Faculty is required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

**DEPT.** Medical Laboratory Technician  
**COURSE NUMBER:** MDLT2102

**NUMBER OF CREDITS:** 3 (2 lecture/1 lab)

**COURSE TITLE:** Medical Microbiology II

**CATALOG DESCRIPTION:** Medical Microbiology II is the continuation of medical Microbiology I. This course focuses on the study and identification of bacteria, parasites, viruses and fungi. The student will be performing basic laboratory procedures in bacteria and fungi identification. The student will also be reviewing laboratory procedures that were taught in Microbiology I. Case studies will be used for group teaching.

**AUDIENCE:** Medical Laboratory Technician or other healthcare students or professionals

**FULFILLS MN TRANSFER CURRICULUM AREA(S)** *(Leave blank if not applicable)*

Area: by meeting the following competencies:
Area: by meeting the following competencies:
Area: by meeting the following competencies:

**PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:** Medical Microbiology I

**LENGTH OF COURSE:** 1 semester

**THIS COURSE IS USUALLY OFFERED:**
Every other year □ fall X spring □ summer □ undetermined □

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) **ACADEMIC CONTENT:** The academic objectives of this course are:
   a. Understand, perform tests, and identify gram positive bacilli of medical Importance and diseases they cause
   b. Discuss Spirochetes, Curviform bacteria, Chlamydia, Mycoplasma, and Mycobacterium
   c. Discuss fungi and yeast of medical importance. Perform tests for identification
   d. Discuss viruses of medical importance
   e. Discuss parasites of medical importance

2) **THINKING SKILLS:** This course will help students improve the effectiveness of their thinking skills through:
   a. Determining what sequence of lab test to set up to identify certain bacteria based on gram stain, colonial morphology and other tests
   b. Identifying bacteria based on results of lab tests
   c. Identifying fungi/yeast based on results of lab tests and their unique characteristics
   d. Correlating identified bacteria and fungi with diseases
3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:
   a. Writing or reading case studies
   b. Collaborating with classmates in the laboratory

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through working closely with classmates in small groups and in the laboratory. Understanding the outside impacts that students deal with, such as being a single working mother, etc.

TOPICS TO BE COVERED:
   a. gram positive bacilli of medical importance and diseases they cause
   b. Spirochetes, Curviform bacteria, Chlamydia, Mycoplasma, and Mycobacterium
   c. Discuss fungi and yeast of medical importance. Perform tests for identification
   d. Discuss viruses of medical importance
   e. Discuss parasites of medical importance

LIST OF EXPECTED COURSE OUTCOMES:
   1. Properly collect and handle specimens
   2. Use sterile technique and safely handle bacteria and fungi
   3. Know what media to use in regards to specimen received
   4. Use the correct test to identify the bacteria based on gram stain and colonial morphology
   5. Correlate bacteria, transmission of and diseases caused by the bacteria
   6. Understand antibiotic susceptibility and antibiotic resistant bacteria
   7. Correlate the fungi and diseases they cause
   8. Perform laboratory tests to help in the identification of bacteria and fungi
   9. Identify parasites under the microscope
   10. Understand viruses and the diseases they cause
   11. Understand parasites and the diseases they cause

LEARNING/TEACHING TECHNIQUES used in the course are:
   □ Collaborative Learning  X  Problem Solving
   □ Student Presentations  □ Interactive Lectures
   □ Creative Projects  □ Individual Coaching
   X Lecture  X  Films/Videos/Slides
   X Demonstrations  □ Other (describe below)
   X Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
   X Reading  X  Tests  □ Individual Projects
   □ Oral Presentations  X  Worksheets  □ Collaborative Projects
   X Textbook Problems  □ Papers  □ Portfolio
   □ Group Problems  □ Term Paper
   X Other (describe below)
   Laboratory assignments
EXPECTED STUDENT LEARNING OUTCOMES: The student should have a basic understanding of medical microbiology for their entrance into externship. They should be able to properly collect specimens, aseptically handle specimens and bacteria/fungi, streak correct media for isolation, and run correct battery of tests for identification. They should have a basic understanding of parasites and viruses including proper media for transportation.

The information in this course outline is subject to revision

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.

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