# Ordinance Governing Bachelor of Public Health (Honor) Syllabus / Curriculum 2018-19



# **KLE ACADEMY OF HIGHER EDUCATION AND**

# RESEARCH

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# SECTION – I

#### PREAMBLE

There is a dearth of core Public Health Professionals in the government health machinery. It is estimated that more than 10,000 Public Health Professionals would be required on an annual basis to equip the government machinery with an appropriately trained and qualified public health workforce. With a rapid health transition taking place, India faces two threats, one being the rising disease burden and the other is the poor allocation of government funds; both can be effectively managed by personnel trained in public health through appropriate public health training, i.e. ability to involve communities, work in multidisciplinary teams, and lobbying with government and community leaders with a deep understanding of social, economic and environmental determinants of health, Public Health Professionals are well armed to face these challenges.

#### Why Bachelor of Public Health (BPH)?

The most widely recognized professional credential for leadership in public health is the BPH degree. This program prepares candidates to be competitive on a National level in the vast area of community health. It emphasizes on acquisition of skills essential to the practice of public health through techniques like student-directed learning, problem solving and field postings. Public Health Professionals can function as health inspectors, health educators, counselors, social and behavioral scientists.

#### **SECTION – II**

#### VISION :

"To be a Premier Public Health Department for Quality Education, Research and Leadership.".

#### **MISSION**:

- Train and Create a Cadre for Public Health Leadership.
- Promote Positive Health Across the Population
- Ensure Collective Commitment to Quality Research

#### **OBJECTIVES:**

The program is designed to focus on the acquisition of knowledge and skills applicable to a career in Public Health, for catalyzing the "Health for all revolution". Upon completion of the programme, the undergraduate will be:

- Aware of the origin and evolution of the field of public health
- Able to use concepts and principles associated with health and development problems
- Able to understand epidemiological principles and statistical techniques
- Able to apply these methods in the measurement and assessment of needs of a community
- Able to plan, implement and evaluate health and development programme
- Able to apply the principles of health promotion in health and development strategies
- Able to conduct empirical studies, by formulation of a question of social relevance, collection of reliable and valid data, documentation of the findings, preparing project proposals and its management

#### **SECTION-III**

#### **Regulations Governing BPH Degree Semester Course**

#### **3.1. Eligibility for Admission:**

Candidate for admission to BPH course should have completed higher secondary level or Pre University College (10+2) in any stream with as basic courses or equivalent course established under law considered equivalent thereto by KAHER, a candidate who has scored a minimum of 45% marks.

#### 3.2. Proposed Intake of Candidates: 40

#### **3.3. Duration of the Course:**

BPH Honors : 4 Years.

#### Medium of Instruction and Examination shall be English

#### **3.4. Requirement to Complete the Course:**

BPH Honors : 4 Years.

Sem I	+	Sem II	+	Sem III	+	Sem IV	+	Sem V	+	Sem VI	+	Project Sem (VII+VIII)	=	BPH with Honor Degree
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#### 3.5. Training, Teaching and Learning Activities:

A candidate pursuing the course shall work in the Department as a full time candidate. No candidate shall join any other course of study or appear for any other examination conducted by this university or any other university in India or abroad during the period of study.

Every candidate shall take part in seminars, group discussions etc. Every candidate shall attend teaching and learning activities during each semester as prescribed by the Department and not absent himself /herself without valid reasons.

A list of teaching and learning activities designed to facilitate acquiring of essential knowledge and skills outlined is given below:

Books are the best teachers but experience makes man perfect. The proficient and lively theory classes shall be equally blended with various practical applications and group activities such as:

- 1. Assignment
- 2. Group Discussions
- 3. Role Plays
- 4. Workshops
- 5. Field Visit (Studies)

All these are aimed for the overall development of the emerging health workers, critical analysis and assessment of situations, creative thinking and proactive measures towards system management

Lectures: For all subjects lectures shall be conducted by the faculty.

**Field Visit** : PHC, Subcentre, Anganwadi, DHO office, KLE Hospital, Sewage treatment plant, Water purification plant, milk dairy, HLL Industry, Campbell factory, Pollution Control Board, CDPO office, IDSP, and other institutions of Public Health importance.

## 3.6. Attendance and Monitoring Progress:

#### 3.6.1 Attendance:

3.6.1.1 A candidate pursuing BPH Course shall study for the entire period as full time candidate. No candidate shall join any other course of study or appear for any other examination conducted by this University or any other University in India or abroad during the period of registration.

3.6.1.2 Each semester shall be considered as a unit for the purpose of calculating attendance.

3.6.1.3 Every candidate shall attend symposia, seminars, conferences, project review meetings and lectures during each year as prescribed by the Department/College/University and not absent himself / herself without valid reasons.

3.6.1.4 Candidate who has put in a minimum of 75% of attendance in the theory and practical assignments separately shall be permitted to appear for University examination at the end of each semester. They should also complete Internship (mini project) report submission.

3.6.1.5 In BPH Honor, candidate will be declared pass only after **Project report** is completed and submitted.

3.6.1.6 Any candidate who fails to complete the course in the manner stated above will not be eligible for university Degree.

# **3.6.2 Monitoring Progress of Studies**

3.6.2.1 *Log Book:* Every candidate shall maintain a log diary and record his/her participation in the training programs conducted by the Department such as workshop, field visits etc. Special

mention shall be made of the scientific presentations in conference by the candidate as well as details of assessment works like essay writing, etc. submitted by the candidate. The work diary shall be scrutinized and certified by the Head of the Department

3.6.2.2 *Sessional Examination:* Records and marks obtained in sessional test shall be maintained by the Head of the Department and sent to the University, when called for.

3.6.2.3 *Records:* Records and marks obtained in sessional tests, field activities and weekly written assignments which shall be maintained by the Head of the Department and shall be made available to the University.

#### 3.7. Mini Project:

Every candidate shall undergo field training for a period of two months in sixth semester in which they will do mini project and submit the report duly signed by the Head of the Department.

#### **3.7.1 Project for BPH (Honors)**

Every candidate shall undergo field training for a period of one year in semester VII & VIII.

Candidate should maintain a daily logbook in which day to day activities of the project will be noted. On completion of the project a report of the same should be submitted duly signed by the Head of the Department and the supervisor under whose guidance the project has been carried out.

#### 3.8 Schedule of Examination

There shall be a University examination at the end of each semester for all six semesters at the end of semester II (subjects of semester I & II ), semester IV (subjects of semester III &IV) & Semester VI (subjects of semester V & VI). There shall be Project Report presentation at the end of semester VIII (BPH Honor).

#### 3.9. Scheme of Examination

#### **3.9.1 Sessional Examination**

There shall be a minimum of two sessional examinations in each subject conducted by the Department at midterms and before term end in theory.

The sessional marks shall be awarded out of a maximum of 80 for theory and shall be calculated out of 20 marks.

