Tribhuvan University
Institute of Medicine
Bachelor in Public Health (BPH) Programme

Description of the programme

1. The Programme Introduction

The Second People’s Movement 2006 commenced a new chapter in the history of Nepal. The popular movement has established Nepal as a republic state. The interim constitution of New Nepal has endorsed health as basic human right of every Nepalese citizen. Government of Nepal has expressed its commitment to comply with the spirit of the interim constitution and has made several health policy reforms towards this direction. Among other factors, role of health professionals has been seen as vital for the efficiency and effectiveness of health care system.

With the epidemiological transition, Nepal is facing double burden of diseases. Rapid urbanization, changing life style with exposure to newer risks, rising mobility across the globe, impact of climate change, increased global relations and many other factors have made the solution of health problems more challenging than before. This situation has apparently demanded further competencies among the health work force. In view of this, the present BPH programme has been developed with enhancement and improvement of previous three years curriculum.

2. Objectives of BPH programme

The overall purpose of BPH programme is to prepare competent and responsible public health graduates needed for the country to respond to the health needs of people. The objectives of the programme is to enable the graduates with Bachelor in Public Health degree to

- Explain relevance of basic health sciences in public health
- Appreciate behavioral, socio-cultural, economic and other dimension of health and diseases
- Analyze health systems from public health perspective – effectiveness, efficiency, equity and justice
- Manage – plan, implement, monitor and evaluate – health systems, programmes and services
- Train and manage human resources for health
- Conduct health research for evidence based decision making process in public health
- Demonstrate leadership to organize and mobilize community to address health problems

3. Scope of degree of Bachelor in Public Health

Public health graduates will have a wide range of working scope in public and private sectors, as well as in service and academic sectors. The graduates with BPH degree can serve as public health officer or other position at the national, regional, district and community level in the government;
in national and international non-government organizations. With their competency in academic area, public health graduates can work in the training and research institutions.

As further career opportunity, public health graduates are eligible for Master in Public Health (MPH) programme and other relevant master programmes.

4. Qualifications for admission to the programme

Those who are interested in admission to the BPH programme should have the following qualifications:
   a. Proficiency certificate level (PCL) in health sciences (general medicine, nursing, medical laboratory technology, pharmacy and other equivalent health sciences) OR
   b. Intermediate or 10+2 or equivalent degree in Science with Biology with at least 50% aggregate in final examination, AND
   c. Pass in the entrance examination conducted by Institute of Medicine

5. Duration of the programme

Bachelor in Public Health is a four academic year programme which includes 6 months practicum in the final years

6. The course outline

There will be a total of 2,800 marks in the course. These marks are equally distributed over four years of the programme – 700 each year. There are 24 papers with 100 marks each, and the practicum in the final year will carry 400 marks. The detail outline of the course is given in the following tables.
### The general curriculum outline

<table>
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<tr>
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<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
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<td>Family Health II</td>
<td>Public Health Research methodology and Public Health Project Planning and Development</td>
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# Bachelor in Public Health

**Credit weights of each of Papers and Units**

## Year One

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**Bachelor in Public Health**  
**Credit weights of each of Papers and Units**

**Year Two**

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Bachelor in Public Health
Credit weights of each of Papers and Units

Year Three

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Total 700
### Proposed Curriculum

**Credit weights of each of Papers and Units**

#### Year Four

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Bachelor in Public Health

YEAR ONE
Curriculum of BPH
– Year one

| Paper I |
|---|---|---|
| Course Title | Basic Health Science I |
| Hours: | 120 | Full Mark: 100 | Pass Mark: 50 |

Course Introduction
This course has been designed to develop the basic knowledge on anatomy, physiology, pathology, biochemistry, pharmacology and toxicology in relation to structures and functions of body systems and organs which will help to the students to understand the health applications in the course. The course aims to impart the basic concept of drug management and importance of emergency medicine, rational use of medicine and public health importance of drug resistance. The course will apply the theoretical and practical knowledge to the student.

Course objectives
1. Explain the structures and functions of different systems, tissue and cell of human body in relation to health and diseases
2. Understand patho-physiology of inflammation, necrosis, neoplasia, hypersensitive reaction, shock, thrombosis, embolism, AIDS, complement, antigen antibody, ischemia, infarction and spread of cancer
3. Understand the functions and rational use of medicine, logistics system of medicine/vaccines, public health importance of drug resistance
4. Describe the basic concept of toxicology in public health

Course Contents

Group A: Anatomy

Introduction
Define the terminologies used in anatomy.
Describe different components of animal cell.
Describe basic types of tissues with their characteristic features.

