



### **Course Description**

#### **MLT2440 | Clinical Microbiology 1 | 1.00 credits**

This course will provide an overview of clinical mycology and parasitology. Topics will include both parasites and fungi and will cover life cycles, epidemiology, and etiology. Emphasis will be given to the most commonly encountered mycoses and parasitic infestations. This course should be taken concurrently with Clinical Microbiology 1 Lab.

### **Course Competencies:**

**Competency 1:** The student will demonstrate knowledge and comprehension of clinical parasites belonging to the class Protozoa by:

1. Differentiating between cysts and trophozoites stages of Protozoa, on the basis of morphological criteria.
2. Stating any vector or intermediate host involved in the transmission of protozoan diseases
3. Stating the kind of diseases associated with protozoan infection
4. Discussing the medical importance of accurate identification of protozoa in humans.
5. Identifying the diagnostic stages of Protozoa from photographs or direct specimens.
6. Differentiating the life cycle of Plasmodium organisms.
7. Stating the common names and scientific names of the organisms studied

**Competency 2:** The student will demonstrate knowledge and comprehension of clinical parasites belonging to the class Nematoda by:

1. Differentiating between eggs of commonly encountered Nematodes, and the body specimen of choice for recovery.
2. Stating the kind of diseases associated with nematode infection
3. Discussing the different ways Nematodes can infect humans including the infective and diagnostic stages.
4. Describing the life cycle of intestinal nematodes from the egg to the adult
5. Stating the common names and scientific names of the organisms studied

**Competency 3:** The student will demonstrate knowledge and comprehension of clinical parasites belonging to the class Cestoda by:

1. Differentiating between eggs of commonly encountered Cestodes, and the body specimen of choice for recovery.
2. Stating the kind of diseases associated with tapeworm infection
3. Discussing the different ways Cestodes can infect humans including the infective and diagnostic stages and method of infection
4. Identifying the diagnostic stages of Cestodes from photograph, illustration or direct specimen
5. Differentiating morphologically between adult cestodes
6. Stating the common names and scientific names of the organisms studied

**Competency 4:** The student will demonstrate knowledge and comprehension of clinical parasites belonging to the class Digenea by:

1. Differentiating between the Cestoda and Digenea as organisms belonging to the Phylum Platyhelminthes
2. Stating scientific and common names of the flukes.
3. Using morphology differentiate adult Digenea
4. Stating the kind of diseases associated with Digenea infection
5. Discussing the different ways flukes can infect humans including the infective and diagnostic stages and method of infection
6. Identifying the diagnostic stages of the flukes studied from photograph, illustration or direct specimen.

**Competency 5:** The student will demonstrate comprehension and application of clinical yeast and molds by:

1. Comparing and contrasting the identifying characteristics of commonly encountered clinical Dermatophytes, saprophytic, opportunistic and dimorphic fungi
2. Describing the physical and biochemical characteristics used for the identification and classification of pathogenic yeast.
3. Stating the pathogenesis of the common yeast found in clinical specimens

**Learning Outcomes:**

1. Information Literacy
2. Communication
3. Critical Thinking