#### Theory

Written examination The total marks obtained have to be calculated out of 10.	80 marks
Reports of field visits	10 marks
Models/Essay writing/Project work	10 marks
Camps/ Group activities	10 marks
Assignments	10 marks

The total marks obtained have to be calculated out of 10.

#### A cumulative total will be calculated out of 20 as "Internal Assessment" (IA) marks

#### **3.9.2** University Examinations

#### 3.2.2.1 Theory:

There shall be six University examinations for the entire course namely I, II, III, IV, V, VI semester examination. The examination will be conducted at the end of each semester. There shall be four core subjects in first and Second semester and three core theory papers for all other semesters. All core subjects will have University exam. Each theory paper shall be of 3 hours duration carrying 80 marks each. There will elective subject from semester III till Semester VI and have college examination.

Question	Number of Questions	Marks	Maximum Marks	Total Marks
Long Essay Questions	2	10	20	
Short Essay Questions	8	5	40	80
Short Answer	10	2	20	
Questions				

#### SCHEME OF EXAMINATION FOR THEORY

Paper No.	Paper	Max. Sessional marks	Max. University marks	Total maximum marks	Minimum Marks to pass
BPH-I-1 T	Human Biology I	20	80(60+20)	100	50
BPH-I-2 T	Basics of Health, Diseases	20	80	100	50
BPH-I-3 T	Fundamentals of Demography, Sociology and Behavioral health	20	80(50+30)	100	50
BPH-I-4 T	Introduction to Health Care Delivery System	20	80	100	50

# (A) BPH Semester I Theory:

# (B) BPH Semester II Theory:

Paper No.	Paper	Max. Sessional marks	Max. University marks	Total maximum marks	Minimum marks to pass
BPH-II-1 T	Human Biology II	20	80	100	50
BPH-II-2 T	Fundamentals of Environmental Studies	20	80	100	50
BPH-II-3 T	Introduction to Communicable & Non Communicable diseases	20	80	100	50
BPH-II-4 T	Fundamentals of Data Processing and Analysis – Basic Bio Statistics	20	80	100	50

# (C) BPH Semester III Theory:

Paper No.	Paper	Max. Sessional marks	Max. University marks	Total maximum marks	Minimum marks to Pass
BPH-III-1 T	Introduction to Public Health Nutrition	20	80	100	50
BPH-III-2 T	Fundamentals of Health Education and Communication	20	80	100	50
BPH-III-3 T	Rural, Urban & Tribal Health	20	80	100	50
BPH-III- E T	Elective(s) NSS	20	80	100	50

Paper No.	Paper	Max. Sessional marks	Max. University marks	Total maximum marks	Minimum marks to Pass
BPH-IV-1 T	Health of Child, Adolescent and Ageing of Population	20	80	100	50
BPH-IV-2 T	Basics of Health Informatics and Health Economics	20	80	100	50
BPH-IV-3 T	Disaster & Emergency Management	20	80	100	50
BPH-IV- E T	Elective(s) NSS	20	80	100	50

# (D) BPH Semester IV Theory

# (E) BPH Semester V Theory:

Paper No.	Paper	Max. Sessional marks	Max. University marks	Total maximum marks	Minimum marks to Pass
BPH-V-1 T	National Health Programs & Health laws	20	80	100	50
BPH-V-2 T	Introduction to Organizational Development, Medical Entomology & Occupational Health	20	80	100	50
BPH-V-3 T	Basics of Health Planning & Management	20	80	100	50
BPH-V- E T	Elective(s) NSS	20	80	100	50
BPH-V- E T	Elective(s) Indian Constitution	20	80	100	50

# (F) BPH Semester VI Theory

Paper No.	Paper	Max. Sessional marks	Max. University marks	Total maximum marks	Minimum marks to Pass
BPH-VI-1 T	Preventive Obstetrics and Family Planning	20	80	100	50
BPH-VI-2 T	Public Leadership and Managing Health Organizations Quality and Safety in Healthcare	20	80	100	50
BPH-VI- E T	Elective(s) NSS	20	80	100	50

# (G) BPH Semester VII Theory:

Paper No.	Paper	Max. Sessional marks	Max. University marks	Total maximum marks	Minimum marks to Pass
BPH-VII-1 T	Research Methodology & Bio-ethics	20	80	100	50
* BPH-VII-2 E	Monitoring and Evaluation in Public Health	20	80	100	50

(\*College level exam will be conducted)

## (H) BPH Semester VIII Theory

Paper No.	Paper	Total maximum marks
BPH-VIII-1 P	Project work	Accepted

#### 3.11. Criteria for Declaring Pass

3.11.1 A candidate shall be declared to have passed BPH if all the conditions below are fulfilled:

#### **BPH-Semester I**:

 Candidate who secures Grade B or above in each subject in theory of University & Sessional examinations considered together.

#### **BPH** -Semester II

- Candidate who secures Grade B or above in each subject in theory of University & Sessional examinations considered together
- Candidate shall further obtain Grade B

#### **BPH** -Semester III

 Candidate who secures Grade B or above in each subject in theory of University & Sessional examinations considered together

#### **BPH** -Semester IV

- Candidate who secures Grade B or above in each subject in theory University & Sessional examinations considered together
- Candidate shall further obtain Grade B

#### **BPH** -Semester V

- Candidate who secures Grade B or above in each subject in theory University & Sessional examinations considered together
- Candidate shall further obtain Grade B

#### **BPH** -Semester VI

- Candidate who secures Grade B or above in each subject in theory University & Sessional examinations considered together.
- Candidate shall further obtain Grade B

#### **BPH** -Semester VII

- Candidate who secures Grade B or above in each subject in theory University & Sessional examinations considered together.
- Candidate shall further obtain Grade B

#### **BPH-** Semester VIII

Candidate has to submit the project report and should obtain minimum grade B to declare pass.

#### 3.11.2 Carry over:

At any given point of time a candidate shall have subjects pending to clear of only previous semester in addition to the subjects of the current semester that he is appearing for. e.g:

- If the candidate has not passed semester I, he/she can appear for semester II and pending subjects of semester I simultaneously.
- Appearing for semester III he/she should have passed semester I and can appear for papers pending from semester II along with semester III subjects.
- Appearing for semester IV he/she should have passed semester II completely and can appear pending papers of semester III simultaneously.
- Appearing for semester V he/she should have passed semester III completely and can appear pending papers of semester IV simultaneously.
- Appearing for semester VI he/she should have passed semester IV completely and can appear pending papers of semester V simultaneously.
- Appearing for semester VII he/she should have passed semester V completely and can appear pending papers of semester VI simultaneously.
- Appearing for semester VIII he/she should have passed semester VI completely and can appear pending papers of semester VII simultaneously.

