader and Windelspecht, 2024, Essentials of Biology, 7e, McGraw-Hill; **Publisher: ISBN Number: 978-1-266-09331-9**

Required Lab Instructional Materials: Biology I For Non-Majors Lab Manual; Hearron

Required Lab Notebook (Journal): (a bound composition notebook (minimum of 50 sheets with 5 x 5 quads),

Minimum Technology Requirements: Internet Access; Microsoft Office or Google Suite

Required Computer Literacy Skills: Blackboard Ultra; Microsoft Office or Google Suite



Lecture Assignments

Weekly online tutorials and quizzes will be assigned to check your understanding of classrooms discussions and reading assignments. These are completed online in Connect. You will need to access Connect the first week of the semester and register your keycode to complete your assignments. Each assignment has a posted due date for completion. Due dates in Connect are firm – no makeups for missed homework.

Lecture Material:

Each week, lectures will be posted on Bb from Powerpoint presentations by your professor. Either print these out and bring to class or have them available on your laptop.

Tests/Exams

The lecture exams may include both objective questions (multiple choice, matching, fill in the blank, short answer essay, etc.) over classroom discussions, notes, text materials, and readings as well as

descriptive questions requiring detailed explanations over broad themes. Success on the exams is a function of anxiety regulation, test prep, study strategies, and studying for retention. Retention requires repetitions, which requires time! Scantrons will be required for the major exams. **Tests will not be made up for any reason without prior communication to your instructor.** Late arrivals must complete exam by the end of class time.

Lecture Quizzes (and Bonus pts):

Weekly lecture quizzes will be given during the first 10 minutes of lecture to check your understanding of the previous week's lecture material. Each quiz will be worth a total of 12 pts (2 pts on each is always bonus and fill in the blank, other 10 questions are multiple-choice). Every odd quiz (1, 3, 5, 7...) is totally bonus, every even quiz (2, 4, 6, 8...) counts 10 pts toward your grade. You must be in your seat and ready to take each quiz at the beginning of lecture. Any student who comes in late after the quiz has begun will not be able to take the quiz. So, punctuality is very important! Bring a #2 pencil and scantron for each.

Lab Reports:

The lab reports from the lab manual are to be completed **during lab**. I do not take up and grade these reports as these are designed to help you prepare for the Lab Practicals. I will be glad to take a look at your answers and provide feedback/discussion.

Lab Practical's:

Two lab practicals will be given during the semester. It is a live exam with stations that students will rotate through and answer open ended questions associated with visuals from lab. Visuals may include images, specimens, lab equipment, data tables, graphs, experimental results, etc.

Lab Journal:

It is a requirement of this course to keep a Non-majors Biology Laboratory Notebook. The notebook will be graded by Dr. Mac at 2 different (announced) times during the semester. The notebook should be a **bound** composition notebook (minimum of 50 sheets with 5 x 5 quads), available at most bookstores or Wallyworld. It is worth a total of 150 pts. More later on this journal.

Optional Class Report:

You will provide an "optional" special written report in this class on topics provided by the instructor. First come, first serve. This is not a requirement, entirely optional!

Final Lecture Exam

A final exam will be given during the time set forth by the college Final Exam Schedule. The final exam will consist of 100 objective questions (multiple choice, matching, etc.) from chapters chosen by your professor TBA. A scantron is required for the final exam.

Late Work: I do not accept late work. Deadlines are meant to be met when they are set.

Communications: NTCC email is the official form of communication used by the college. Please utilize my email for communication purposes. I will get back to you within 24 hrs of your email. I do not typically return emails between the hours of 9 pm – 6 am. I have office hours every day on campus – don't hesitate to contact me during my office hrs. Email me at: cmcallister@ntcc.edu

Institutional/Course Policy:

Attendance (if needed) via TEAMS is mandatory and will affect your grade as in class quizzes will count as zeros if you are absent for any reason.

