



BIOL 2420.002
Microbiology
Course Syllabus: Fall 2017

“Northeast Texas Community College exists to provide responsible, exemplary learning opportunities.”

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	11:00am- 12:20pm	11:00am- 12:20pm	11:00am- 12:20pm	11:00am- 12:20pm		

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Course Description: This course covers basic microbiology and immunology. It provides an introduction to 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.

Required Textbook(s):

Lansing Prescott, John Harley and Donald Klein, Microbiology, 10th Ed

Publisher: McGraw-Hill Publishers

Michael Leboffe, Burton Pierce, Photographic Atlas For Microbiology Laboratory

Publisher: Morton Publishing Company

ISBN Number: ISBN-13 9780077993122
MHID 0077993128

Recommended Reading(s): Text Book

Student Learning Outcomes: Upon successful completion of this course the student will:

1. Describe distinctive characteristics and diverse growth requirements of prokaryotic organisms compared to eukaryotic organisms and provide examples of the impact of microorganisms.
2. Distinguish between mechanisms of physical and chemical agents to control microbial populations.
3. Explain the unique characteristics of bacterial metabolism and bacterial genetics and describe evidence for the evolution of cells and organelles from early prokaryotes.
4. Understand characteristics of acellular infectious agents (viruses and prions) and cellular infectious agents (prokaryotes and eukaryotes).
5. Describe functions of host defenses and the immune system in combating infectious diseases and explain how immunizations protect against specific diseases.

6. Use and comply with laboratory safety rules, procedures, and universal precautions.
7. Perform basic microbiology procedures including use of light microscope, staining techniques, and aseptic techniques for transfer, isolation and observation of bacteria.
8. Use different types of bacterial culture media and biochemical tests to grow, isolate, and identify microorganisms.
9. Communicate results of scientific investigations, analyze data and formulate conclusions using critical thinking and scientific problem-solving skills.

Lectures & Discussions:

- Week 1- The History and Scope of Microbiology
- Week 2- The Study of Microbial Structure: Microscopy and Specimen Preparation
- Week 3- The Study of Microbial Structure: Microscopy and Specimen Preparation
- Week 4- Lecture Test # 1
- Week 5- Prokaryotic Cell Structure and Function
- Week 6- Eucaryotic Cell Structure and Function
- Week 7- Lecture Test # 2
- Week 8- Microbial Nutrition
- Week 9- Microbial Growth
- Week 10- Lecture Test # 3
- Week 11- Control of Microorganisms by Physical and Chemical Agents
- Week 12- Clinical Microbiology
- Week 13- Clinical Microbiology
- Week 14- The Viruses: Introduction and General Characteristics
- Week 15- Lecture Test # 4

Evaluation/Grading Policy:

1. Lecture will meet twice a week; meeting for one hour and twenty minutes per lecture.

a.	Four major tests will be given	50% of grade
b.	One comprehensive final	5% of grade
c.	Special assignments and reports	5% of grade
		60%

2. Lab

Lab will meet twice a week; meeting for one hour and twenty minutes per lab. However, lab time will be increased occasionally as time is needed to complete necessary lab assignments or procedures.

a.	Daily work	5% of grade
b.	Lab evaluations/tests	10% of grade
c.	Lab research (unknowns)	25% of grade
		40%

3. Final Evaluation

Lecture	60%
Lab	40%
Course Total - 100%	

Student Responsibilities/Expectations:

Attendance Policy

Regular and punctual attendance at all scheduled classes is required by every student. Students absent, for any reason, are still responsible for lecture materials and any required assignments. There are no excused absences. Excessive absences will ultimately hinder your success in this course. Therefore, it is the responsibility of the student to withdraw from this course before the final withdrawal date to receive a "W". However, your failure to abide by this institutional rule will result in you receiving an "F" for this course.

Lab Supplies

1. Lab Book
2. Lab Coat, Apron, or Acceptable Tunic
3. Container of Matches
4. One Box of Microscope Slides
5. Two Rolls of Paper Towels
6. One Package of Index Cards
7. Labels
8. Expo Marker Fine Point

NTCC Academic Honesty Statement:

"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

Academic Ethics

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

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 Shannin Garrett, Academic Advisor/Coordinator of Special Populations located in the College Connection. She can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the [NTCC website - Special Populations](#).

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.