**SEMESTER – III**

**MPH-301: EPIDEMIOLOGY AND COMPUTER APPLICATIONS**

**Unit-1:** **Fundamentals of** **Epidemiology:**

* Introduction and Basic Concepts of Epidemiology
* Measuring the Occurrence of Diseases

- Measures of Morbidity (Incidence, Prevalence)

- Measures of Mortality (Rates)

* Measures of Prognosis

- Case Fatality Rate

- 5-Year and Observed Survival (Life Table)

* Measurement of Risk

- Relative and Attributable Risk; Odds Ratio

**Unit-2:** **Epidemiological Study Design and Analysis:**

* Study Design

- Cross-Sectional Studies and Cohort Studies

- Case Control Studies

* Strengths and Limitations of Different Study Designs
* Association and Causation
* Causality, Random Errors, Bias and Interaction
* Methods for Assessment of Effect Modification

**Unit-3:** **Epidemiological Inferences in Epidemics and Outbreak Investigations:**

* Preventive Strategies

- Concepts of Screening and Disease Surveillance

- Outbreak Investigation

* Benefits and Limitations of Different Forms of Evidence
* Interpretations of Published Epidemiological Studies

**Unit-4: Computer Applications in Public Health:**

* Introduction and Types of Computers
* Computer Operating System
* Accessing PDF Files and Basics in Word Processing
* Functions in Word, Power Point and Excel
* Advance Search Tools (Google, Bing)

**References**

1. Gordis L. Epidemiology. Philadelphia, PA: WB Saunders Company.
2. Greenberg RS, Daniels SR, Flanders WD, Eley JW, Boring JR. Medical Epidemiology, 2nd Ed. New York, NY: McGraw Hill.
3. Hennekens CH, Buring JE. Epidemiology in medicine. Boston, MA: Little Brown.

**SEMESTER – III**

**MPH-302: COMMUNICABLE AND NON-COMMUNICABLE DISEASES**

**Unit-1:** **Communicable Diseases:**

* General Overview of Communicable Diseases
* Impact of Communicable Diseases on Developing Countries
* Virulence Factors and Mode of Action of Toxins
* Microbial Subversion of Host Defence Mechanisms
* Anti-Microbial Agents and Mode of Action

**Unit-2:** **Non-Communicable Diseases (NCDs):**

* + Overview and Introduction to NCDs and their Epidemiology
  + Risk Factors, Prevention and Management
  + New Approaches and Policies and Programmes on NCDs
  + Important NCDs: Aetiology, Prevention and Control
  + Nutrients as Risk Factors for NCDs

**Unit-3:** **Food Borne Diseases and Toxicity:**

* + Bacterial Food Poisoning
  + Non-Bacterial Food Poisoning
  + Complications
  + Control, Prevention and Management
  + Commutability Stage

**Unit-4:** **Water Borne Diseases:**

* + Causes and Symptoms
  + Chemical and Bacteriological Quality of Water
  + Complications
  + Control, Prevention and Management
  + Commutability Stage

**References**

1. Park’s Textbook of Preventive & Social Medicine, K Park, 23rd Edition, Bhanot

2. Community Medicine with Recent Advances, AH Suryakantha, 4th Edition, Jaypee

3. Control of Communicable Diseases Manual, edited by David L. Heymann, American Public Health Association, Washington DC 19th edition.

**SEMESTER – III**

**MPH-303: DENTAL PUBLIC HEALTH**

**Unit-1: Dentistry and Public Health**

* History of Dentistry and Public Health
* Importance of Oral Health in Public Health
* Oral Hygiene Practices in Ancient India and Modern India
* Structure of Teeth and Associated Tissues in Children, Adult and Geriatric/Aging Individuals
* Components of Dental Public Health Infrastructure

**Unit 2: Preventive Dentistry and Health Hazards**

* Role of Public Health Scholar in Prevention and Control of Oral Conditions and Health in Community
* Oral Health Practices Promotion for Prevention and Control of Dental Problems in Children, Adult, Geriatric/Aging and Special Needs/Care Population
* Critical Evaluation of COTPA Act
* Health Hazards (Mercury and Other Heavy Metals)
* Biomedical Waste Management in Dental Office

**Unit 3: Oral Health and Systemic Issues**

* Myths in Dental Health Practice
* Co-Relation between Oral Health and Systemic Diseases
* Pregnancy and Oral Health
* Tobacco and Oral Cancers
* Oral Health Effect of HIV

**Unit 4: Health Education, Research Methodology and Nutrition**

* Scope and Objectives of Dental Health Education and Research Needs
* Public Health Research
* Funding Agencies in India
* Nutrition and Oral Health
* National Dental Health Policy

**References**

1. K Park. Textbook of Preventive and Social Medicine. Banarsidas Bhanot Publishers. 23rd Ed.
2. Soben Peter. Essentials of Public Health Dentistry (Community Dentistry). Arya Medi Publishing House Pvt. Ltd. 5th Ed.
3. PH Pedersen, AWG Walls and JA Ship. Textbook of Geriatric Dentistry. Wiley Blackwell. 3rd Ed.