Medical Microbiology is a one year course of study in health occupations. This course is designed to develop health care specific knowledge and skills in topics covering pathogenic and non-pathogenic microorganisms, drug resistant organisms, immune response to pathogens, laboratory procedures, infectious control, and emerging diseases. This course prepares the student for work based experiences in health care. Students interested in pursuing careers in research, public health, attending medical or dental school, allied health programs, or laboratory careers may benefit the most from taking a course in microbiology.

This course requires Biology AND Chemistry as a prerequisite. Students taking and passing this course will receive 1 full science credit on their graduation plan.

As dictated by the TEXAS EDUCATION AGENCY, this class is taught by a certified health care professional that is certified to teach. Ms. Nelson is a certified Medical Laboratory Scientist and Histocompatibility Technologist.

The material for this class will be covered by way of lecture, discussion, demonstration, laboratory experiments, audio/visual presentations, role-playing, Internet research, small group interaction, and guest speakers.

The following are some of the units that will be covered or integrated into the curriculum:

- **Bacteria**
- **Fungi**
- **Parasites**
- **Viruses**
- **Standard Precautions**
- **Microscopy**
- **Quality Control**
- **Immune Response**
- **Laboratory Procedures**
- **Diseases by body systems**
- **Cellular Structure**
- **Updates in Microbiology**

**NOTEBOOKS:**

Organization is an extremely important characteristic for medical professionals. To reinforce good organizational practices, you are required to keep a notebook, which will include handouts, class notes, and worksheets. Notebooks may be a spiral or a three-ring binder. Notebooks may be collected and graded for a daily or a participation grade. They will be evaluated on neatness, content, and organization. A notebook, which is turned in a day late, will receive a 20-point deduction, and ten points will be deducted for each day thereafter. Notebooks received after 1 week will not be accepted. Refer to guidelines.

**CURRENT EVENTS:**

Medicine and technology are rapidly changing. In order to keep up with new trends in the medical profession, you will be required to read and summarize or discuss a health care related article every two weeks. The articles may be about an ethical issue, a new procedure, information about new drugs and their application, or any other information that is a topic in healthcare.

**LABORATORY WORK:**

Lab grade are based on participation during the lab, adherence to safety regulations, lab cleanliness, and the written report. The only information that may be shared or copied for lab reports is DATA. A lab safety contract will need to be filled out by the student and parent/guardian online. If you are unable to access the information online, students are to inform me the first day of class and a printed copy will be given to them. The lab safety contract is required for participation in all labs.

Lab Reports: lab reports are to be professional quality, typed, and in the format provided by the instructor. They are due the beginning of the class, usually within one week after the lab is completed. Other labs and investigations may only have data, conclusions, and analyses.

Unknown Project: Students will be given an unknown bacterium towards the end of the second
semester and will be required to identify and write a lab report. This will be a **major test grade** and lab grade.

**Students must wear closed toed shoes when participating in all labs.** If a student does not have closed toed shoes on the day of the lab, he or she will be required to schedule a time to make up the lab **that same week** and will receive a 20 point grade deduction. If the student does not make up the lab within a week they will receive a zero (0) for that lab. Lab grades are 40% of the course average.

**HOMEWORK:**
Completion of homework on time is expected from each student. If there are special circumstances why homework is missed, a parent may contact me via email. Late homework will be accepted with a 20 point deduction for the first day and a ten point deduction for each additional day. Late work will only be accepted one week after the assignment.

**GRADING PROCEDURES:**

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework/Class Work/Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Labs</td>
<td>40%</td>
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<tr>
<td>Exams/Major Grades</td>
<td>40%</td>
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<td>Total</td>
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***Students who make below 70 may retest with required attendance to a tutorial session prior to retesting. The highest possible grade on a retest is 70. Retesting will only be available for one week after the tests are returned.***

**ACADEMIC DISHONESTY:**

Students in this class are expected to read and abide by the statements on academic dishonesty, plagiarism, stealing, and cheating found in the student handbook. If a student is found to be in violation of any of these statements, he/she will receive a zero for the assignment and may receive home suspension. Academic dishonesty includes daily work, labs, and exams. Students are not allowed to use the internet to answer questions for exams, quizzes, or assignments that are done online. (Ex: You may not Google the answer for a test question.)

**ABSENCES:**

If you miss a class, please check with Ms. Nelson, the day you return to school before or after class, so that you can get any materials that were handed out during your absence or you may schedule an afternoon to make up your missed lab. **You are responsible for copying any notes that were taken in class during your absence from a classmate.** In the event you are absent for an exam, you are responsible for **rescheduling a makeup exam the day you return to school** before or after class. You cannot wait a week to reschedule. The highest grade you may receive for an unexcused absence is a “70”.

**HOSA:**

All HST Students are encouraged to join HOSA, Health Occupation Students of America. HOSA is a professional national, state, and local organization for secondary and post-secondary students, and is well known in the health care community. Involvement in HOSA is encouraged.