# Cumulative Grade Point Average (CGPA)

Letter Grades and Grade Points equivalent to percentage of marks and performances 10 Point Grade Scale

Percentage of marks obtained	Letter Grade	Grade Point	Performance
90.00 - 100	0	10	Outstanding
80.00 -89.99	A+	9	Excellent
70.00-79.99	А	8	Good
60.00-69.99	B+	7	Fair
50.00-59.99	В	6	Average
Less than 50	F	0	Fail
Absent	AB	0	Fail

#### 1. <u>Conversion of Grades in to GPA:</u>

**GPA=** Credits x Grade Points / Total Credits

2. Cumulative Grade Point Average (CGPA) of all 4 Semester will be calculated as:

Total No. GPA / No. of Semester

#### SECTION-IV COURSE CONTENT

#### 4.1 SEMESTER I

S. No.	Core Subjects	Credits
BPH-I-1 T	Human Biology I	4
BPH-I-2 T	Basics of Health & Diseases	4
BPH-I-3 T	Fundamentals of Demography, Sociology and Behavioral health	4
BPH- I-4 T	Introduction to Health Care Delivery System	3
TOTAL: 15		

#### Theory

# BPH I-1 Human Biology I (Anatomy, Physiology and Biochemistry) Anatomy and Physiology

- 1. **General Introduction**: Definition of anatomical terminologies such as Anterior, Posterior, Superior, Inferior, Proximal, Distal, Extension, Flexion, Abduction, Circumduction, Sagittal, Coronal, Palmar, Dorsal and Ventral.
- Components of human cell, tissue, organ and their functions An Introduction to the Human Body Overview of structural organization of Human body. Functions of Human Life

## 3. Organ Systems

#### A. Musculo Skeletal

- Overview of Muscle Tissues.
- Skeletal Muscle Types of Muscle Fibers Bone Tissue.
- The Functions of the Skeletal System .
- Bone Classification & Bone Structure
- Different types of joints and their functions and characteristic.

#### **B.** Blood (Hematology)

- Composition and functions of blood
- Haemopoiesis & production of RBCs & functions
- White Blood cells: types & functions
- Platelet: count & functions
- Disorders of blood components (Anemia, Leukocytosis/ Leukemia)
- Hemoglobin: Introduction, functions, NAD value & significance.

# C. Cardio vascular diseases:

- Physiology & Anatomy of Heart, CVS,
- Pulmonary v/s systemic circulation
- Functions of CVS.
- Cardiac Cycle, ECG

# D. The Respiratory System

- Anatomy of Organs and Structures of the Respiratory System
- Lungs & its functions, Process of Breathing. Surfactant functions, Transport of gases, Physio clinical aspects: Dyspnea, Apnea, Hypoxia

#### E. The Digestive System

- Overview of the Digestive System
- Digestive System Processes and Regulation .
- The Mouth, Pharynx, and Esophagus
- Stomach, Small and Large Intestines
- Accessory Organs in Digestion: The Liver, Pancreas, and Gallbladder.

## F. The Urinary System

- Gross Anatomy of the Kidney.
- Functions of kidney, ureter, urinary bladder and urethra.
- Physical Characteristics of Urine.

## G. Central Nervous system

- Different components of nervous system. Identification of different parts of the brain and coverings. Extent and covering of spinal cord.
- Function of the Nervous System.

## H. The Lymphatic and Immune System

- Anatomy of the Lymphatic and Immune Systems
- Parts of Lymphatic System, Axillary group of lymph nodes, Inguinal group of lymph nodes,
- Barrier Defenses and the Innate Immune Response

## I. The Reproductive System

- Anatomy and Physiology of the Male Reproductive System
- Anatomy and Physiology of the Female Reproductive System

#### J. Endocrine System

• Enumeration of different endocrine glands, their position, secretions, and their functions.

# **Biochemistry:**

- Introduction and application of Biochemistry in public health.
- Carbohydrates (Definition, Classification, Physical and Chemical Properties) Glucose absorption and its homeostasis
- Proteins (Definition, Classification, Physical and Chemical Properties) Amino-acids (Definition, Classification and Biomedical Importance)
- Fatty acids (Definition, Nomenclature and Biomedical Importance)
- Definition, nomenclature and biomedical importance of lipid.
- Important aspects of essential amino acids and fatty acids.
- Water (Types, Properties and Ionization) including the concept of pH.

# BPH I -2

# **Basics of Health & Diseases**

- Concept of health and being healthy.
- Scope of public health: Preventive health and levels of prevention
- Differentiate between public health, community health, community medicine and clinical medicine
- Dimensions of Health, Positive health, Quality of life index (PQLI, HDI)
- Spectrum and determinants of health and disease
- Indicators of Health
- Concept of Disease
- Measurements of Burden of disease : (DALY, HALE, QALY)

- Definition and concept of Epidemiology, Historical development of Epidemiology
- Aims, scope, purpose, branch and use of Epidemiology
- Mode of transmission of diseases, relationship between epidemiology and public health.
- Natural history and progress of the disease : Epidemiological triad
- International Classification of Diseases (ICD)
- Distribution of disease characteristics according to; Time, Place and Person
- Concepts of disease prevention & control
- Measurements and calculation in epidemiology : (definitions) Counts, rates, ratio, proportions, incidence, prevalence (point and period), odds ratio, relative risk, cumulative incidence, incidence density, attributable risk, secondary attack,

• Definition and types of errors, bias and chance, type of bias & Confounding

# BPH I - 3

# Fundamentals of Demography, Sociology and Behavioral Health Demography:

- Introduction, and Importance of population health studies and medical demography in public health
- Sources of population data and importance of population census, vital registration system, sample surveys, health institution data. Demographic Health Surveys in India
- Population Structure, Characteristics and Components
- Population pyramid, types of population pyramid, and comparison of population pyramid between developing and developed countries
- Importance of age and sex structure
- Definitions: literacy rate, sex ratio and dependency ratio
- Demography cycle, Trend, Fertility.
- Eligible couple, Population policy, Community Needs Assessment Approach

# Behavioral Health

- Concept, definition of human behaviour and change process
- Factors affecting human behaviour
- Effects of human behaviour: cognitive, affective and psychomotor domain
- Role of human behaviour for prevention of diseases
- Motivation: definition, Maslow's Concept of human motivation, including hierarchy of needs, motivation
- Adoption of innovations (Diffusion of Innovations theory).