Organ systems

Unit 1. Musculoskeletal system
Name and identify the bones of appendicular and axial skeleton.
Classify joints with their characteristic features and examples. 
Name the major muscles of the axial and appendicular skeleton.

**Unit 2. Neurosensory System**
- Mention different components of nervous system; describe a typical spinal nerve. 
- Mention the extent and coverings of spinal cord. Describe the transverse section of spinal cord; name the main tracts of spinal cord. 
- Name and identify different parts of brain and its coverings; 
- Name the cranial nerves and their area of supply. 
- Name the sensory organs; mention briefly on the gross features of eyeball and ear.

**Unit 3. Respiratory System**
- Name different organs of respiratory system 
- Name paranasal sinuses 
- Describe briefly the extent and morphology of larynx, trachea and bronchi 
- Identify different parts of lungs and pleura 
- Mention different parts of bronchial tree

**Unit 4. Cardiovascular system**
- Name and identify the parts, chambers and valves of heart. Mention briefly on fibrous pericardium, serous pericardium and pericardial cavity. 1hr 
- Mention the characteristic features of arterial, venous and lymphatic vessels. 
- Name the extent and branches of different parts of aorta. 
- Name the extent and branches of external carotid artery and internal iliac artery. 
- Mention the extent of the following arteries: axillary, brachial, radial, ulnar, femoral, popliteal, anterior tibial, posterior tibial. 
- Mention the extent and major tributaries of: superior vena cava, inferior vena cava and dural venous sinuses. 
- Mention and locate important superficial veins of upper and lower limbs. 
- Define lymphatic system. 
- Mention the area of drainage of: thoracic duct, right lymphatic duct, axillary group of lymph nodes, inguinal group of lymph nodes, pre and para-aortic groups of lymph nodes.
Unit 5. Reproductive system
   Name different parts, location and extent of male genital tract.
   Name different part, location and extent of female genital tract.

Unit 6. Urinary system
   Name different parts of urinary system.
   Explain parts of kidney in a coronal section.
   Explain different parts of a nephron.
   Mention the extent of ureter.
   Describe briefly on urinary bladder, male and female urethra.

Unit 7. Gastrointestinal system
   Name different parts of GIT. Mention the general architecture of GIT.
   Mention the positions of salivary glands and pancreas.
   Mention the position, lobes and structure of liver.
   Name extra-hepatic biliary apparatus.
   Explain the basic concept of peritoneal folds. Mention briefly on portal system.

Unit 8. Endocrine system:
   Enumerate different endocrine glands.
   Mention their position, secretion and their functions.
Group B: Physiology

Unit 1. General Physiology
Name different components of animal’s cell and their function
List different tissue of body and their characteristics
Define body fluids and electrolyte balance. Classify them and mention their composition.

Unit 2. Cardiovascular system and Blood
Describe the organization of the cardiovascular system and mention the function of its different components.
Describe cardiac cycle, heart sounds and systemic circulation
Define arterial blood pressure, cardiac output, venous return, vasodilation, vasoconstriction.
Describe briefly mechanisms of blood pressure regulation
Correlate physiological aspects of hypertension, coronary artery disease, heart failure, rheumatic heart disease, atherosclerosis
Mention composition and function of blood
Define haemopoiesis and correlate physiological aspects of common blood disorders.
Explain physiological basis of blood groups, define Rh- incompatibility and mention dangers of mis-matched blood transfusion.
List clotting factors and explain mechanism of clotting.
List the functions of spleen
Define immunity and mention its types and correlate physiological aspects of hypersensitivity reactions and AIDS.

