



Medical Microbiology Honors

Mrs. Sonia Longoria

Telephone: 956-271-1600, Ext. 4152

Rm 216 - 4th Blk

Conference: 1st Block

REMIND: @medmic4

Tutoring (Rm 216): Tuesdays 4:15 pm

Course Description

Students in medical microbiology explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug resistant organisms, and emerging diseases. While microbiology is the study of all microscopic life, medical microbiology is most concerned with those creatures which have a particular impact on medicine and their clinical implications. This course is beneficial for those wishing to pursue a medical career (especially in a laboratory setting). More than other introductory biological sciences, the study of medical microbiology requires even the beginning student to learn and put into practice a series of unique techniques and concepts. The necessity to maintain a consistent work ethic, perform and evaluate laboratory experiments, read and evaluate technical information, and memorize are required for success in this course.

Big Ideas

1. Understand the immune system's response to invading microorganisms.
2. Working knowledge of basic bacterial laboratory techniques
3. Foundations of Microbiology - classification, evolution, and growth of microorganisms
4. Microbial Ecology - medical and practical uses for microorganisms
5. Infectious Diseases – What happened when your body is not in homeostasis?

COURSE CONTENT/TOPIC HEADINGS:

Chpt 1 - Main Themes of Biology
Chpt. 2 - The Chemistry of Biology
Chpt. 3 - Tools of The Lab: Studying Microbes
Chpt. 4 - Prokaryotic Cells & Microorganisms
Chpt. 5 - Eukaryotic Cells & Microorganisms
Chpt. 6 - Introduction of Viruses
Chpt. 7 - Microbial Nutrition, Ecology, & Growth

Chpt. 15 - Adaptive, Specific Immunity & Immunization
Chpt. 16 - Disorders in Immunity
Chpt. 17 - Diagnosing Infections
Chpt. 18 - The Cocci of Medical Importance
Chpt. 19 - Gram-Positive Bacilli of Medical Importance
Chpt. 20 - Gram-Negative Bacilli of Medical Importance
Chpt. 21 - Misc. Bacterial Agents of Disease

Chpt. 8 - Microbial Metabolism
Chpt. 9 - Microbial Genetics
Chpt. 10 - Genetic Engineering
Chpt. 11 - Physical & Chemical Agents
Chpt. 12 - Drugs, Microbes, Host
Chpt. 13 - Microbe-Human Interactions
Chpt. 14 - Host Defenses

Chpt. 22 - Fungi of Medical Importance
Chpt. 23 - Parasites of Medical Importance
Chpt. 24 - Viruses That Infect Humans: The DNA Viruses
Chpt. 25 - RNA Viruses That Infect Humans
Chpt. 26 - Environmental Microbiology
Chpt. 27 - Applied & Industrial Microbiology

Grading:

The weight distribution of the following will be used to determine the overall final grades.

Major assignments: **60%** → Tests, Projects, Lab Reports, Presentations

Minor assignments: **20%** → Daily work, Quizzes, Homework, Lab Work

The semester exams will be worth **20%** of your nine weeks grade.

- All work handed in must be neat with clear legible handwriting if it is not legible it will not be graded.
- The student must also put their name, date and block on all work handed in.
- Any work requiring problem solving must show all the work or no credit will be given.
*a minimum of a **50** will be given assuming all answers are correct w/ correct units.

Late work and Make-up work:

Students with an EXCUSED ABSENCE from school will have the opportunity to make up missed work at the rate of **one day for one day missed**, with a maximum of **five** days. Students will receive a **zero** for any major or minor assignments not made up within the allotted time. Students with an UNEXCUSED ABSENCE **may not make up missed work**; however, if the unexcused absence is determined to be caused by an extenuating circumstance, makeup work may be allowed. The grade for the makeup work will be no higher than a **70**.

Re-Testing

Students will be given the opportunity to re-test on a major grade in the event that they are absent and or have a failing test grade. Absent students will be allowed three days to inform me when they can come in to re-test. According to district policy, making up an exam because of an excused absence will be allowed the full grade to be awarded.

In the event that a student fails an exam, they will have three days to come in for tutoring and set up an appointment to re-test. According to district policy, making up an exam because of a failing grade will automatically lose **30 pts**. So the highest possible grade cannot be over a **70**.

Classroom Principles

Respect – I believe that respect is the most important classroom principle. I expect all of my students to treat teachers, staff, substitutes, other students, and property with respect.

Responsibility – I expect my students to demonstrate a well-developed sense of responsibility. **As seniors/juniors in high school, students should be capable of demonstrating responsibility in their actions and words.**

Honesty – I expect all classroom communication to be honest and open. Students should promote honesty through actions and words that display integrity. **Cheating on exams or**

quizzes will result in a zero, and your parents/guardian will be notified. When writing reports or papers, **plagiarism will not be tolerated and will result in a zero.**

General Rules

1. Please log in on time as attendance will be taken within the first 10 minutes of class.
2. Bring all appropriate materials to class.
3. Use of cell phone is **prohibited in class** unless instructed by teacher. Your cell phone will be confiscated otherwise. **Cell phones will be picked up before quizzes and tests.**
4. No personal grooming during class time.
5. Stay focused and attentive throughout the presentation.
6. No foul language, teasing or yelling in the classroom or online. Be respectful of your teacher and all classmates.
7. Restroom passes will be issued every 9 weeks. **You may only go to restroom with this pass.** You are not allowed to use another student's pass.

Tardies

Three tardies equal one unexcused absence, so get to class & in your seat on time.

Tutoring

If you ever find this course to be difficult and/or overwhelming, I am here to help you. Do not hesitate to ask for help. I will be available before school begins. I may be reached by email. **PLEASE, LET ME KNOW THE DAY BEFORE IF YOU ARE COMING IN.**

Teacher Area

NO student is allowed behind the teacher's desk. NO EXCEPTIONS!

Technology

BYOD WILL follow school and classroom policy. If not being used, ALL devices will be kept away in your backpacks, purses, etc.

Materials when you return to campus

1. Folder with pockets and brads or binder (any color)
2. Notebook paper or spiral notebook
3. Blue or black ink pen (for all assignments)
4. Pencils
5. Color pencils
6. Ear buds
7. Small scissors
8. Liquid glue
9. Tissue Box

Microbiology Contract

Finally, feedback from the community (parents or guardians of our students) is always an essential component for successful schools. Please do not hesitate to contact me if you feel there is a problem starting to develop. If you need to talk face to face, I am available during 1st block or before school. You can e-mail me for an even quicker response. It is always better if we work together.

By signing below, it is understood that the parent and student has read the course syllabus and that the student will adhere to the rules set forth by the teacher.

Student's signature _____ ID#: _____

Student's printed name _____

Parent

Parent's name (printed) _____

Parent's signature _____

Cell phone _____

Work phone _____

Email _____