



BIOL 2420 Microbiology

Course Syllabus: Fall 2026

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

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Weekday	Office Hours
Monday	8:00 – 11:00 p.m. and by appointment TEAM Meetings Available Upon Request
Tuesday	8:00 – 9:30 a.m. and 1:30 – 3:00 p.m. TEAM Meetings Available Upon Request
Wednesday	8:00 – 11:00 p.m. and by appointment TEAM Meetings Available Upon Request
Thursday	8:00 – 9:30 a.m. TEAM Meetings Available Upon Request
Friday	Email: lpresley@ntcc.edu

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

Information relative to the delivery of the content contained in this syllabus is subject to change. Should that happen, the student will be notified.

Course Description:

4 Semester Credit Hours. This course covers basic microbiology, immunology, and the basics of culture and identification of bacteria and microbial ecology. This course is primarily directed at pre-nursing, pre-allied health, and non-science majors. This course introduces historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health.

Prerequisite(s): none

Student Learning Outcomes:

1. Describe distinctive characteristics and diverse growth requirements of prokaryotic organisms compared to eukaryotic organisms.
2. Provide examples of the impact of microorganisms on agriculture, environment, ecosystem, energy, and

human health, including biofilms.

3. Distinguish between mechanisms of physical and chemical agents to control microbial populations.
4. Explain the unique characteristics of bacterial metabolism and bacterial genetics.
5. Describe evidence for the evolution of cells, organelles, and major metabolic pathways from early prokaryotes and how phylogenetic trees reflect evolutionary relationships.
6. Compare characteristics and replication of acellular infectious agents (viruses and prions) with characteristics and reproduction of cellular infectious agents (prokaryotes and eukaryotes).
7. Describe functions of host defenses and the immune system in combating infectious diseases and explain how immunizations protect against specific diseases.
8. Explain transmission and virulence mechanisms of cellular and acellular infectious agents.
9. Use and comply with laboratory safety rules, procedures, and universal precautions.
10. Perform basic microbiology procedures including proficient use of light microscope, staining techniques, and aseptic techniques for transfer, isolation, quantification, and observation of bacteria.
11. Use different types of bacterial culture media and biochemical tests to grow, isolate, and identify microorganisms.
12. Demonstrate making a wet mount and basic identification protocols based on microscopic morphology of some common fungi and parasites.

Evaluation/Grading Policy:

The breakdown of the course requirements is as follows:

%	Requirement
10%	Connect Assignments, Homework, Quizzes
40%	Unit Assessments 1 - 4
20%	Final Exam
10%	Lab Reports, Lab Quizzes, and Connect Virtual Labs
10%	Lab Practicals
10%	Unknown Identification Experimental Procedure, Dichotomous Keys, Virtual Labs, ID Unknown Quiz, and Written Report

Semester grades will be earned as follows

Percentage	Letter Grade
90% and above	A
80 %–89%	B
70 %–79%	C

60%–69 %	D
59.9% and below	F

What is McGraw-Hill Connect?

The McGraw-Hill Connect provides you with access to your ebook. Additionally, within each Connect Folder in Blackboard you will see a link to three different activities: 1) SmartBook, 2) Chapter Assignment, and 3) Quiz.

1) SmartBook assignments are not figured into your course grade; however, they will be used as extra credit assignments. Each Chapter SmartBook completed with a grade of 100 will result in at least one extra point added to the Unit Test score in which that chapter is covered. Students have said that completing the SmartBook exercises improved their grades as SmartBook assignments are beneficial to your understanding of the material. This guided reading helps identify areas that you are having trouble understanding and provides you with some “tutoring” in those areas. Each Chapter SmartBook will take an average of 60 - 90 minutes, however, you can spend as much time on these reading activities as you need.

2) Homework assignments are required and figured into the course grade. These can be done 2 times before the due date. Five percent will be deducted for the 2nd try. There is no time limit, so it is advisable to start early and work on this all during the week. Use of the eBook and hints are available with no deductions. Feedback will be shown after submitting each attempt. After the first attempt, you will see what questions you got correct or incorrect. After the 2nd attempt, more detailed feedback is given. Printing is allowed on homework assignment questions. Study attempts: After the due date, these homework assignments will be available for practice without changing your grade. Assignments are automatically submitted on the due date. If you do not complete the assignment before that time, a grade of zero will automatically be recorded in the gradebook. If you open the assignment after the due date as a study attempt, you cannot receive an extension on the work.

