
Course Prefix No.:	MLT 105
Course Title:	Medical Microbiology
Lecture Hrs/Wk:	3.0
Lab Hrs/Wk:	3.0
Credit Hrs/Semester:	4.0

[Distance Learning Attendance/VA Statement](#)
[Textbook Information](#)

COURSE DESCRIPTION

This course provides a survey of organisms encountered in the clinical microbiology laboratory, including sterilization and disinfection techniques.

COURSE COMPETENCIES

Upon completion of this course the student will be able to:

- (1) Define the most common terms used in introductory microbiology.
- (2) Interpret gram stains with the use of the microscope.
- (3) Perform procedures in the microbiology lab manual.
- (4) Identify the growth requirements for bacteria.
- (5) Describe specimen collection and handling.
- (6) Identify bacteria to genus and species utilizing cultivation techniques and biochemical tests.
- (7) Recognize and relate disease states with the most common bacterial cause.
- (8) Explain two types of antimicrobial susceptibility testing.
- (9) Examine molecular methods of identification of microorganisms
- (10) Identify quality control used in the microbiology lab.
- (11) Recognize common parasites and associated disease states.
- (12) Relate to introductory mycology.
- (13) Promote professionalism in dress, conduct and attitude.

PERFORMANCE OBJECTIVES

1. Given specific terms during MLT 105 lecture, the student will define these terms and will show proficiency in defining by scoring 70% or better on each written test given.
2. Utilizing pre-Gram stained slides of bacteria, lecture notes, and a microscope, the student will interpret with 100% proficiency the gram stain and gram morphology after 3 attempts per slide.
3. The student will perform each lab test described in the microbiology lab manual and will display competency through performance, observation and written documentation of results in the lab manual.
4. The student will list the growth requirements of bacteria and reproduce and/or recognize at least 5 of the requirements on a written test.
5. Given six different specimen sources, the student will utilize lecture notes and kodachrome slides to select the collection and handling technique for each source according to standard operating procedure. Evaluation will occur through written test.

6. Select, perform and interpret biochemical tests given in class and arrive at a confirmatory identification for the bacteria studied in each unit. 70% or greater on each written test, completion of laboratory exercises and class participation will prove competency.
7. Utilizing lecture notes, handouts, and case simulations, the student will correlate disease states with the most common bacterial cause. Passage of 70% or greater on written tests indicates competency.
8. The student will reproduce and/or recognize on a written test the MIC and Kirby Bauer methods of susceptibility testing to include inoculation, incubation, and interpretation.
9. Utilizing a Powerpoint presentation given in class, the student will recognize molecular methods (hybridization, PCR, etc.) used in the identification of microorganisms. Evaluation will occur through written test.
10. Given biochemical tests in the lab manual, the student will select and evaluate the quality control method for each test according to standard operating procedure.
1. Completion of each lab exercise indicates competency.
11. Through the use of lecture notes, life cycles, kodachromes, and slides, the student will recognize given parasites and their disease states. Evaluation will occur through written test and laboratory exercise.
12. Given handouts, lecture notes, and text, the student will state the three main types of mycoses and cite examples of each type. Evaluation will occur through written test.
13. Demonstrate a professional demeanor by adhering to dress code, following policies, and using a respectful attitude at all times.

* Note: For more objectives refer to the chapter learning objectives in the text.

COURSE REQUIREMENTS

1. Attend lecture/lab consistently. The maximum number of allowable absences is **10%**. (**All missed labs will be made up and the 10% includes doctor excused absences.**)
2. Students will adhere to the student code of conduct as described in the York Technical College Catalog and Handbook. Students will conduct themselves with dignity and maintain high standards of responsible citizenship. Any student caught cheating or involved in any other academic dishonesty will be given a grade of zero and will be subject to further disciplinary action.

EVALUATION STRATEGIES/GRADING

1. Class participation = 10%. (Issue Presentation--Present 3 issues relating to microbiology during the course of the semester.)
2. Perform all laboratory exercises and turn in lab manual. (Lab exercise on unknowns will count as 1 grade. Laboratory exercises will not be given a formal letter grade. All exercises must be completed before a final course grade is given.)
3. Take and pass 6 written tests and a final exam.

Grading Scale:

90 - 100 = A

80 - 89 = B

70 - 79 = C

60-69 = D

<60 = F

- **A grade of C or better** must be obtained in this class for progression in the MLT program.

Note:

If a student must be absent on the day of a test, he/she must notify the instructor prior to test time in order to be allowed to take a make-up test. A grade of 0 will be assigned if the instructor is not notified. If the student exceeds the 10% maximum absences as stated by the MLT Dept., this may result in his/her being dropped from the course and from the MLT program. Three (3) tardies is equivalent to one (1) absence. 96 hours = 9.6 hours allowable absence (10%)

An extra grade of 95 will be given for perfect attendance. (This includes < 3 tardies and leaving before class has ended.)

ENTRY-LEVEL SKILLS

The student should display basic reading, writing, and math skills.

PREREQUISITES: None

CO-REQUISITES: None

Disabilities Statement: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Offices (SR) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.