

Microbiology Laboratory

Vision:


The staff of the Microbiology Laboratory aspire to graduate students capable of understanding the most important bacterial, viral, and parasitic diseases, their diagnostic methods, treatments, and the selection of appropriate therapies. They aim to equip students with the knowledge of the clinical manifestations associated with microbial infections, preventive measures, laboratory safety, infection control techniques, and the essential methods of sterilization and disinfection.

Mission:

The primary priority of the microbiology laboratory staff is to improve the healthcare reality within medical institutions by keeping pace with scientific advancements in the field of microbiological diseases. They focus on identifying, diagnosing, and treating infections while exploring and implementing innovative developments in this field, thereby significantly contributing to healthcare progress, particularly in diagnostics and treatment.

Objectives:

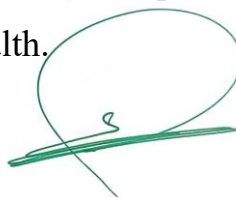
1. To understand the fundamental principles of microbiology and the main microbial infections, alongside their diagnostic methods.
2. To ensure laboratory personnel are protected from microbial contamination and to promote personal safety when handling infectious samples in healthcare settings (e.g., hospitals).
3. To learn the mechanisms of disease transmission and control.
4. To study the sterilization methods for laboratory tools and surgical instruments.



5. To master the diagnostic techniques for bacterial, viral, parasitic, and fungal infections and understand their forms and types.
 6. To explore the essential tests for selecting appropriate antibiotics and their mechanisms in treating bacterial infections.
 7. To study vaccination programs targeting viral infections and their modes of action.
 8. To identify key clinical signs and disease stages associated with microbial infections.
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Chemistry Laboratory Objectives:

1. To teach students the basic principles of safety and security while working in laboratories.
2. To educate students on the correct use of microscopes and slide preparation techniques.
3. To introduce students to the major types of harmful microorganisms affecting humans, including their structure and genetic characteristics.
4. To teach the methods used in sterilization, disinfection, and personal hygiene related to healthcare.
5. To instruct students in proper scientific methods for collecting, handling, and disposing of contaminated medical samples.
6. To train students on how to properly handle various chemicals.
7. To help students understand the biochemical functions of different body organs, distinguish between their healthy and pathological states, and comprehend their role in dental health.



8. To apply laboratory methods for monitoring biochemical reactions in biological samples.

