

Swami Rama Himalayan University

Ph.D. Syllabus for Entrance Examination

Epidemiology

Unit-I-Design & Conduct of clinical and epidemiological studies

1. Descriptive Studies
 - 1.1 Types- Correlation studies
 - Case reports and case series
 - Cross sectional Surveys
 - 1.2 Time, place and person distribution
 - 1.2 Hypothesis formulation
2. Case Control Studies
 - 2.1 Design of case control studies
 - 2.2 Selection bias
 - 2.3 Matching
 - 2.4 Analysis
 - 2.5 Interpretation
3. Cohort Studies
 - 3.1 Study design
 - 3.2 Timing of measurements
 - 3.3 Selection of subjects
 - 3.4 Data collection
 - 3.5 Analysis
 - 3.6 Interpretation
4. Clinical studies (Design & Conduct)
 - 4.1 Research question
 - 4.2 Hypothesis
 - 4.3 Core design
 - a) Parallel
 - b) Cross over
 - c) Mixed
 - 4.4 Study participants
 - 4.5 Sample size calculation
 - 4.6 Statistical power
 - 4.7 Allocation
 - 4.8 Masking
 - 4.9 Treatment groups
 - 4.10 Ethical issues
 - 4.11 Data collection

- 4.12 Analyses
- 4.13 Interpretation

Unit-II-Chronic Disease Epidemiology

1. Chronic Disease: A Public Health Perspective
2. Epidemiology of Non Communicable Diseases
 - Cardiovascular Diseases including stroke
 - Cancers particularly in relation to India
 - Type II Diabetes

Unit-III – Ethical Issues Design, Conduct & Reporting of Medical Research

1. Gold standard
2. Ethical frameworks for conduct of clinical trial
 - Issues in clinical trial design
 - Informed consent
3. Four golden rules of ethical conduct in clinical research
 - Respect for patient autonomy
 - Maximization of research impact on medical treatment
 - Minimization of risk to research participants
 - Scientific integrity

Unit-IV- Public health surveillance system

- 1. Population health: assessment, indicators, and measures**
 - Introduction to public health surveillance
 - Population health information
 - Population health and community health assessment
 - Population health indicators
 - Disease surveillance at state and local level
 - Surveillance : The Sentinel Health Event Approach
- 2. Information systems**
 - Types of health information systems in India
 - Evaluating Public health surveillance system
- 3. Types of surveillance**
 - Chronic disease surveillance
 - Occupational and environmental surveillance

- Infectious disease surveillance
- Syndromic surveillance

Unit-V - Social Problems, Communication & Health Education

1. a) Social context of Medicine
 b) Concepts in Sociology
 c) Psychology - Emotions
 - Role of emotions in health & disease
 - Control of emotions
 - Learning - Conditions affecting learning
 Types of Learning
 - Personality - Components of Personality and I.Q.
 d) Family life of cycle
 - Family cycle & stress
 - Family in Health & Disease
2. **Cultural factors in Health & Disease**
 The Community
 a) Structure of Society
 b) Social class & Socio-economic status
 c) Social Problems of a Community
 d) Social Agencies
 e) Community Services
3. **Communication**
 a) The Communication Process
 b) Types of Communication
 c) Barriers of Communication
4. **Health Education**
 a) Definition
 b) Aims & objectives of Health Education
 c) Approaches, Models, Contents, Principles and Practices of Health Education