



**YENEPOYA**

(DEEMED TO BE UNIVERSITY)

Recognized under Sec 3(A) of the UGC Act 1956

Accredited by NAAC with 'A' Grade

## **YENEPOYA MEDICAL COLLEGE**

### **PROGRAM OUTCOMES AND COURSE OUTCOMES**

#### **UNDERGRADUATE PROGRAM**

#### **BACHELOR OF PUBLIC HEALTH**

**ATTESTED**

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**PROGRAM OUTCOMES**  
**UNDERGRADUATE PROGRAM**  
**BACHELOR OF PUBLIC HEALTH**

The program is designed for the learners to focus and acquire the knowledge and skills applicable to a career in Public Health, for catalyzing the “Health for all revolution” at the end of the BPH Program, students will be :

(K=Knowledge, S=Skill, A=Attitude)

- PO 1 Able to understand epidemiological principles and statistical techniques; (K)
- PO 2 Able apply these methods in the measurement and assessment of health and development needs of a community; (K,S)
- PO 3 Able to use concepts and principles associated with health and development problems; (K,S)
- PO 4 Able to plan, implement and evaluate health and development programme(K,S);
- PO 5 Able to understand the influences of social, cultural, biochemical and socio psychological factors on health and disease; (K,S,A)
- PO 6 Able to apply the principles of health promotion in health and development strategies; (K,S)
- PO 7 Able to professionally manage a health/development system.(S,A)

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**COURSE OUTCOMES**  
**UNDERGRADUATE PROGRAM**  
**BACHELOR OF PUBLIC HEALTH**

**Introduction to Public Health**

- CO 1 To introduce students to the field of public health.
- CO 2 To give an overview of the determinants and measures of health.
- CO 3 Status of health and disease: global and national

**Human Biology**

- CO1 To provide an understanding about the structure and function of the human body

**Demography**

- CO 1 To familiarize students on the fundamentals of population studies and its links with health, family planning, population policies and programmes.
- CO 2 To know the source and types of data.
- CO 3 To define the population trend by geographically.
- CO 4 To discuss the population policy.

**Basic Epidemiology**

- CO 1 To familiarize students on concepts and use of epidemiology, methods to measure and describe health of populations and risk measurement.
- CO 2 Competent to apply concepts and principles associated with health and disease in the prevention & control of disease.
- CO 3 Able to apply epidemiological principles.

**Principles of Nutrition**

- CO 1 Understand the role of nutrients in the body.
- CO 2 To enlist the public health nutrition problems.
- CO 3 To enumerate and discuss the national programs on nutrition.
- CO 4 To perform independent nutrition assessment.
- CO 5 Introduction: the relationship between nutrition, health and disease –  
Proximate principles
- CO 6 Digestion absorption, metabolism of carbohydrates, proteins and lipids

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- CO 7 Concept of nutrition in Indian Systems of Medicine
- CO 8 To understand the common nutritional disorders: physiological basis, measurement, Interventions.
- CO 9 Recommended dietary allowances -Nutrition throughout life cycle -Malnutrition and Chronic Energy Deficit -Micronutrient disorders
- CO 10 Maternal and child nutrition
- CO 11 Methods of promoting dietary change

### **Diagnostics of major public health problem in India :**

- CO 1 To demonstrate the diagnostic methods that are used for supporting disease control and environmental health activities and the underlying principles.
- CO 2 Students will learn and will be able to identify the diagnostic for communicable diseases.
- CO 3 To counsel the information about these diagnostics to the beneficiaries.
- CO 4 Diagnosis of tuberculosis – demonstration of diagnostic algorithm for detection of sputum positive and negative cases, laboratory demonstration of acid fast bacilli, culture and staining
- CO 5 Diagnosis of malaria--- thick and thin film preparation, identification of parasites
- CO 6 Study of entomological specimens
- CO 7 General bacteriological methods—gram staining and antibiotic susceptibility testing
- CO 8 Stool culture and selective and enrichment procedure for microorganisms
- CO 9 HIV/AIDS – CD4 counts, ELISA and Western blotting
- CO 10 Hematological methods
- CO 11 Water testing

### **Fundamental Biostatistics**

- CO 1 To introduce students to the use of bio-statistics in health sciences.
- CO 2 To apply biostatistics knowledge in public health project.
- CO 3 To understand the types and use of bio-statistics in epidemiology.
- CO 4 To document the data in SPSS software.
- CO 5 Levels of measurement
- CO 6 Measures of central tendency, Measures of variability, Skewness, Kurtosis
- CO 7 Probability and Binomial, Poisson, Normal and t Distribution
- CO 8 Sampling methods

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CO 9 Confidence Intervals for mean(s) & proportion(s) -Test of Significance

CO 10 Nonparametric tests

CO 11 Association and Causation -Correlation and regression -Analysis of Variance -

Multivariate analysis

CO 12 -Data entry, analysis, presentation -Training in statistical software SPSS

### **Research project :**

CO 1 To train students in all aspects of executing a research project.

