

Course Description

MLT2811L | Hospital Practicum: Microbiology | 3.00 credits

A supervised laboratory rotation in a clinical microbiology facility. This provides the student an opportunity for the practice of skills previously learned and for the acquisition of new procedural skills. Prerequisites: MLT2403, 2403L; corequisite: MLT2930.

Course Competencies:

Competency 1: The student will demonstrate the ability to apply the guidelines in the clinical microbiology of the laboratory by:

- 1. Processing specimens for clinical analysis
- 2. Performing manual and automated clinical microbiology testing
- 3. Performing and interpreting quality control in the microbiology laboratory
- 4. Performing and reporting STAT's in a timely manner
- 5. Calling panic values
- 6. Performing inventory of media and following departmental guidelines for media disposal
- 7. Processing blood cultures, screening and recognizing signs of bacterial growth
- 8. Operating the automated blood culture system
- 9. Working -up potentially positive blood cultures to include the preparation, examination and interpretation of the blood smear
- 10. Setting up manual and automated methods of identification and antibiotic susceptibility testing on aerobic isolates and interpreting, recording, and reporting results
- 11. Setting up manual and automated methods of identification and antibiotic susceptibility testing on anaerobic isolates and interpreting, recording, and report results
- 12. Preparing, examining and interpreting lactophenol wet preps for fungi (dermatophytes, dermatophytes opportunistic fungi, systemic and dimorphic fungi) as well as differentiating and recognizing common contaminants
- 13. Practicing techniques for Collecting and transport of specimens for parasitology examination
- 14. Performing wet mount smears using iodine or saline from previously prepared specimens
- 15. Correctly identifying parasites on stained blood and fecal smears
- 16. Observing and/or performing proper processing, concentration and set up of specimens submitted for mycobacteriology in appropriate media
- 17. Observing and/or practicing the use and application of gene probes and biochemical for the identification of mycobacteria and other species if applicable at the facility

Competency 2: The student will demonstrate knowledge, comprehension and application of safety by:

- 1. Wearing gloves while performing lab testing
- 2. Handling biohazard material and samples according to OSHA guidelines
- 3. Disposing of biohazard waste in the appropriate containers

Competency 3: The student will demonstrate the ability to apply the guidelines in the immunology/ serology laboratory by:

- 1. Reading the departmental procedure manual to become familiar with policies, procedures, methods, reporting of results and lab information system entry procedures
- 2. Processing specimens for clinical analysis
- 3. Performing serological testing in analyzers and manually
- 4. Performing accurate and precise quality control analysis
- 5. Performing preventive maintenance of the serology instruments
- 6. Performing and reporting STAT's in a timely manner
- 7. Calling panic values

Learning Outcomes:

• Communicate effectively using listening, speaking, reading, and writing skills

- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning