

BIOL 2420

Microbiology for Non-Science Majors



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Office Hours: TBD

Course Information

Course Description

The study of infectious disease processes including host-microbe interactions and medical intervention. Laboratory includes basic microbiological methodology and case studies

Prerequisite and Co-requisite Courses

Recommended Prerequisites: Biology 2324/2124 or Health Science Professions 2302/2102

Prerequisite Skills

Accessing Internet websites, including Blackboard and Tophat, and proficiency with Microsoft Word and/or PowerPoint.

Student Learning Outcomes

Upon completion of this course, students will be able to:

- Demonstrate knowledge in discerning signs and symptoms of medically relevant infectious diseases in order to apply knowledge in clinical settings
- Understand infectious disease processes including pathogenesis, diagnosis, signs and symptoms, transmission, and treatment.

- Demonstrate understanding of the methods of infectious transmission and the means by which these are controlled, including those related to nosocomial infections
- Demonstrate knowledge of the nature of antimicrobial resistance and to incorporate this knowledge within the context of providing appropriate healthcare
- Demonstrate knowledge in administering quality care in the context of safe handling of infectious materials/patients in order to minimize risk of transmission

Course Delivery

Choose ONE of the two statements listed below:

This is a face-to-face course with online components that students are expected to access in [Blackboard](#).¹

Required Texts and Materials

Norman-McKay L. Microbiology : Basic and Clinical Principles. New York, NY: Pearson; 2019.

Technology Requirements

To successfully complete this course, students need to purchase access to Top Hat. Lectures and daily assignments will be done through Top Hat. All lecture notes and Exams will be done through Blackboard.

Top Hat We will be using Top Hat Pro (www.tophat.com) for class participation. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message.

You can visit the Top Hat Overview (<https://success.tophat.com/s/article/Student-Getting-Started-with-Top-Hat>) within the Top Hat Success Center which outlines how you will register for a Top Hat account, as well as provides a brief overview to get you up and running on the system.

An invitation will be sent to you by email. If you do not receive this email, you can register by simply visiting our course website: Note: our course Join Code is Top Hat Pro may require a paid subscription, and a full breakdown of all subscription options available can be found here: www.tophat.com/pricing.

Communication

The best method of contacting me is through EMAIL. I will respond as quickly as possible (usually within 24 hours on weekdays). PLEASE include the course name (BIOL 2420 or Micro Lecture) and as much info as possible. If you send me a vague email, I am less inclined to reply or it takes me a lot longer to figure out what you are talking about.

You can also come by my office during office hours, but please send me an email beforehand to ensure I don't already have an appointment set for that time.

Grading

Evaluation and Grades

Course grades will be determined as indicated in the table below.

Assessment	Points
Exam 1	100
Exam 2	100
Exam 3	100
Exam 4 (Final)	100
TopHat Questions	100*
Lab Midterm	100
Lab Final	100
Lab Reports	100
Total	800

*You will have more than 100 questions (and therefore more than 100 points) on TopHat, but this grade will be taken as an average. Whatever your average is on TopHat, is how many point you will have out of the 100. (ex: you have 150 points out of 200, which is a 75%, so you would earn 75 of the 100 points available for TopHat).

Grading System

Course grades will depend on completing course requirements and meeting the student learning outcomes.

This course uses the following grading scale:

A = 720 - 800 points

- B = 640 - 719 points
- C = 560 - 639 points
- D = 480 - 559 points
- F = 0 - 479 points (Grades are not rounded up)

Assignment and Activity Descriptions

For the lecture, all lectures notes will be on Top Hat and Blackboard. Top Hat questions will be during lectures. Exams will take place during the normal lecture time in the normal room.

For the labs, Lab Reports will be assigned for each lab they are worth 10 points each. Lab reports are due the next week in lab, unless your instructor gives a different due date. The lab midterm and final will be administered in lab class time.

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)²
- [Angelo State University Catalog](#)³

Academic Integrity

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university's [Statement of Academic Integrity](#).⁴

Accommodations for Students with Disabilities

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the

student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the [Student Disability Services website](#).⁵ The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dr. Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112

Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#)⁶ for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)⁷ in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the [ASU Writing Center](#).⁸

Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 [Student Absence for Observance of Religious Holy Day](#)⁹ for more information.

Title IX at Angelo State University

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Miller, J.D. You may submit reports in the following manner:

Online: [Incident Reporting Form](#)¹⁰

Face to Face: Mayer Administration Building, Room 210

Phone: 325-942-2022

Email: michelle.miller@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit the [Title IX website](#).¹¹

Information About COVID-19

Please refer to ASU's [COVID-19 \(Coronavirus\) Updates](#)¹² web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

Modifications to the Syllabus

This syllabus, including grade evaluation and course schedule, is subject to modification on potentially short notice based on developing circumstances.

Course Schedule

Date	Lecture Topic	Lab Activities
Jan 17 th – 21 st	Ch. 1 & 2: Intro and Biochemistry	No Labs
Jan 24 th -28 th	Ch. 3 & 4: Prokaryotic & Eukaryotic Cells	Aseptic Technique
Jan 31 st – Feb 4 th	Ch. 5: Genetics	Microscopy & Staining
Feb 7 th – 11 th	Ch. 6: Viruses and Prions & EXAM I	Gram Staining
Feb 14 th – 18 th	Ch. 7 & 8: Microbial Growth and Metabolism	Selective Media I
Feb 21 st – 25 th	Ch. 9: Infectious Disease	Selective Media II
Feb 28 th – Mar 4 th	Ch. 10: Host Microbe Interactions	LAB MIDTERM
Mar 7 th – 11 th	Ch. 11 & 12: Innate Immunity and Adaptive Immunity & EXAM II	No Labs
Mar 14 th – 18 th	SPRING BREAK	No Labs
Mar 21 st – 25 th	Ch. 13 & 14: Immune Disorders and Vaccines	Standard Plate Count
Mar 28 th – Apr 1 st	Ch. 15: Antimicrobial Drugs	Differential Tests
Apr 4 th – 8 th	Ch. 16: Respiratory Infections	Differential Tests
Apr 11 th – 15 th	EXAM III	Antimicrobial Susceptibility
Apr 18 th – 22 nd	Ch. 17 – Skin/Eye Infections	Epidemic Simulation
Apr 25 th – 29 th	Ch. 18 & 19: Nervous & Digestive System Infections	LAB FINAL
May 2 nd – 6 th	Ch. 21: Cardiovascular and Lymphatic infections	No Labs
May 9 th – 13 th	EXAM IV/FINAL	No Labs

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- 1 <https://blackboard.angelo.edu/>
 - 2 <https://www.angelo.edu/current-students/student-handbook/>
 - 3 <https://www.angelo.edu/academics/catalog/>
 - 4 <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96>
 - 5 <https://www.angelo.edu/current-students/disability-services/>
 - 6 <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>
 - 7 <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96>
 - 8 https://www.angelo.edu/current-students/writing-center/academic_honesty.php
 - 9 <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>
 - 10 <https://www.angelo.edu/incident-form>
 - 11 <https://www.angelo.edu/title-ix>
 - 12 <https://www.angelo.edu/covid-19/>