

# **PACIFIC MEDICAL UNIVERSITY, UDAIPUR**

## **Ph.D. Entrance Syllabus –Community Medicine**

### **Ph.D. Entrance Syllabus – Community Medicine**

#### **1. Epidemiology**

- **Concepts of health & disease**
- **Natural history of disease**
- **Levels of prevention**
- **Epidemiological triad**
- **Measures of disease frequency**
  - Incidence, prevalence, attack rate
- **Measures of association & impact**
  - Relative risk, odds ratio, attributable risk
- **Study designs**
  - Descriptive, analytical, experimental studies
  - Cohort, case-control, RCT
- **Bias, confounding & effect modification**
- **Screening of diseases**
- **Disease surveillance**
- **Outbreak investigation**
- **Epidemiology of communicable & non-communicable diseases**

#### **2. Biostatistics**

- **Types of data & variables**
- **Measures of central tendency**
  - Mean, median, mode
- **Measures of dispersion**
  - Range, SD, variance
- **Probability & normal distribution**
- **Sampling methods**
- **Statistical tests**
  - t-test, chi-square, ANOVA
- **Correlation & regression**

- **Confidence interval**
- **P-value & hypothesis testing**
- **Interpretation of data**
- **Basic statistical software awareness**

### **3. Research Methodology**

- **Research process & protocol writing**
- **Types of research**
- **Formulation of research question**
- **Objectives & hypothesis**
- **Sample size calculation**
- **Data collection methods**
- **Ethics in research**
- **Informed consent**
- **Ethics committee & ICMR guidelines**
- **Evidence-based medicine**
- **Systematic reviews & meta-analysis**
- **Scientific writing & publication ethics**

### **4. Preventive & Social Medicine**

- **Concepts of public health**
- **Primary Health Care**
- **Health indicators**
- **Social determinants of health**
- **Health promotion & education**
- **Nutrition & nutritional disorders**
- **Environment & health**
- **Water, sanitation & waste management**
- **Occupational health**
- **School health services**
- **Mental health**

### **5. Communicable Diseases**

- **Epidemiology, prevention & control of:**

- Tuberculosis
- Malaria
- Dengue
- HIV/AIDS
- Leprosy
- COVID-19 (basic public health principles)
- **National disease control programmes**
- **Immunization & cold chain**
- **Vaccine schedule (UIP)**

## **6. Non-Communicable Diseases**

- **Epidemiology of:**
  - Cardiovascular diseases
  - Diabetes
  - Hypertension
  - Cancer
  - Stroke
- **Risk factor approach**
- **Lifestyle modification**
- **Screening & early detection**

## **7. Maternal, Child & Adolescent Health**

- **Antenatal, intranatal & postnatal care**
- **IMNCI**
- **Maternal mortality & child mortality**
- **Family planning methods**
- **Reproductive & adolescent health**
- **National health programs related to MCH**

## **8. Health Systems & Health Management**

- **Health care delivery system in India**
- **Primary, secondary & tertiary care**

- **National Health Mission (NHM)**
- **Health planning & policies**
- **Health economics**
- **Health financing**
- **Health management & administration**
- **Hospital management basics**

#### **9. National Health Programs (India)**

- RMNCH+A
- NVBDCP
- NTEP
- NACP
- NPCDCS
- National Mental Health Programme
- Universal Immunization Programme
- Ayushman Bharat

#### **10. Health Legislation & Ethics**

- **Medical ethics**
- **Biomedical waste management**
- **Relevant health acts**
- **Public health laws**
- **Rights of patients**