

PUBLIC HEALTH MICROBIOLOGY

Course Syllabus

Unit - I

Introduction to public health: definition, scope, concept and importance of public health microbiology – roles of microbiologist in public health – microbial association of water, air and soil.

Practice:

1. Selection, collection, preservation and transportation of samples from the community to the laboratory.

Unit - II

Air borne infections: air and its composition – indoor air – outdoor air – air borne diseases (bacterial, fungal and viral) – methods of enumeration of microorganisms in air – air sanitation.

Practice:

Isolation and Identification of microorganisms from air.

Unit - III

Water borne infections: kinds of water – water borne diseases (viral, bacterial, protozoan) – methods of enumeration of microorganisms in water – indicator organism – water treatment, control of water borne diseases.

Practice:

Isolation and Identification of microorganisms from water and evaluation of water quality

Unit - IV

Food borne diseases: definition and importance of food hygiene – types (spoilage of meat and its products, milk and dairy product, fish and fish products and eggs) – role of microorganisms in food spoilage and poisoning – food borne diseases – types of food borne diseases – food poisoning – food borne infection.

Practice:

Isolation and identification of microorganism from different food products: meat, canned juice, milk, cheese and ice cream.

Unit - V

Hospital acquired infection: Prophylactic immunization – disposal of infective hospital and laboratory materials – monitoring of sanitation in community – techniques used for the diagnosis of hospital acquired infection.

Practice:

Isolation and Identification of microorganisms (hospital acquired infection)

Suggested References

1. A Text Book of Microbiology, by Ghimire P. & Parajuli K. VidhyarthiPustakBhandar Publication, Kathmandu.
2. Text Book of Social and Preventive Medicine by Park JE and Park K
3. Evidence Based Public Health by Brownson, RC., Baker, EA., Leet. TL., Follespie. KN, Oxford University Press
4. The Quest for Health, Educational Enterprises, Kathmandu, by Dixit H.
5. Epidemiology for Public Health Practice, by Friis, RH., and Sellers, TA, 2nd Edition, Gaithersburg, MD: Aspen Publication,
6. Modern Food Microbiology, by Jay, J, H 3rd Edition CBS Publication and Distributors Delhi 1987.
7. Introduction to Soil Microbiology, Martin Alecender, *by* Academic press, 1961.