Withdrawal Date: The last day to drop (withdraw from) the course with a grade of “W” is **Tuesday, November 21**. If circumstances require you to withdraw from this course, you must do so by that date. It is the **student’s responsibility** to initiate the withdrawal with the Registrar’s office. **Failure to officially withdraw will result in your receiving a grade of F.**

Alternate Operations During Campus Closure and/or Alternate Course Delivery Requirements:

In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Northeast Texas Community College to move to altered operations. During this time, Northeast Texas Community College may opt to continue delivery of instruction through methods that include, but are not limited to, online through the Blackboard Learning Management System, online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor NTCC’s website (<http://www.ntcc.edu/>) for instructions about continuing courses remotely, Blackboard for each class for course-specific communication, and NTCC email for important general information.

Additionally, there may be instances where a course may not be able to be continued in the same delivery format as it originates (face-to-face, fully online, live remote, or hybrid). Should this be the case, every effort will be made to continue instruction in an alternative delivery format. Students will be informed of any changes of this nature through email messaging and/or the Blackboard course site.

Cell Phones and Unapproved Electronic Devices: Absolutely NO cell phones, video cameras, tape recorders, beepers, laptops, MP3 players, I-pods, or other unapproved electronic devices are to be used during class/lab. You may turn your cell phone to a silent buzz (but not during any exam) and excuse yourself from the classroom/lab if you absolutely must answer the call (emergencies only!). Examples would include sick children and/or seniors or other family members who need your immediate help. It is wise to leave your phone in your car on test days!! Students found using their cell phones or other devices during class will **lose 10 pts** from their total class score for each offense. **THIS INCLUDES TEXTING!!**

Please make it a habit to turn cell phones OFF or on vibrate before class begins each day. Phones are never to be on during any sort of examination. If your phone rings during any exam, you must immediately turn in your exam and receive the grade you earned on all questions whether or not you completed that exam (probably an “F”). No one to blame but yourself!

NTCC Academic Honesty/Ethics Statement:

NTCC upholds the highest standards of academic integrity. The college expects all students to engage in their academic pursuits in an honest manner that is beyond reproach using their intellect and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. This course will follow the NTCC Academic Honesty and Academic Ethics policies stated in the Student Handbook. Refer to the student handbook for more information on these subjects. Dr. Mac adds the following:

Acts violating the expected academic integrity include:

1. Cheating on examinations, quizzes, or other written work;
2. Giving assistance to or receiving assistance from another during an examination or quiz;
3. Plagiarism, defined as:
 - a) The use of another’s published work wholly or in part without proper recognition or documentation
 - b) The use of another student’s work as one’s own
 - c) The purchase, use, or provision of an already prepared paper
4. Obtaining or attempting to obtain copies of un-circulated examinations or examination questions.
5. Falsifying any academic record.
6. Using Artificial Intelligence (AI) to conduct any of the above referenced activities.

Artificial Intelligence (AI) Course Statement:

Writing, analytical, and critical thinking skills are an important part of the learning outcomes of this course; therefore, all writing assignments should be prepared by the student. More importantly, developing strong competencies in this area will prepare you for a competitive workplace. Therefore, the use of any AI-generated submissions are **not permitted** in this class and will be treated as plagiarism. Taking credit for words or ideas that are not your own is plagiarism. The temptation to plagiarize may be heightened with generative AI (*such as ChatGPT, DALL-E, etc.*) because it seems like a victimless crime, but it IS NOT! Students at NTCC are expected to make responsible and ethical academic decisions. Ethics obviously matters and plagiarism will be treated as a serious NTCC offense. In the event of use by any student of AI tools as defined herein, it will result in a zero for that assignment.

AI Enforcement:

I take academic integrity very seriously, and I will address any violations of this policy and follow NTCC’s disciplinary policies and procedures. If you have any questions about the information, policies, and guidelines in this statement, I urge you to contact me to discuss them. This policy goes into effect on the first day of this course, [29 August, 2023]. I trust that each of you will make ethical decisions about the use of AI tools in this course and I’m looking forward to a rewarding experience for everyone, including myself.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student’s responsibility to request accommodations. An appointment can be made with the Academic Advisor/Coordinator of Special Populations located in Student Services and can be reached at 903-434-8264. For more information and to obtain a copy of the Request for Accommodations, please refer to the special populations page on the NTCC website.

