

Microbiology

Hrs.30

Course Description

This course is designed to help students gain knowledge and understanding of the characteristics and activities of microorganisms, how they react under different conditions and how they cause different disorders and diseases. Knowledge of these principles will enable student to understand and adopt practices associated with preventive and promotive health care.

General Objectives

Upon completion of this course the students will be able to:

1. Describe the classifications and characteristics of microorganism.
2. List the common disease producing micro-organisms and their characteristics.
3. Explain the activities of micro-organism in relation to the environment and the human body.
4. Enumerate the basic principle of control and destruction of micro-organisms.
5. Apply the principle of microbiology in nursing practice

Course Content

Unit-I Introduction

- Brief historical review of bacteriology and microbiology
- Scope and usefulness of knowledge of microbiology in nursing.

Unit-II Micro-organisms

- Classification, structure, Size, method and fate of reproduction.
- Factors influencing growth
- Pathogenic and non-pathogenic organisms.
- Normal flora of the body
- common diseases caused by different types of microorganisms.

Unit-III Infection and its transmission

- Sources of infection
- Growth of microbes
- portals of entry and exit o microbes
- transmission of infection
- Collection of specimens.

Unit-IV Immunity

- Types of immunity
- Hypersensitivity and autoimmunity
- Immunising agents

Unit-V The control and destruction of micro organisms

- Principle and methods of microbial control
- Sterlization dry heat moist heat chemicals and radiation
- Disinfeetion physical natural gases chemicals used and prepatation of lotions
- medical and surgical asepsis crossinfection
- Control of spread of infection
- pasteurization
- Bio-safety and waste management

Unit-VI Introduction to laboratory techniques

- microscope pares and uses handling and care of microscope
- inoculation of culture media
- Staining and examination of slides
- preparation and examination of smears.