3) Quizzes are required and figured into the course grade. Quizzes are usually 20 – 25 questions with a time limit of 30 minutes. Please use these quizzes to determine whether you have a true understanding of the material. Each quiz can be taken 2 times before the due date. Five percent will be deducted for the 2nd try, but I have set the quizzes and the homework assignments to take the highest grade, so it is to your advantage to correct your work and review the questions. The quizzes will be submitted automatically on the due date.

4) Sharpen Advantage will be used to supplement your learning.

Inclusive Access: We have negotiated with the Publisher to obtain a discounted price for your lecture course materials. Your ebook and Connect Access Code are included with your tuition and will be available through Blackboard on the first-class day (use the link found on the Bb course homepage). The materials are required for your class and essential in your success. If you also determine that you would like a print copy of your text in addition to your inclusive access loose- leaf copies will be available in the College Store at a discounted price. You may opt out of purchasing your materials from the College Store through the Census Date for the course. If you choose to opt-out you will be responsible for purchasing your Connect Access Code from another vendor. You will receive a refund for the Inclusive Access if you opt out.

Required Instructional Materials:

Required Textbooks: Cowan, Evergreen 2025 Release, Microbiology Fundamentals: A Clinical Approach, 4th Edition with Connect

Author: Cowan

Publisher: McGraw-Hill Education

ISBN Number: 2805858751733

Lab Manual: Hearron & Deming, 2026, Biology 2420/21 Laboratory Manual for Microbiology

Publisher: NTCC Bookstore

Optional Instructional Materials:

None

Minimum Technology Requirements:

Access to either a mac or a pc computer with high-speed internet access.

Required Computer Literacy Skills:

Ability to utilize Blackboard to access course content. Ability to use Microsoft word and upload assignments

Communications:

NTCC email is the official form of communication used by the college. The instructor will respond to student emails within 24 hours of receipt. You should NOT expect an immediate response from your instructor in reply to your email. While I will try to respond in a timely fashion, I do not always have my phone on my person, and I do not have notifications set on my phone to alert me the moment an email arrives in my inbox. (On the weekends it may be up to 48 hours after receipt of email.) Feedback and grades on assignments and postings will be posted 48 to 72 hours after due date/time of assignment.

Institutional/Course Policy:

Northeast Texas Community College is a “community of scholars.” Please remember that you and all students in this class are pursuing very important goals in your lives. As scholars, I expect every student to be courteous to other students and the instructor in all online experiences. As your instructor, I will make a conscientious effort to provide you with a variety of teaching and learning formats to help you in your efforts to be successful in microbiology.

I care about your learning experience and your success in this course, however that ultimate success does depend largely on YOU. Your success can be maximized and your potential achieved by making the commitment to meet these online expectations:

1. 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 assignments are not accepted unless the student can provide a compelling reason for submitting late work. No tests or exams may be taken late.
2. Be sure to do all your own work. Collusion and plagiarism are acts of academic dishonesty.
3. The last day to drop the course with a grade of W is November 17, 2026. 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.

Statement Regarding the Use of Artificial Intelligence (AI) Technology:

Employees and students shall be permitted to explore artificial intelligence (AI) and implement its use in and out of the classroom in accordance with policy and administrative regulations. The use of AI shall only be as a support tool to enhance student outcomes or as necessary to engage in research and shall never take the place of faculty, staff, and student decision-making. Any use of AI must comply with law, policy, and administrative regulations relating to student and employee privacy and data security. A student shall only use AI tools with faculty permission and shall be expected to produce original work and properly credit sources, including AI tools used in creating the work.

Example:

APA (7th edition)

OpenAI. (2026). ChatGPT (March 25 version) [Large language model]. <https://chat.openai.com/>

MLA (9th edition)

OpenAI. ChatGPT. 25 Mar. 2026, <https://chat.openai.com/>.

Employees or students who use AI tools to deceptively harm, bully, or harass others shall be disciplined in accordance with policy. [See DH, DIA series, FFD series, FFE, FLB, and the FM series] AI Use by Employees and Students. Northeast Texas Community College 225500 TECHNOLOGY RESOURCES CRB ARTIFICIAL INTELLIGENCE (LOCAL) DATE ISSUED: 12/8/2025 1 of 1 UPDATE 50 CRB(LOCAL)-AJC Adopted: 12/16/2025

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.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodation 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 accommodation as required to afford equal educational opportunity. It is the student's responsibility to request accommodation. 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.