Unit 3. Respiratory system
List the functions of the lungs, describe mechanism of breathing and mention control of breathing
Describe gaseous exchange, and transport of oxygen and carbon dioxide in blood
Define tidal volume, vital capacity and timed vital capacity
Correlate physiological aspects of COPD, Bronchial asthma and high altitude sickness

Unit 4. Gastrointestinal system
List the functions of different parts of GIT
Explain the process of digestion and absorption
Enumerate the functions of accessory digestive glands including liver
Correlate physiological aspects of diarrhea, constipation, peptic ulcer, jaundice and cirrhosis

Unit 5. Musculo-skeletal system
Name the functions of different types of muscles
Explain neuro-muscular transmission and mechanism of skeletal muscle contraction
Explain the physiological effects of exercise and training (2hrs)

Unit 6. Nervous system and Special senses
List the functions of different parts of the central nervous system and peripheral nervous system
Mention the functions of sensory and motor tracts
Mention the functions of different cranial nerves
Enumerate the functions of autonomic nervous system
Correlate the physiological aspects of paralysis, cerebrovascular accidents (stroke), meningitis, encephalitis and epilepsy
Describe the functional anatomy of the eyes and ear and mention their functions
Correlate the physiological aspects of refractive errors, deafness and color blindness

Unit 7. Renal/ electrolyte and skin
Describe the mechanism of formation of urine
Explain how urine is concentrated and diluted
Describe micturition reflex
Describe the role of kidney in blood pressure regulation
Correlate the physiological aspects of renal failure, polyuria, retention of urine, renal stones, renal colic and electrolyte disorders.
Mention the functions of the skin, describe body temperature regulation and explain the pathogenesis of fever

Unit 8. Endocrine and reproductive system
Correlate the physiological aspects of dwarfism, acromegaly, goiter, diabetes mellitus and Cushing’s syndrome
Explain the physiology of menstruation, spermatogenesis, pregnancy and lactation.
Explain the physiological basis of contraceptives.

**Demonstrations / Practical**
- Recordings of blood pressure and pulse
- Demonstration of principles of CPR, Vital Capacity and Timed Vital Capacity
- Examination of cranial nerves
- Motor and sensory examinations
- Hearing tests
- Tests for visual acuity and color blindness
Group C: Biochemistry          24 hrs

Describe the basic concept of acid, base, salt and acid-base indicator.
Describe the properties and ionization of water.
Explain the concept of pH and pH meter.
Define buffer solution and enumerate types of buffers present in body fluid and their significances. 2hrs
Define, classify and enumerate the physical and chemical properties of carbohydrate.
Describe glucose homeostasis.
Define, classify and enumerate the physical and chemical properties of protein.
List the essential and non essential amino acids and their significances.
Define, classify and enumerate the physical and chemical properties of lipid.
Enumerate essential fatty acids.
Enumerate enzymes and list their important properties.
Enumerate the clinical significance of enzymes.
Discuss the concept of nucleic acid; define the terms: DNA, RNA, nucleotide and nucleoside.

Practical:

Measurement of pH (solutions, buffers etc.)
  pH paper
  pH meter
Preparation of different types of solution: normal solution, molar solution, 1% solution
Colorimetric estimation of serum glucose, protein and albumin
Group D. Pathology

General Pathology

- Describe the concept of cell injury and various change produced by such injury and necrosis.
- Define basic terminologies.
- Describe important causes of inflammation and its types
- Explain the concept of wound healing
- Describe the definition and types of thrombosis, embolism, ischemia infarction, shock and edema
- Describe disorders of tissue growth and enumerate predisposing factors of neoplasia, mechanism of spread and metastasis
- Define antigen, antibody and complement
- Describe different types of immunity and hypersensitivity
- Understand the patho-physiology, sign, symptoms and diagnosis of AIDS.

Systemic Pathology

- Explain basic concepts of fracture, arthritis, osteomyelitis, pathophysiology, signs, symptoms and diagnosis

Unit 1. Cardiovascular system

- Patho-physiology, signs, symptoms and diagnosis of hypertension, atherosclerosis, myocardial infarction, anemia, leukemia – classification and definition

Unit 2. Respiratory system

- Tuberculosis, patho-physiology, signs, symptoms and diagnosis

Unit 3. Endocrine system

- Diabetes mellitus, hypothyroidism, hyperthyroidism: Patho-physiology, signs, symptoms and diagnosis

Unit 4. Gastrointestinal system

- Gastritis, Peptic Ulcer, acute viral hepatitis: Pathogenesis, signs, symptoms and diagnosis
Group E: Pharmacology and Toxicology