Family Educational Rights and Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children’s educational records. These rights transfer to the student when he or she attends a school

beyond the high school level. Students to whom the rights have transferred are considered “eligible students.” In essence, a parent has no legal right to obtain information concerning the child’s college records without the written consent of the student. In compliance with FERPA, information classified as “directory information” may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student’s name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Tentative Course Timeline:*

(Note: * instructor reserves the right to make adjustments to this timeline and/or topics at any point in the semester):

Week 1 Biology: the Science of Life (Aug. 29, 31)

Week 2 The Chemical Basis of Life (Sept. 5, 7)

Week 3 Organic Molecules of Life (Sept. 12, 14)

Unit 1 Chapter 1 – 3 Exam 9/19

Week 4 Inside the Cell (Sept. 19, 21)

Week 5 The Dynamic Cell (Sept. 26, 28)

Unit 2 Chapter 4 – 5 Exam 10/10

Week 6 Energy for Life (Oct. 3, 5)

Week 7 Energy for Cells (Oct. 10, 12)

Unit 3 Chapter 6 – 7

Week 8 Cellular Reproduction (Oct. 17, 19)

Week 9 Meiosis/ Patterns of Inheritance (Oct. 24, 26)

Unit 4 Chapter 8 – 10 Exam 10/31

Week 10 DNA & RNA (Oct. 31, Nov. 2)

Week 11 Biotechnology & Genomics (Nov. 7, 9)

Week 12 Mutations and Genetic Testing (Nov. 14, 16)

Unit 5 Chapter 11 – 13 Exam 11/14

Week 13 Darwin & Evolution (Nov. 21)

*******Thanksgiving Holiday (Nov. 23, No Classes)*******

Week 14 Evolution on a Small & Large Scale (Nov. 28, 30)-**Optional Report Due Nov. 30 (worth 100 pts)**

Week 15 **EXAM 5 (Dec. 5)**

Unit 6 Chapter 14 – 16 All assignments, labs and exam due by 11/17; **Exam 12/5**

Week 16 Final Exam on Thursday, Dec. 14 @9:30am

LAB SCHEDULE:

Lab Topic 1 – The Microscope (Aug. 31)

Lab Topic 2 – Cell Chemistry (Sept. 7)

Lab Topic 3 – The Cell (Sept. 14)

Lab Topic 4 – Diffusion and Osmosis (Sept. 21)

Lab Topic 5 – Enzymes (Sept. 28)

Lab Topic 6 – Photosynthesis (Oct. 5)

Lab Topic 7 – Anaerobic and Aerobic Respiration (Oct. 12)

1st Lab Journal due-Oct. 19 @1:30pm (worth 50 pts)

*******LAB PRACTICAL 1 (Lab Topics 1-7) – 100 points (Oct. 19)*******

- Lab Topic 8 – Cell Division (Oct. 26)
- Lab Topic 9 – Genetics I-Mendelian Genetics (Nov. 2)
- Lab Topic 10 – Genetics II-Nonmendelian Genetics (Nov. 9)
- Lab Topic 11 – Molecular Genetics and DNA Fingerprinting (Nov. 16)
- Lab Topic 12 – Bacterial Transformation (Nov. 30)
- Lab Topic 13 – Chromosomal Genetics and Bioethics (TBA)

Final Lab Journal due-Dec. 7 @1:30pm (worth 100 pts)

*******LAB PRACTICAL 2 (Lab Topics 8-13) – 100 points (Dec. 7)*******

Evaluation/Grading Policy (~1,200 – 1,300 points):

- LECTURE: ~ 800-900 pts (50%)**
 - 100 pts – Connect Online
 - 100 pts – *Optional Class Report*
 - 500 pts – 5 Lecture Exams
 - 50 pts – weekly lecture quizzes
 - 50 pts – homework (TBA)
 - 100 pts – Lecture FINAL EXAM
- LABORATORY: 400 pts (44-50%)**
 - 150 pts- Lab Journal
 - 50 pts- Collaborative (TBA)
 - 200 pts - 2 Lab Practicals

