VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.

S.Y. M.B.B.S.

2. MICROBIOLOGY

1. Goal

The goal of teaching Microbiology is to provide understanding of the natural history of infectious diseases in order to deal with the etiology, pathogenesis, pathogenicity, laboratory diagnosis, treatment, control and prevention of these infections and infectious diseases.

2. Educational objectives

(a) Knowledge

The student at the end of one and half years should be able to: -

i. state the etiology, pathogenesis and methods of laboratory diagnosis and apply that knowledge in the diagnosis, treatment, prevention and control of communicable diseases caused by microorganisms.
ii. understand commensal, opportunistic and pathogenic organisms of human body and describe host parasite relationship.
iii. know and describe the pathogenesis of diseases caused by microorganisms.
iv. state the sources and modes of transmission of pathogenic and opportunistic micro-organisms including knowledge of insect vectors & their role in transmission of infectious diseases.
v. choose appropriate laboratory investigations required for clinical diagnosis.

(b) Skills

i. plan and interpret laboratory investigations for diagnosis of infectious diseases and correlate the clinical manifestations with the etiological agent.
ii. identify common infectious agents with the help of laboratory procedure, acquire knowledge of antimicrobial agents, use of antimicrobial sensitivity tests to select suitable antimicrobial agents for treatment.
iii. perform simple laboratory tests, which help to arrive at rapid diagnosis.
iv. be conversant with proper methods of collection, storage & transport of clinical material for microbiological investigations.
v. understand the principles of immunology and its application in the diagnosis and prevention of infectious diseases including immunization schedule, acquire knowledge of the scope of immunotherapy and different vaccines available for the prevention of communicable diseases.
vi. understand methods of disinfection and sterilization and their application to control and prevent hospital and community acquired infections including universal biosafety precautions and waste disposal.
vii. recommend laboratory investigations regarding bacteriological examination of food, water, milk and air.
viii. the student should be well equipped with the knowledge of prevalent communicable diseases of national importance and of the newer emerging pathogens.

(c) Attitude

i. the student will be regular, sincere, punctual and courteous and regular in studies.
ii. the student will follow all the rules laid down by the department and participate in all activities.
iii. the student will understand the importance of, and practice asepsis, waste segregation and appropriate disposal.
iv. the student will understand the importance of, and practice the best methods to prevent the development of infection in self and patient. (E.g. hand washing, using aprons for hospitals in hospitals only, regularly washing the aprons, wearing gloves (as and when required / handling specimens etc.).
v. the student will understand the use of the different antimicrobial agents including antibiotics to use judiciously and prevent misuse, (prescribing attitude).
vi. the student will understand the significance of vaccinations and will receive appropriate vaccines (e.g. TT, Hepatitis B and any other as per needs).
vii. the student will wash his/her hands with soap after each practical class.
viii. the student will leave the area allotted for his practical neat and tidy.
ix. the student will discard the slides in the appropriate container provided for the same.
x. the student will report any injury sustained in class, immediately.
xi. the student will report any breakage occurring during class times immediately.
xii. the student may give suggestions to improve teacher student association.

3. Total duration of para-clinical teaching 3 semesters
Total 360 teaching days

Total number of teaching hours allotted for Microbiology (As per MCI guidelines 1997). **250 hrs**

4. Syllabus

a. Learning methods

Lectures, practicals

Distribution of teaching hours

A) Theory (lectures &	….. 71
(tutorials	….. 26
Total	….. **97**
B) Practicals and Revision	... 120
C) Assessments	... 33
Total	.. 250