Unit 1. Pharmacology

a. Basics of pharmacology
   - Concept and functions of medicine
   - Pharmaco-dynamic and pharmacokinetic
   - Classification of medicines
   - Concept of essential medicine, life saving medicine
   - Development of new medicines
     - Experiment in lab animal
     - Healthy human
     - Patients and community trial

b. Rational use of medicine
   - Concept of rational use of medicine
   - Maintaining quality of medicine: quality during
     - Production
     - Transportation
     - Storage in the stock and at the household
     - Consumption: right dose, right time, right duration, expiry
   - Cost of drugs, rational prescription
   - Factors contributing to irrational use of medicine
   - Consequences of irrational use of medicine
     - inappropriate use of medicine
     - ‘drug resistance’
   - Role of health professionals and users in promotion of rational use of medicine

c. Regulatory authority of medicine
   - Steps of regulation of medicines
     - Regulation of production, marketing, import
   - Concepts of prescription medicine and ‘over the counter medicine’

Unit 2. Toxicology

a. Introduction
   - Concept of toxicology
Historical perspective of toxicology
Toxicology as an analytic science
Importance of toxicology in Public Health

b. Dimension of toxicology
   Environmental toxicology
   Occupational toxicology
   Clinical toxicology
   Forensic toxicology

c. Concept of toxins and toxicity in relation to dimension of toxicology
   Toxin and toxicity
   Toxic substances
   Toxicity value
   Poison and causes of poisoning
   Factors that influencing toxicity

d. Approaches to prevent and control of health risk due to various dimension of toxicology.

Teaching learning method

Didactic lectures, group demonstration/practical discussion in class room setting, OPD, ward, laboratory, and field exposure

Evaluation

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**References**

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2. Robbin’s Pathology
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**Course Introduction**

This course will develop the knowledge and skill of identifying different types of pathogens, arthropods and rodents of public health importance. The course aim to develop skill on pathogenic diseases and diseases caused by arthropods and rodents and the laboratory skills for characteristic features. It also aims to impart the knowledge and skill on first aid.

**Course objectives**

1. Describe the concept of microbial diseases and viral diseases
2. Describe the lifecycle of common intestinal and blood parasites
3. Provide the treatment prevention and control of parasitic diseases
4. Describe the normal opportunistic and pathogenic bacteria
5. Describe the methods of sterilization
6. Understand and the mechanism and development of immunity
7. Describe the bacterial and viral diseases of community concern
8. Describe the role and control measures of rodents and arthropods in public health
9. Understand the basic concept of first aid and its application in emergency situation

**Group A: Microbiology**

**Full Mark: 60**

**Hours: 72**

**Unit 1. Introduction of microbiology**

Introduction to microbial world
Classification of microbial diseases
Introduction to community acquired microbial infection

12 hrs
Unit 2. Bacteriology 20 hrs

- Classification of bacteria.
- Normal bacterial flora on or in the body.
- Concept of opportunistic and pathogenic organisms.
- Bacterial physiology and its growth factors.
- Mechanism of infection.
- Spread of diseases, pandemic, endemic, epidemic and laboratory infection.
- Physical sterilization, chemical disinfection and radiation.
- Collection and transport of specimen for identification of common bacterial communicable diseases (Respiratory, genital and gastrointestinal diseases)
- Gram staining and AFB staining in identifying bacteria.

Unit 3. Parasitology 20 hrs

- Classification of human parasite
- Introduction to parasitic diseases associated with poor personal and public hygiene.
- Blood parasites (Malaria parasite, Kala-azar, microfilaria)
- Life cycle and mode of infection.
- Collection of sample, processing and identification.
- Treatment, prevention and control.
- Intestinal protozoa (Entamoeba hystolytica, Giardia lamblia and Cryptosporia)
- Life cycle and mode of infection.
- Collection of sample, processing and identification.
- Treatment, prevention and control.
- Intestinal worms (Roundworm, hookworm, pinworm, whipworm)
- Tapeworm: T. saginata, T. solium, Echinocococus granulosus. H. nana
- Life cycle and mode of infection.
- Collection of sample, processing and identification.
- Treatment, prevention and control.

Unit 4. Virology 10 hrs

- Introduction
- Classification of virus
Replication of virus
Introduction to viral disease of community concern
Collection and preservation of viral specimen for laboratory study
Prevention and control of viral diseases

**Unit 5. Immunology**

- Introduction to immunology
- Defense mechanism of body
- Antigen and antibody
- Hypersensitivity reaction
- Basic concept of immunology in diagnosis of viral diseases.

