

(109-MED-1503) MD – MICROBIOLOGY

Significance of Program:

Viruses, bacteria, fungi, and parasites are some of these microbes. Microbiology in medicine is significant for a number of reasons. Microbiologists are able to recognise, isolate, diagnose, and prevent harmful bacteria due to their expertise in medical microbiology

Career Options:

Junior/Senior Research Fellow, Researchers at ICAR or CSIR Labs, Biomedical Scientist, Science Writer, Faculty Teaching Professional in Colleges or Universities

Program Objectives:

1. State and explain the clinical features, etiology, pathogenesis and methods of laboratory diagnosis of infectious diseases and apply that knowledge in the treatment, prevention and control of communicable diseases caused by micro-organisms.
2. State and explain the principles of immunity and immunological phenomenon which help to understand the pathogenesis, laboratory diagnosis of infectious and non-infectious diseases.
Establish and practice “laboratory medicine” for diagnosis of infectious diseases in hospitals and community in the field of bacteriology, parasitology, virology, mycology, serology and immunology in the light of clinical findings.
3. Organize the prevention and control of communicable diseases in the community.
4. Understand and practice the principle of prevention and control of healthcare associated infections and rational antibiotic policy.
5. State their cent advances in the field of Medical Microbiology and apply this knowledge in understanding aetiopatho genesis and diagnosis of diseases caused by micro-organisms.
6. Carry out fundamental or applied research in the branches of medicine involving microbiological work.
7. Develop specialization in any of the above sub specialties.
8. Undertake teaching assignments in the subject of medical Microbiology

Outcomes of the Program:

- To produce a competent specialist and medical teacher who recognizes the health needs of the community
- To train postgraduates to carry out professional obligations ethically and in keeping with the objectives of the national health policy.
- To educate postgraduates so they are aware of contemporary advances in the field of medical and diagnostic microbiology.
- To enable postgraduates to master the competencies pertaining to diagnostic Microbiology as relevant to secondary and tertiary levels of the health care system.
- To foster the spirit of scientific enquiry and orient the trainee to the principles of research methodology and epidemiology
- To help trainees acquire the basic skills of teaching medical and paramedical professionals
- To sensitize postgraduates to the importance of quality control in laboratory medicine. To enable postgraduates to understand and implement the guidelines for hospital infection control
- To help the trainee understand the clinical, therapeutic and preventive aspects of infectious diseases of regional, national and global importance

Major Course Outlines:

General Microbiology, Immunology, Systematic bacteriology, Mycology, Virology, Parasitology

CORE	Electives	Skill Course
MICROBIOLOGY	PATHOLOGY BIOCHEMISTRY	To help them to understand morphology, pathogenesis, laboratory diagnosis, prophylaxis of HIV, Hepatitis To develop skills to identify outbreaks due to viral diseases and to implement appropriate control measures :To educate the postgraduates on the morphology, pathogenesis, laboratory diagnosis, preventive and control measures of clinically significant yeasts and molds :To identify the method so antifungal susceptibility testing