# Sociology

- Concepts in sociology : society, community
- Social structure, social institutions Socialization, social control, customs, norms, culture, acculturation, Standard of living, Dynamics of social change, social stress, social problems, social survey: case study & field study, social defense. Family, family cycle, Types & functions of Family, role of family in Health & Diseases,
  - Social Class SE status, social problems & Community services, Social Security

# **BPH I – 4**

# Introduction to Health Care Delivery System.

- Introduction to Public Health
  - Evolution of Public Health
  - Ancient India and Public Health
  - Founders of Modern Public Health
- Changing concepts of Health Care

- Comprehensive Health Care
- Basic Health Care
- Primary Health Care
- Levels of Health Care
  - Primary Health Care Village, subcentre & Primary Health Centre
  - Secondary Health Care community health centre & district hospitals
  - Tertiary Health Care teaching hospitals / superspeciality hospitals
  - Function, Staffing pattern with job responsibilities of each staff at each of the above levels
- Health Administration in India:
  - Central Level,
  - State level,
  - District Level Role of Panchayat Raj Institutions in health care Delivery system .
- Health for all- Millennium Development Goals & Sustainable Development Goals
- Voluntary & International Health Agencies: (WHO, UNICEF, UNDP, CARE, DANIDA, Red Cross & FAO)
- Voluntary Health Agencies of India
- Three tier system of health care: Sub centre, Primary Health Centre, Community Health Centre

#### 4.2 SEMESTER II

S. No.	Core Subjects	Credit
BPH-II-1 T	Human Biology II	4
BPH-II-2 T	Fundamentals of Environmental Studies	4
BPH-II-3 T	Introduction to Communicable & Non Communicable diseases	4
BPH-II-4 T	Fundamentals of Data Processing and Analysis – Basic Bio Statistics	3
	TOTAL	: 15

#### THEORY

#### BPH II -1

# Human Biology II Pathology & Microbiology (Parasitology, bacteriology Virology)

#### **General pathology:**

- Introduction: Basic Terminologies in Pathology
- General Concepts of Cell injury Tissue Injury
- Inflammation: Definition & types:- acute, chronic (definition of: Necrosis, Thrombosis, Embolism, Wound Healing, Shock, Oedema, Neoplasia)
- Hypersensitivity reaction in relation to Infectious Diseases
  - Diseases Caused by Bacteria(Gross & microscopy)
  - TB (Tuberculosis)
  - Leprosy
  - Typhoid
  - Viral (pathogenesis) Polio, Rabies, Measles, Dengue, HIV in detail
- Neoplasms
  - Definition benign/malignant
  - General differences
- CVS pathogenesis of MI, IHD.
  - Hypertension, atherosclerosis
- The Respiratory System
  - COPD causes, types & prevention.
- Renal renal failure definition and causes.
- Reproductive system causes of infertility

# **Microbiology:**

- Introduction to microbiology
- Definition scope and history of microbiology
- Morphology and physiology of bacteria, virus, fungus, and parasites.
- Classification of microbial diseases.
- Introduction to community acquired microbial infection.
- Classification of parasites, viral, bacterial diseases of public health.
- Types of Immunity
- Defense mechanism of body.
- Antigen, antibody and antigen antibody reaction

# Practical:

- Use of microscope
- Demonstration of infectious agents and parasites as relevant locally
- Methods of field investigations
- Specimen collection stool, urine, blood, sputum, etc.
- Stool examinations for ova/cysts,
- Blood smear collection, staining and examination
- Staining methods Grams, ZN

# **BPH II - 2**

# **Fundamentals of Environmental Health**

# **Unit 1: The Multidisciplinary Nature of Environmental Studies**

Definition, scope and importance, need for public awareness, institutions in environment, people in environment

# Unit 2: Natural Resources:

• Introduction to renewable and non-renewable resources with examples, Renewable and non-renewable energy sources and limitations.

# Unit 3: Ecosystems

- Concept of an ecosystem, Structure and functions of an ecosystem
- Producers, consumers and decomposers, Energy flow in the ecosystem
- Ecological Succession: Food chains, food webs and ecological pyramids.
- Introduction, types, characteristic features, structure and functions of forest ecosystem, grassland ecosystem, desert ecosystem, aquatic ecosystems (ponds, lakes, streams, rivers, estuaries, oceans).

# Unit 4: Biodiversity and its Conservation

- Introduction definition: genetic diversity, species diversity, ecosystem diversity.
- Value of biodiversity: commonly used modern drugs derived from plant resources.
- India as a mega diversity nation, hotspots of biodiversity, threats to biodiversity: Deforestation & habitat loss, Climate change, Over exploitation (poaching of wildlife, man-wildlife conflicts), Invasive species and Pollution, Endangered and endemic species of India, Conservation of biodiversity: in-situ conservation & ex-situ conservation

# **Unit 5: Environmental Pollution**

- Definition, general causes for environmental pollution causes, types of pollution-based on environment segment affected, based on pollutant.
- Air pollution: air pollutants and their sources, effect of air pollutants on human health, ambient air quality, other effects of air pollution-smog & photochemical smog and their effect on health, global warming & climate change effects, acid rain, ozone layer depletion and effects, control of air pollution.
- Water pollution: Terrestrial water pollution-water pollutants and their sources, water pollution and public health, other effects of water pollution-eutrophication, causes & effects, control of water pollution, sewage treatment. Ground water pollution-causes,

sources, effects on health and control measures. Marine water pollution-causes, effects and control measures.

- Land/soil pollution: causes, effects and control measures
- Noise pollution: causes, effects and control measures
- Solid waste management: causes, effects and control measures of urban and industrial waste, role of local bodies and individuals in management of urban solid waste.
- An introduction to disaster management: floods, earthquakes, cyclones, landslides. Epidemics after floods & cyclones and their control measures.

# **Unit 6: Social Issues and the Environment**:

- From unsustainable to sustainable development, urban problems related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns.
- Environmental ethics: issues and possible solutions.
- Environment Acts: Air (prevention and control of pollution) act, 1974; Water (prevention and control of pollution) act, 1981; Environment protection act, 1986 and various rules under it, Wildlife protection act and Fforest conservation act.
- Issues involved in enforcement of environmental legislation. Environment impact assessment (EIA), citizen's actions and action groups, public awareness using an environmental calendar of activities.

# **Unit 7: Human Population and the Environment**

- Population growth, variation among nations, global population growth,
- Environmental and human health, environmental health, climate and health, infectious diseases, water-related diseases, risks due to chemicals in food, cancer and environment.
- Human rights, equity, nutrition, health and human rights, intellectual property rights.
- HIV/AIDS, Women and child welfare
- Role of information technology in environment and human health

# Unit 8: Field Work

- Visit to a local area to document environmental assets: river/forest/grasslands/hill/mountain
- Study of common plants, insects, birds
- Study of simple ecosystems
- Visit to a local polluted sites-water bodies, solid waste dump sites
- Visit to air quality monitoring station of regional PCB

- Visit to sewage treatment plant
- Visit to Biomedical waste management plant
- Visit to Municipal Solid waste management unit

# BPH II- 3

# Introduction to Communicable and Non-Communicable Diseases

- Introduction to terminologies related to health and disease.
- Classification of diseases.
- Disease burden, transmission and cycle.
- Communicable diseases: (Etiological factors signs and symptoms, control and prevention)
  - Acute diarrheal diseases,
  - Cholera,
  - Typhoid fever (Enteric fever),
  - HIV/AIDS,
  - Leprosy,
  - Malaria,
  - Filaria,
  - Dengue,
  - Japanese Encephalitis
  - Epidemiology and control of vaccine preventable diseases:
  - Tuberculosis,
  - Diphtheria,
  - Whooping Cough,
  - Measles,
  - Tetanus,
  - Poliomyelitis
  - Hepatitis -B
- Non-infectious diseases: (Etiological factors signs and symptoms, control and prevention)
- Cardiovascular Diseases:
  - Rheumatic Heart Disease,
  - Coronary artery disease,
  - Hypertension
- Diabetes,
- Obesity,
- Blindness
- Accidents.