CO 2 Report research findings in written and verbal forms

CO 3 To perform and report the data independently.

CO 4 To train students in execution of research projects through a small study

The course will include selection of a topic, selecting the research design, planning and implementation of the research project, analysis of the results and presentation of the work as a written dissertation.

CO 5 To impart training in the methodology of developing a research proposal

CO 6 Funding agencies and their submission requirements

### **Non-communicable diseases**

CO 1 To give an understanding of the patho-physiology of some common NCDs.

CO 2 To classify the major NCDs and their clinical manifestations, diagnosis and treatment.

CO 3 To understand the risk factors for common NCDs.

CO 4 To identify and counsel the methods of disease control and health promotion

CO 5 To give an understanding of the patho-physiology of some common mental health problems

CO 6 Overview and introduction to NCDs, Patho-physiology (including biochemical and genetic parameters), cardinal signs, clinical and diagnostic features (with special emphasis on biochemical parameters), treatment (please emphasize pharmacological component) prevention and control.

CO 7 Epidemiology of NCDs, risk factors, global profile and predictions prevention and control of NCDs.

CO 8 Health promotion strategies, methods and activities.

CO 9 Role, nature and practice of advocacy in health promotion practice

CO 10 Mental Health : Classification, biochemistry, clinical manifestations, diagnosis and treatment and intervention and support services

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- CO 11 Concept of Mental Health Burden of Mental diseases: Depression, Schizophrenia, Alzheimer's, Parkinson's, Senile dementia, Suicides Substance Abuse  
CO 12 National Mental Health Programme

## **Health Behaviour and Counseling**

- CO 1 Health education  
CO 2 . Definitions & theory of health education  
CO 3 Practice of health education  
CO 4 Role of health education in health  
CO 5 Effectiveness of health education & Health communication  
CO 6 Theories related to health communication  
CO 7 Practice of health communication  
CO 8 Role of health communication in health promotion practice Health counseling: theories and practice  
CO 9 Stigma and discrimination: Definitions, context and role of stigma and discrimination in health and disease

## **Public Health Internship**

- CO 1 To provide an understanding of day to day activities.  
CO 2 To understand the functions of professionals working in the public health system.

## **Social Epidemiology**

- CO 1- To orient students to theory and methods of social epidemiology.  
CO 2 To understand social synergies contributing to current health and health care issues.  
CO 3 Background and History of social epidemiology:  
CO 4 Issues: fundamental issues in / for social Epidemiology  
CO 5 Theories and constructs: fundamental to social epidemiology  
CO 6 Measurement: methods of social epidemiology  
CO 7 Design and Inferences:

## **Infectious diseases**

- CO 1 To understand the biology of microbes and the mechanism of colonization and disease causation.  
CO 2 To understand the disease pattern in developing countries.  
CO 3 To understand the emerging diseases and its preventing measures.

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- CO 4 Students will be able to put their critical review on national disease control programmes.
- CO 5 Structure of prokaryotic cell -Pathogenic modifications –Mechanisms of breaching host defenses -Mechanisms of production of disease
- CO 6 Anti-microbial agents, mode of action, drug resistance
- CO 7 To understand the pathology, pathogenesis, clinical manifestation, mode of transmission, prevention and control of diseases of bacterial and viral etiology
- CO 8 To orient students about the national disease control programmes,
- CO 9 Critical evaluation of various disease control programmes
- CO 10 To evaluate the impact of disease control programmes on epidemiology of the disease
- CO 11 General overview of infectious diseases and their impact in developing countries. Biology, pathogenesis and pathology, clinical presentation, of common infections.

