

## MIC 243 : Microbiology

This course will provide the students with a basic understanding of modern medical and general microbiology with emphasis on role of microorganisms in human health and disease. The course will address the fundamental concepts on characteristics of microorganisms of medical importance including bacteria, virus, fungi, protozoa, and helminthes. The basics of the taxonomy and classification, morphology, nutrition, growth conditions, metabolism and genetics of these microbes will be discussed. The concept of host-parasite relationship, pathogenicity and microbial virulence factors will also be addressed. Using an integrated approach, the students will then be able to explore how these concepts relate to the infectious disease process, laboratory diagnosis and identification of microbes and targets of antimicrobial drugs. The students will explore the development of antimicrobial resistance and correlate microbial gene transfer mechanisms with dissemination of resistance genes. This course will use a diversity of teaching approaches such as lectures, laboratory practical sessions and interactive large group discussions, through which, it is expected that this course will equip students with the basic principles of microbiology. This will serve as a basis for their continuing understanding of infectious diseases in later stages of the curriculum.

**Credits** 3