# BPH II -4

# Fundamentals of Data Processing and Analysis – Basic Bio Statistics

- Definition of statistics and bio-statistics and its types, scope, function, limitations and characteristics.
- Uses and application of bio-statistics in public health research and medical sciences.
- Descriptive Statistics: Basic concept of variables, types of variables (discrete and continuous variables), scales of measurement
- Data Collection:
  - Collection and recording of statistical information on public health and its related

fields from primary and secondary sources

- Presentation of statistical data. Classification and Tabulation of data: frequency distribution and different types of tables (one way, two way and manifold tables).
- Diagrammatic and graphic presentation: Bar diagram (simple, multiple, subdivided), pie chart, map diagram, pictogram histogram, frequency polygon, frequency curve, cumulative frequency curve, line chart, scatter diagram, stem- and-leaf plots, whiskers box-plot.
- Measures of Central Tendency: Mean, Median & Mode and identify the ideal averages, requisites and its merits and demerits.
- Analysis of outliers: different partition values (quartiles, deciles & percentiles) and its uses.
- Measures of dispersion (variability). Range, quartile deviation, mean deviation, standard deviation, variance and coefficient of variation and identify the ideal dispersion, requisites and its merits and demerits. Measures of skewness and kurtosis.
- Basic Probability : Concept of set theory, factorial, permutations, combinations, Concept of probability, its terminology and different types of definition Laws of probability: addition law, multiplication law and conditional probability

#### **4.3 SEMESTER III**

S. No.	Core Subject	Credit
BPH-III-1 T	Public Health Nutrition	4
BPH-III-2 T	Fundamentals of Health Education	5
BPH-III-3 T	Rural, Urban & Tribal Health	4
BPH-III- E	NSS	2
	TOTAL :	15

#### THEORY

#### **BPH-III-1 Public Health Nutrition** Introduction to food and nutrition

- Concept and importance of food and nutrition
- Nutrition as a public health science
- Classification and composition of food
- Nutritive value of food
- Food pyramid
- Macronutrients and its functions
- Micronutrients and its functions

## Nutrition across the human life cycle

- Nutrition requirement of infant, pre-school children, school children, pregnant and breastfeeding women, adolescents, adults and old aged
- Recommended dietary allowances,
- Infection-malnutrition cycle
- Weaning, supplementary and complementary feeding practices

# Nutrition deficiency disorders, diseases and prevention

- Protein energy malnutrition (PEM)
- Iron deficiency disorder
- Iodine deficiency disorders
- Vitamin A deficiency

## **Food Sanitation**

- Food fortification, adulteration its causes and health effects
- FSSAI
- Basics of food borne diseases classification, burden, prevention & control.
- Importance of milk and milk products.
- Milk borne diseases prevention & control.
- Milk Hygiene, Pasteurization
- Meat hygiene

# Nutritional programs in India:

- Mid-day Meal program
- Integrated Child Development Services (ICDS)
- Rashtriya Poshan Abhiyan (National Nutrition Mission)

#### **BPH-III- 2 Fundamentals of Health Education & Communication** Introduction to Health Education and health promotion

- Concepts, definition, objectives and strategies of health promotions.
- Aims, purposes, principles and scope of health education in relation to health promotion.
  - Role of health Education Specialists.
  - various approaches in Health education:
  - Behavioral change approach (HBM)
  - Child to Child approach
  - Distinguishing between education and propaganda.
  - Role of health education/health promotion in primary health care/and health development in the concept of health promotion in 21st century.

# Theories and modalities for behavior change

Meaning, elements and types of communication, principles of effective communication,

Mass Communication.

## Health Education Methods and Media

#### • Appraisal of various methods of health education such as:

- Individual methods: Counseling interview.
- Group methods: Demonstration, group discussion, buzzes session, field trip, workshop, symposium, mini-lecture, brainstorming, interview forum, role play.
- Mass methods: Exhibition, advertisement, film show public addressing system, Speeches, miking, radio broadcasting, and television telecast.
- Various types of health education media, its advantages and disadvantages
  - Audio- radio programme, songs, stories
  - Visual poster, flash cards, flip chart, hand puppets, hand bill, pamphlets, slides show film, strip, hoardings, banners, model
  - Audio and visual film, video, television, internet (YouTube).
- Preparation and use of selected health education media in classroom and field setting: poster, flashcard, flip chart, hand puppets, models, handbills, pamphlet, slide song video film.
- Preparation of lesson plan, and classroom teaching

# BPH-III- 3

# Rural, Urban & Tribal health

# **Rural Health**

- Urban/rural contrasts in morbidity & mortality.
- Disabilities in rural adults
- Rural mortality patterns
- Rural environmental health and industrial agriculture
- Adolescents and their risky behaviors in rural area
- Health issues in rural areas
- Funding health services in rural areas
- Rural health disparities

# Urban Health

- Urbanization
- Health problems of urbanization / migration
- Health services in urban areas / slums
- Urban rural equity issues

# Tribal Health

- Tribes in India: Definition, Characteristics and Geographical Distribution in India
- Racial, Cultural and Economic Classification of Tribes in India
- Tribal Culture and the Various forms of Tribal Social Institutions:
  - Marriage,
  - Kinship,
  - Clan,
  - Youth Dormitory,
  - Status and Role of Women in Tribal Society
- Socio-economic Profile and Development of Tribes
- Tribal Development Programmes in National Perspective and Appraisal of Different Development Programmes
- Tribal Administration: Central, State, District, Project Level & its functioning.

## **BPH-III--E NSS I**

#### **UNIT 1: Introduction and Basic Concepts of NSS**

- History, philosophy, aims & objectives
- Emblem, flag, motto, song, badge
- Organizational structure, roles & responsibilities of various NSS functionaries

#### **UNIT 2: NSS Programmes and Activities**

- Concept of regular activities, special camping, day camps
- Basis of adoption of village/slums, methodology of conducting survey
- Financial pattern of the scheme
- Other young programmes/schemes of GoI
- Coordination with different agencies
- Maintenance of the diary

#### **UNIT 3: Understanding Youth**

- Definition, profiles, categories of youth
- Issues, challenges and opportunities of youth
- Youth as an agent of social change

#### UNIT 4: Health, Hygiene & Sanitation

- Definition, needs and scope of health education
- Food and nutrition
- Safe drinking water, water borne diseases and sanitation (SBA)
- National Health Programme
- Reproductive Health

#### **UNIT 5: Volunteerism and Shramdaan**

- Indian Tradition of volunteerism
- Needs & importance of volunteerism
- Motivation and constraints of volunteerism
- Shramdaan as part of volunteerism

