

# Medical Microbiology SYLLABUS

**INSTRUCTOR:** Dr. Li and Dr. Sundrani

**Conference:** B1

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## **COURSE DESCRIPTION:**

Medical Microbiology provides an overview of the field of microbiology. It provides a concise study of clinically significant microorganisms. This course lasts for two semesters. Student must stay both semesters to obtain the credit and receive the CCMA certification below.

## **CERTIFICATE OFFERED:**

### The Certified Clinical Medical Assistant (CCMA)

The Certified Clinical Medical Assistant is an unlicensed, multi-skilled healthcare practitioner who is competent in both clinical and administrative procedures. As a CCMA you may perform some or all of the following tasks:

- Interview patients
- Measure and record vital signs
- Prepare exam rooms
- Clean and sterilize medical equipment
- Administer injections, as well as topical or oral medications
- Perform venipuncture and point-of-care testing

**REQUIRED SUPPLIES:** Charged laptop and internet access

## **STUDENT RESOURCES:**

<http://www.nhanow.com/certifications.aspx>

<https://www.aeseducation.com/learning-center>

## **COURSE TEXTBOOK**

Introduction to Diagnostic Microbiology: A Text and Workbook by Maria D. Delost ISBN # 0-8016-7853-6

Parasitology: A self-instructional textbook by Leventhal and Cheadle 5<sup>th</sup> Ed. ISBN # 0-8036-0788-1

## **COURSE NOTEBOOK**

Students will be required to keep a notebook and/or digital notebook and bring it to every class. Periodic notebook checks will occur for a six weeks grade. This grade will count as one major test grade. To receive the maximum points allowed, students should keep their notebook neat and current. Instructions on how the notebook should be arranged will be discussed in class. Notebook checks may be randomly conducted.

## **Medical Microbiology COURSE OUTLINE**

Unit 1: Introduction to Microbiology

Introduction to Medical Microbiology

Unit 2: Laboratory Safety and Infection Control

Laboratory Safety

Laboratory Basics

Standard Precautions for the Laboratory

Quality Control

Nosocomial Antibiotic Resistant Organisms

Unit 3: History of Medical Microbiology

History of Microbiology

Unit 4: The Immune Response

Immunity and Vaccinations

Unit 5: Microorganisms

Microorganisms  
Introduction to Virology  
Streaking and Agar Plate  
Introduction to Mycology  
Introduction to Parasitology  
Emerging and Reemerging Infectious Disease  
Unit 6: Concepts of Medical Microbiology  
Critical Thinking  
Analysis of Current Infection Control Measures  
Bacteria Growth Characteristics  
The Growth of Microorganisms  
Unit 7: Laboratory Investigations and Identification of Causative Agents  
The Gram-stain  
Urease Testing  
Catalase and Oxidase Testing  
Coagulase Testing  
Mystery Growth Laboratory Practical  
Case Study Laboratory Investigation

This syllabus is subject to change based on the needs of the class.