***Letter Grade Assignment:**

- A = 90-100%**
- B = 80-89%**
- C = 70-79%**
- D = 60-69%**
- F = <59%**

% breakdown of grades

Lecture (includes Connect) = 20%

Exams = 50%

Lab = 25%

Quizzes = 5%

***Final Grade will be rounded up if attendance, punctuality, and feedback/discussions were made.**

Institutional/Course Policy:

Northeast Texas Community College is a “community of scholars.” Please remember that you and all of the students in this class are pursuing very important goals in your lives. All colleges and universities must remain diligent in their pursuit of assuring the academic integrity of their courses to maintain their accreditation status with Southern Association of Colleges and Schools and the Texas Higher Education Coordinating Board.

Your success can be maximized and your potential achieved by making the commitment to meet these expectations:

Schedule and plan to complete all lecture and laboratory assignments and submit them when they are due. Be sure to print off the calendar to help you keep up with assignment due dates. Late work will not be accepted. Be sure to do all of your own work. Collusion and plagiarism are acts of academic dishonesty. Work that is copied and pasted directly from any website is not acceptable in any form on any assignment, lab or test. See the Student Handbook, p. 90 for definitions of collusion, plagiarism, and cheating. Infractions can result in severe grading penalties or failure.

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Biology 1408 Schedule
Fall 2023
Dr. Mac

Wk	Lectures-TUES	THURS	LABS-Thurs	Lecture TESTS cover
1 Aug 29- 31	Orientation & Syllabus CH 1 The Science of Life	CH 1 (Con’t)	Lab Safety Lab Topic 1 The Microscope	
2 Sep. 5-7	CH 2 Chemical Basis of Life	CH 2 (Con’t)	Lab Topic 2 Cell Chemistry	
3 Sep. 12- 14	CH 3 Organic Molecules of Life	CH 3 (Con’t)	Lab Topic 3 The Cell	
4 Sep. 19- 21	Sept. 19 Exam 1	CH 4 Inside the Cell	Lab Topic 4 Diffusion & Osmosis	EXAM 1 (CH 1-3)
5 Sep. 26- 28	CH 5 The Dynamic Cell	CH 5 (Con’t)	Lab Topic 5 Enzymes	
6 Oct. 3-5	CH 6 Energy for Life	CH 6 (Con’t)	Lab Topic 6 Photosynthesis	
7 Oct. 10- 12	Oct. 10 Exam 2	CH 7 Energy for Cells	Lab Topic 7 Respiration	EXAM 2 (CH 4-5)
8 Oct. 17- 19	CH 8 Cellular Reproduction	CH 8 (Con’t)	Oct. 19 Lab Practical I	Lab Practical I Covers Exercises 1-7
9 Oct. 24- 26	CH 9 Meiosis	CH 10 Patterns of Inheritance	Lab Topic 8 Mitosis & Meiosis	

10 Oct. 31, Nov 2	Oct. 31 Exam 3	CH 11 DNA & RNA	Lab Topic 9 Mendelian Genetics I	EXAM 3 (CH 6-9)
11 Nov 7-9	CH 12 Biotechnology & Genomics	CH 12 (Con't)	Lab Topic 10 Mendelian Genetics II	
12 Nov 14- 16	CH 13 Mutations & Genetic Testing	Nov. 14 Exam 4	Lab Topic 11 Molecular Genetics/DNA	EXAM 4 (CH 10-12)
13 Nov 21- 23	CH 14 Darwin & Evolution	Thanksgiving Holiday No Thurs. class	Thanksgiving Holiday No Thurs. Lab	
14 Nov 28- 30	CH 15-16 Evolution on a small & large scale	CH 15-16 (con't)	Lab Topic 12 Bacterial Transformation Lab Topic 13 Chromosomal Genetics	
15 Dec. 5-7	Dec. 5 Exam 5		Dec. 7 Lab Practical II	Lab Practical Covers (Exercises 8-13) Lecture EXAM 5 (CH 13-15)
16	FINAL EXAM Dec. 14 @9:30am			Chapters chosen by Dr. Mac (TBA)