#### 4.4 SEMESTER IV

S. No.	Core Subject	Credit
BPH-IV-1 T	Health of Child, Adolescent and Ageing of population	5
BPH-IV-2 T	Basics of health informatics & economics	4
BPH-IV-3 T	Disaster and Emergency management	4
BPH-IV- E	NSS	2
	TOTAL :	15

# **BPH-IV-1** Health of Child, Adolescent and Ageing of population Child Health

• Define children, overview of child health status, indicators of child health

- Major causes of infants and child morbidity and mortality in India
- Socio-economic, educational and cultural factors affecting child rearing practices and child health care activities in India.
- Components of child health care –GOBI-FFF campaign by WHO/UNICEF
- Baby friendly hospitals, breast feeding, and complementary feeding IYCF guidelines.
- Community based management of child health
- IMNCI, ICDS
- UN convention on the Rights of Child
- Social aspects of Child Health & Development
- Introduction of child abuse, child prostitution, child trafficking, street children, child labour, child protection and child rights and child laws.
- Rehabilitation community based rehabilitation.
- Physical, sexual, drug and alcohol abuse ,children in difficult circumstances, Substance abuse and social crime.
- Mental health
- Adolescent and special children.
- Legislation related to child health

#### Child Health Care

- Principles of new born care
- Low birth weight babies
- Care of Under Five Children
- School Health Services
- Universal immunization program

#### **Adolescent Health**

- Definition, phase in life, classification
- Social and emotional development aspects
- Problems, social issues, programmes, prevention of teenage marriage and pregnancy

#### Sexual Health

- Physiological and pathological
- Sexual behavior
- Early pregnancy and early marriage
- Sex education
- Adolescent reproductive & sexual health program

#### Ageing of population

- Introduction to geriatrics and aging population
- Demography and Epidemiology of aging
- Theories of aging
- Biological (physiological changes of aging)
- Major diseases of aging classification
  - Hypertension
  - Diabetes
  - Joint disorders
  - Cataract
  - Neurological disorders (NCDs)
- Aging and Disability
- Services available old age friendly services
- Mental disorders of older persons

- Social security in old age
- NPCDCS program & National Program for Health Care of Elderly (NDHCE)

## **BPH-IV- 2 Basics of Health Informatics and Health Economics Public Health Informatics**

- Concept, definition and application of HIS
  - Objectives of HIS
  - Sources of HIS
  - Two way flow of information
  - Reporting from health facilities, district, region to central level
  - Maintenance and use of health information system.
  - Internet and world wide web role of information technology
  - Data, information, knowledge & wisdom
  - Privacy, confidentiality and security of public health information
  - Data standards in public health informatics

#### **Health Economics**

- Concept of Health Economics
  - Meaning, scope of health economics
  - Principles of health economics
  - Role of health economics in health policy and planning
  - Factors effecting health and development
  - Macro -economics and health and clinical economics
  - G.D.P. and G.N.P. poverty line APL/BPL
  - Total health care expenditure
  - Out of pocket payment
  - Contribution of government and external development partners

#### Demand and Supply of Health Care

• Concept of demand and supply; determinants; law of demand; law of supply; price mechanism

#### Health Care Costs

• Concept of different types of costs in health care;

#### **Economic Evaluation**

- Definition, importance, process and constraints of economic evaluation
- Cost effectiveness analysis
- Cost minimization analysis
- Cost benefit analysis
- Cost utility analysis

#### **BPH-IV- 3 Disaster & Emergency Management** Introduction to Disaster management

- Disaster definition, types of disaster
- Disasters in history
- Disaster trends
- Modern disaster management disaster cycle

#### Hazards

- Hazards identification and profiling
- Hazard analysis & mapping

Risk

- Risk and vulnerability
- Components of risk
- Risk perception and evaluation

#### Mitigation

- Types of mitigation
- Obstacles
- Assessing and selecting mitigation options
- Emergency response and risk mitigation

## Preparedness

- Overview of disaster preparedness
- Government preparedness
- Public preparedness
- Media management in disaster
- Obstacles

## Response

- What is response
- Response to emergency
- Water management / food / shelter management
- Media response

## Recovery

• Types of recovery

# Agencies

- Role of government in disaster management
- Introduction to emergency planning

# **BPH-IV-E NSS II**

# UNIT 1: Importance and Role of Youth leadership

- Meaning and types of leadership
- Qualities of good leaders; traits of leadership
- Importance and role of youth leadership

# **UNIT 2: Life Competencies**

- Definition and importance of life competencies
- Communication
- Inter Personal
- Problem-solving and decision-making

# **UNIT 3: Social Harmony and National Integration**

- Indian history and culture
- Role of youth in peace-building and conflict resolution
- Role of youth in Nation Building

# **UNIT 4: Youth Development Programmes in India**

- National Youth Policy
- Youth development programmes at the National level, State level and voluntary sector
- Youth-focused and Youth-led Organizations

#### 4.5 SEMESTER V

S. No.	Core Subject	Credit
BPH-V-1 T	National Health Programs & Health laws	4
BPH-V-2 T	Introduction to Organizational Development, Medical Entomology & Occupational Health	4
BPH-V-3 T	Basics of Health Planning & Management	4
BPH-V- E	NSS	2
BPH-V- E	Indian Constitution	2
	Total :	16

# **BPH-V-1** National Health Programme and Public Health Laws National Health Programmes

- National Health Policy(1983,2002,2017)
- ICDS
- RNTCP
- NACP
- RCH Program (RMNCH+A)
- NHM (NRHM & NUHM)
- NVBDCP
- NIDDCP
- NLEP
- NMHP
- NBCP
- IDSP
- Pulse Polio Immunization Program / National Immunization Program
- NPCDCS Program

# Legislations related to Health in India

- National Health Bill 2017
- The Consumer Protection Act 1986
- The Registration of Births and Deaths Act 1969
- Census Act 1948 with amendments
- The cigarettes and other tobacco products(Prohibition of Trade and Commerce, Production,
- The Prevention of Food Adulteration Act 1954
- Food Safety and Standards Authority of India Act 2006
- The Dowry Prohibition Act 1961
- The Protection of Women from Domestic Violence Act 2005
- The Child Labour Prevention Act 1986, Juvenile Justice Act
- The Right to Education Act
- The Environment Protection Act, 1986

# **BPH-V-2** Introduction to Organizational Development Medical Entomology & Occupational Health

**Organizational Development** 

- Introduction to Organizational Development (OD)
- History of Organizational Development.
- Characteristics of OD
- Foundation of OD
- Recent Organization Development Strategies

# **Occupational Health**

- Introduction (concept, definition, and scope)
- Principles of Occupational Health and Safety
- Occupational Health Problems and Hazards
- Occupational Health safety and prevention
- Industrial health, its situation in Indian context and safety
- Concept of ergonomics

- Stress at Work / work life balance
- Legal aspects of occupational health and safety (ESI act, Factory act, Labour Act, and Workman's Compensation Act)