### **Applied Research Methods:**

- CO 1 To introduce students to research methods.
- CO 2 To impart knowledge on ethics of research, including bioethics, ethical use of animals.
- CO 3 To understand the issues in getting ethical permission.
- CO 4 Overview of the philosophical foundations of the principles of medical ethics
- CO 5 Issues of patient and professional autonomy, beneficence and non-maleficence, CO6 confidentiality, informed consent, and distributive justice with applications to contemporary issues
- CO 6 Monitoring of ethical issues: ethics committees, institutional review boards, and community advisory boards.
- CO 7 To train students in community diagnosis
- CO 8 To train students in the method of analysis of data and report writing. The information from this course will be subsequently used for planning health interventions.
- CO 9 Sampling and survey methods and their application to public health research.
- CO 10 Survey design and planning, Interview schedule, questionnaire construction, Data collection, Data management, Data coding procedures
- CO 11 Qualitative research methods
- CO 12 Execution of a survey including –designing questionnaire, designing analysis tables, entry of data, analysis of collected data, evaluation of results, report writing, presentation of data.

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## **Environment health :**

- CO 1 Multidisciplinary nature of Environmental Studies
- CO 2 Concept of sustainability and sustainable development
- CO 3 What is an ecosystem? Structure and function of an ecosystem; Energy flow in the ecosystem; Food chains, food webs and ecological succession.
- CO 4 and resources and land use change; Land degradation, soil erosion and desertification.
- CO 5 Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.
- CO 6 Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state).
- CO7 Energy resources: Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

## **Basic Management of health service organizations and evaluation**

- CO 1 To familiarize students with the principles and techniques of management,
- CO 2 To familiarize students with the methods of management of health services at various levels, Methodologies for designing and conducting program evaluation and research in health care settings
- CO 3 A survey of management theories and principles
- CO 4 Essential management skills with an overview of management in health;
- CO 5 Health organizational behaviour
- CO 6 Strategic planning and operational management of organisations-Govt and Non-Govt;
- CO 7 Project design and management-emphasis on developing logical frameworks and action plan development
- CO 8 Proposal development and fund raising for health programs
- CO 9 Project cycle management-emphasis on operating and evaluation of projects
- CO 10 Health financing concepts including costing, budgeting and financial management.
- CO 11 To familiarize students with the methodology of establishing and running non-governmental organizations
- CO 12 Roles of NGOs in health development, historical background of voluntary activity in health in India.
- CO 13 Managerial challenges: strategic management and decision making, structures and



- systems (including monitoring and financial management),  
CO 14 Generation of financial resources  
CO 15 Interaction with public sector

### **Health Economics**

- CO 1 To impart knowledge on health care financing health economics including cost-benefit and cost-utility analysis  
CO 2 Health financing, budgeting and economics  
CO 3 Overview on Health financing in Developing countries  
CO 4 Health financing concepts such as cost and cost classification -Budget management issues such as  
CO5 Cost-effective analysis, Cost-benefit analysis and Cost-Utility analysis; -  
CO 6 Economic analysis reporting for projects should be covered here.

### **Analyzing Qualitative Data**

- CO 1 To orient students to various methods of analysis of qualitative data  
CO 2 Introduction to qualitative data analysis  
CO 3 Analytic approaches, methods, and techniques  
CO 4 Selecting appropriate qualitative data analysis technique  
CO 5 Presenting and interpreting qualitative analysis  
CO 6 Computer applications for qualitative analysis

### **Project management**

- CO 1 Introduction to Project Management  
CO 2 Project Planning  
CO 3 Feasibility of the project  
CO 4 Project Evaluation and Review techniques  
CO 5 Project Management Functions: Controlling, Directing, Project authority, Team building,  
CO6 Leadership, communications, Project review meetings, Management policies and procedures.  
1. Harold Kerzer, Project Management  
2. Vasanth Desai, Project Management and Entrepreneurship

## **Hospital hazards**

CO 1 To understand the hospital hazards.

CO 2 To differentiate the types of Hospital hazards.

CO 3 Hospital Hazards- Its impact on employees- Preventive measures - Hospital Hazards Management: Meaning – Need – Principles – Purpose.

CO 4 Control of Hospital Acquired infection

CO 5 Biomedical Waste Management: Meaning – Categories of biomedical wastes

CO 6 Disposal of biomedical waste products – Incineration and its importance

CO 7 Indian Medical Association – Government Rules and Schedules

CO 8 Standards for Waste autoclaving, micro waving and deep burial – Segregation – Packaging – Transportation – Storage.

CO 9 Human Waste Disposal and Sewage Disposal:

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