Module Description

This course will introduce the students to the vast world of microorganisms, including both pathogenic and nonpathogenic forms. A basic understanding of the kingdoms of life, cell structure, prokaryotic and eukaryotic cells, cellular metabolism and methods of reproduction is necessary before focusing on the organisms of clinical interest. They will gain insights into pathogenicity, toxicity and the role of the opportunistic pathogens in humans, including bacteria, fungi, protozoan, viruses, parasites, and prions. The epidemiology of the most common disease-causing organisms will be compared, with an emphasis on understanding the methods of pathogenicity and mode of transmission so as to prevent and control infection. The fundamentals of the immune response to infection will be included, as well as a retrospective explanation on the emergence of HIV and an awareness of newly emerging disease threats such as Ebola and SRAS.