# Medical Entomology

- Introduction to medical entomology
- Introduction to medically important arthropods
- General and outline classification of arthropods (with special reference to medical important groups) Habit, habitant, external morphology and control measures
- Arachnids: Scorpions, spider, ticks, mites
- Non-dipterous insect: Lice, fleas, bugs, and cockroach
- Dipterous insects:
  - Myasis Producing flies: housefly
  - Phlebotomine: Sand flies
  - Simulium: Black flies
- Mosquito (Life cycle and differences) *Culicine, Anopheline* and *Aedes*

# Vector borne Disease and health hazards

- Diseases and health hazards associated with arthropods
- Different methods of controlling arthropods
- Insecticides and their usability
- Insecticides Problem of resistance, Hazards

# Rodentology: Introduction

- Introduction to rodent and Rodentology
- Introduction to medically important rodents
- Classification of rodent (with special reference to medical important groups)

Disease and health hazards

- Disease and health hazards associated with rodents
- Different methods anti-rodent measures
- Rodenticides and their usability

Integrated vector control approach

- Principle of control measure of arthropod and rodents
- National Vector borne disease control program (Objective and strategy)

# **BPH-V-3 Basics of Health Planning and management**

- Planning: Elements of planning, planning cycle
- Methods of planning: top down, bottom up planning process
- Overview of the health planning process in India.
- Types of health planning
- Essential management skills with an overview of management in health
- Time Management
- Managerial Skills
- Personnel Management & Human Resource Development

# **BPH-V-E NSS V**

#### **UNIT 1: Citizenship**

- Basic Features of Constitution of India
- Fundamental Rights and Duties
- Human Rights

- Consumer awareness and legal rights of consumer
- RTI

# **UNIT 2: Family and Society**

- Concept of family, community, (PRIs & other community-based organizations) and society
- Growing up in the family- dynamics and impact
- Human Values
- Gender Justice

# **UNIT 3: Community Mobilization**

- Mapping of community stakeholders
- Designing the message in the context of the problem and culture of community
- Identifying methods of mobilization
- Youth-adult partnership

# **UNIT 4: Environment Issues**

- Environment conservation, enrichment and sustainability
- Climate change
- Waste management
- Natural resource management

# **UNIT 5: Project Cycle Management**

- Project planning
- Project implementation
- Project monitoring
- Project evaluation: impact assessment

# **UNIT 6: Documentation and Reporting**

- Collection and analysis of data
- Preparation of documentation/ reports
- Dissemination of documents/reports

# **UNIT 7: Additional Life Skills**

- Positive Thinking
- Self Confidence and Self Esteem
- Setting Life Goals and working to achieve them
- Management of Stress including Time Management

# **BPH-V--E INDIAN CONSTITUTION**

# I. GOAL:

The students should gain the knowledge and insight into the Indian Constitution so that they are aware of the fundamental rights and freedom bestowed through the democratic governance of our country.

# **II. OBJECTIVES:**

# A) KNOWLEDGE:

At the end of the BPH-V course the student is expected to know:

- 1) Basic knowledge of the Indian Constitution.
- 2) Democratic institutions created by the Constitution.

<ul> <li>3) Special rights created by the Constitution for regional and Inguistic minorities.</li> <li>4) Election Commission.</li> <li>5) Legislative, Executive and Judicial powers and their functions in India.</li> <li>B) SKILLS: <ul> <li>At the end of the BPH -V course the student is expected to make use of knowledge:</li> <li>1) To perform his / her duties towards the society judiciously and with conscious effort for self-development.</li> <li>2) To utilize state policies in their future practice.</li> </ul> </li> <li>COURSE CONTENTS <ul> <li>Theory:</li> <li>25 Hours</li> </ul> </li> <li>Unit I <ul> <li>a) Meaning of term Constitution - 1946 - 1949 and role played by Dr. B. R. Ambedkar.</li> <li>c) Salient Features of the Constitution.</li> <li>d) Preamble of Devers to Panchayat Raj Institutions.</li> <li>5 Hours</li> </ul> </li> <li>Unit II <ul> <li>The democratic institutions created by the Constitution.</li> <li>Bicameral System of Legislature at the Centre and in the States.</li> <li>Devolution of Powers to Panchayat Raj Institutions.</li> <li>5 Hours</li> </ul> </li> <li>Unit III <ul> <li>Fundamental Rights and Duties - Their content and significance 5 Hours</li> </ul> </li> <li>Unit IV <ul> <li>Directive Principles of State policies - The need to balance</li> <li>Fundamental Rights with Directive Principles.</li> <li>1 Hour</li> </ul> </li> <li>Unit VI <ul> <li>Doctrine of Separation of Powers - Legislative, Executive and Judicial, and their functions in India.</li> <li>4 Hours</li> </ul> </li> <li>Unit VII <ul> <li>The Election Commission and State Public Service Commissions.</li> <li>2 Hours</li> </ul> </li> <li>Unit VIIIIIII Kethod of amending the Constitution.</li> <li>1 Hour</li> <li>Unit VIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII</li></ul>				
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# 4.6 SEMESTER VI

S. No.	Core Subject	Credit
BPH-VI-1 T	Preventive Obstetrics and Family Planning	5
BPH-VI-2 T	Public Leadership, managing health organizations and Quality and safety in healthcare	5
BPH-VI- E	NSS	2
BPH-VI-1 P	Mini Project	12
	Total: 24	

#### **BPH-VI-1** Preventive Obstetrics and Family Planning Introduction to

- Health Status of Women in General
- Reproductive Health in particular
- Health Problems of Women across the Life Span childhood, adolescence, adulthood, old age across world and India.

#### Maternal health

- Concept and Scope of maternal health
- Safe motherhood and its components
- Major conditions causing morbidity and mortality
- Socio-economic, educational and cultural factors affecting maternal morbidity and mortality and utilization of maternal care.
- Concept, types and process of maternal and perinatal death review
- Concept of infertility, factors causing infertility and sub-fertility
- Concept of In-vitro fertilization (IVF),
- Marriage: Preconception, conception, pregnancy
- Contraception and family planning methods
- Reproductive tract infections
- RCH / RMNCH + A Program

# **BPH-VI-2 Public leadership and managing health organization** Introduction to leadership

- Definition
- Principles of leadership
- Leadership styles and traits
- Levels of leadership
- Systems thinking
- Leadership Theories
- Leadership Skills
- Manager Vs Leader

# Management

- Introduction to health care management
- Classical management and healthcare services management
- Organizational theories
- Evolution of management
- Managerial Role
- Motivation

# Quality and safety in healthcare

- Patient Safety in hospitals
- Hand hygiene / Universal precautions
- NABH / NABL Accreditation.
- Indian Public Health Standards at
  - SC
  - PHC
  - CHC

## BPH-VI- E NSS VI

#### **UNIT 1: Youth Health and Yoga**

- Healthy lifestyles (yoga as a tool), substance abuse, HIV, home nursing, first aid
- Yoga: history, concept, misconceptions, traditions, impacts
- Yoga as preventive, promotive and curative method

#### **UNIT 2: Youth and Crime**

- Sociological and psychological factors influencing youth crime
- Peer mentoring in preventing crimes
- Awareness about anti-ragging
- Cybercrime and its prevention
- Juvenile Justice

#### UNIT 3: Civil/ Defense

- Positive Thinking
- Self Confidence and Self esteem
- Setting Life Goals and working to achieve them
- Management of Stress including Time Management

#### **UNIT 4: Entrepreneurship Development**

- Definition & Meaning
- Qualities of good entrepreneur
- Steps/ ways in opening an enterprise
- Role of financial and support service institutions

#### **UNIT 5: Resource Mobilization**

- Writing a Project Proposal
- Establishment of SFUs

#### **UNIT 6: Disaster Management**

- Introduction to Disaster Management, classification of disasters
- Role of youth in disaster management

#### 4.7 SEMESTER VII

S. No.	Core Subject	Credit
BPH-VII-1 T	Research Methodology & Bio-ethics	5
BPH-VII-2 T	*Monitoring and Evaluation in Public Health	5
BPH –VII- P	PROJECT	5
	T	OTAL : 15

\*College level Examination

#### **BPH VII-1 Research Methodology & Bioethics** Research Methodology:

- Introduction to Research Methodology
- Types of research methods
  - Qualitative
  - Quantitative
- Introduction to Cross Sectional, Case Control, Cohort, Experimental Design
- Introduction to qualitative methods (Participant Observation, Focus Groups discussion, In-Depth Interviews
- Comparing Quantitative and Qualitative Research Mixed method study

#### **Bioethics**

- Historical Perspectives
- General Principles on Ethical Considerations Involving Human Participants
- General Ethical Issues
- Ethical Guidelines in Qualitative Research
- ICMR Guidelines for biomedical Research
- Informed Consent process and informed consent form
- Composition & Functions of Institutional Ethical Committee/ Independent Review Boards (IRB)
- Duties & Roles of Principal Investigator/sponsor

# **BPH VII-2** Monitoring and evaluation in Public Health

- What are monitoring and evaluation & it's importance
- Types of monitoring and evaluation
- Steps of monitoring and evaluation
- Investigation of an epidemic/outbreak

#### 4.7 SEMESTER VIII

S. No.	Core Subject	Credit
BPH –VIII- P	PROJECT	15
	TC	DTAL: 15

#### **SECTION-V**

## **Recommended Books (Latest Editions)**

TITLE	AUTHOR(S)	PUBLISHER
Practical Statistics for Medical research	Altman D	Chapman & Hall
An Introduction To Medical statistics.	Bland M	Oxford Medical Publications

Statistical Methods In Clinical and Preventive Medicine.	Hill.S.A.B.	E.& S. Livingstone Ltd.
Textbook Of Preventive And Social Medicine.	Gupta.M.C; Mahajan.B.K.	Jaypee Brothers.
Topics In Public Health.	Mackintosh.J.M.	E.& S. Livingstone Ltd.
Textbook Of Preventive And Social Medicine.	Park.K; Park.J.E.	BanarsidasBhanot
Industrial Injuries.	Featherstone.D.F.	John Wright & Sons.
Environmentproblems& solutions	Asthana & Asthana	S.Chand& Company Ltd.
Environmental Biology	P.D.Sharma	Rastogi Publication
Earth science	Edward J.Tarbuck	Prentice Hall
Environmental Issue-Measuring Analyzing, evaluating	Robert L.Mc.Connell&LannielC.Abel	Prentice Hall
Environmental Pretoction& law	C.S.Mehta	Ashish Publishing House.
Environmental Pollution,	Timmy Katyal&M.Satake	Anmol Publication
Promoting Health: A Practical Guide To Health Education	Ewles ,L Simnet,I	Scutari Press
Human Rights In Health.	Found.C.	Elsevier Publishing Co.
Public And Community Health.	Parker.W.S.	Staples Press London.
Public Health Informatics and Information systems	O'Carroll, P.W., Yasnoff, W.A., Ward, M.E., Ripp, L.H., Martin, E.L. (Eds.)	Springer
Public Health Informatics and Information systems	J.A. Magnuson, Jr., Paul C. Fu	Springer

TITLE	AUTHOR(S)	PUBLISHER
Sex, Disease, And Society: A Comparative History Of Sexually Transmitted Diseases And HIV/AIDS In Asia And The Pacific	Milton Lewis, Scott Bamber, Michael Waugh	Greenwood Press,
Living With HIV: Experiment In Courage	Mary Elizabeth O'Brien	Auburn House, 1992
The Unending Frontier: An Environmental History Of The Early Modern World	John F. Richards	California Press
Communicable Diseases Control	Anderson, Arnstein, Lester	The Macmillan Company

Encyclopedia Of Disaster Management	Goel, S. L.	Deep & Deep	
Disaster Management	G.K. Ghosh	A.P.H.	
Emergency Medical Services And Disaster Management: A Holistic Approach	P.K. Dave	Jaypee Brothers	
Disaster Management - Recent Approaches	Arvind Kumar	Anmol Publication	
The New Public Health: An Introduction For The 21st Century.	San Diego, CA:	Academic Press	
Handbook Of Health Economics.	Culyer A.J. And J.P. Newhouse.	Elsevier	
Biostatistical Aspects Of Health And Population	Edited By Arvind Pandey.	Hindustan Pub	
Essentials Of Dental Public Health	Daly	Oxford	
Community Dentistry	Cynthia Pine	Oxford	
Community Oral Health Practice For The Dental Hygienist	Kathy Voigt Geurink,	Elsevier Science	
Concepts In Dental Public Health	Jill Mason	Lippincott Williams & Wilkins	
Essential Dental Public Health	Blanaid Daly, Richard Watt, Paul Batchelor,Elizabeth Treasure	Oxford Univ Press	
Dental Public Health And Community Dentistry	Anthony Jong	C.V. Mosby Co	
The Theory And Practice Of Public Health.	Hobson.W.	Oxford University	
Oxford Textbook Of Public Health. Vol. Ii.	Holland.W.W.	Oxford University	
Oxford Textbook Of Public Health. Vol. Iii.	Holland.W.W.	Oxford University	
Oxford Textbook Of Public Health. Vol. Iv.	Holland.W.W.	Oxford University	

TITLE	AUTHOR(S)	PUBLISHER
Man Adapting	Dubos, Rene	Yale University Press
Doing Your Research Project	Bell, J.	Open University
The Limits Of Medicine	Illich, I.	Pelican Books
The Role Of Medicine	Mckeown, T.	Blackwell

Sl. No.	Title	Author	Year of Publ.	Publisher
1	The Constution of India – A Politico – Legal Study	J. C. Johari	-	Sterling Publication Pvt. Ltd.
2	Constitution Law of India	J. N. Pandey	1998	Central Law Agency
3	The Indian Constitution	Granville Austin	2000	Corner Stone of Nation Oxford