**Practical**

- Preparation of slides (smears) and identification of ova, parasites, cyst trophozoites from stool specimen.
- Collection of specimen, preparation of smears, staining and identification of blood parasites.
- Performance of Gram staining and AFB staining and identify the bacteria.
- Use of autoclave, hot air oven and preparation of chemical disinfectant.
Group B: Entomology and Rodentology

Full Mark: 30
Hours: 36

Unit 1. Introduction 6 hrs
Introduction to medically important arthropods and rodents.
General outline, classification of arthropods and rodents (with special reference to medical important groups).

Unit 2. Habit, habitat, external morphology and control measures of: 12 hrs
Arachnids: Scorpions, spiders, ticks, mites
Non-dipterous insect: Lice, fleas, bugs, and cockroach
Dipterous insects:
Myasis - Producing lies
Phlebotomine - Sand flies
Simulium - Black flies
Mosquito - Culicine, Anopheline
Integrated approach of vector control

Unit 3. Rodentology 12 hrs
Habit, habitat and morphology of rodents.
Diseases and health hazards associated with arthropods and rodents
Different methods of controlling arthropods and rodents- Integrated approach of vector control
Insecticides, rodenticides and their usability
Insecticides - Problem of resistance, Hazards
Group C: First Aid

**Full Mark: 10**
**Hours: 12**

- Shock, types of shock, identify first aid measures to the patient
- First aid measures in case of poisoning (insecticides, rodenticides, drugs, alcohols)
- Foreign body in ear, nose, throat and eyes and provide first aid
- Injury, identify measures to provide first aid appropriately
- Hemorrhage, first aid to control external bleeding
- Burns, classification, its percentage and first aid measures to thermal and chemical burns
- Measure to manage the case of frost bite
- Fractured bones and dislocations, its first aid measurement
- Heatstroke and its first aid measurement
- Rabid animal bites and its first aid measurement
- First aid measures in case of drowning
- Measures to be taken in case of snake bites
- Acute mountain sickness and its first aid measures

**Practical**
- Identify medically important arthropods and rodents
- Illustrate the different stages of the life cycle of medical important insects

**Teaching learning method**
- Didactic lectures, group work, discussion in class room setting
- Laboratory demonstration classes, Hands on exercise
- Observation visit to different organizations related to environmental issues

**Evaluation**
- Internal assessment in different forms 20%
- Final examination 80%
References
1. K.D. Chatterji “Parasitology”
2. Students Text Book of Medical Entomology
4. Fuerst R “Microbiology in health and disease” W.B. Sauder 1995
6. Text books of First, Aid, Recent edition
Paper III

Course Title: Biostatistics

| Hours: 120 | Full Mark: 100 | Pass Mark: 50 |

**Course Introduction**

This course will develop the student's skills on the basic statistics used in public health research. After the completion of the course, the students will be able to:

a. Understand the key concepts on descriptive statistics.

b. Identify and use of appropriate descriptive and analytic statistical measures.

**Course Objectives**

1. Describe and apply statistical concepts and knowledge in planning, implementing and monitoring public health programmes

2. Describe and generate statistical information participate in and provide statistical information to conduct operational research designed to provide effective health care delivery for the community

3. Describe and generate information on the health status of a community

**Course Contents**

**Unit 1 Introduction**

6 hrs

Definition of Common Statistical Terms, difference between Statistics and Bio-statistics – some concepts, definition of biostatistics, scope, role, usefulness of different branches of statistics in the investigation of community health and public health research, uses of Bio-statistics in public health research

**Unit 2 Descriptive Statistics**

16 hrs

Basic concept of variables, types of variables (discrete and continuous variables), scales of measurement

a. Data Collection

Collection and recording of statistical information on public health and its related fields from primary and secondary sources
Tabulation, processing and presentation of statistical data: frequency distribution and different types of tables (one way, two way and manifold tables).

b. Diagrammatic and graphic presentation
Bar graphs, histogram, stem- and–leaf plots, polygon bar charts, pie charts, Box-plot

c. Measures of Central Tendency
   - Mean, Median & Mode
   - Different partition values (quartiles, deciles & percentiles)

d. Measures of dispersion (variability)
   - Range, standard deviation, variance and coefficient of variation (CV)

Unit 3. Probability Distribution
   - 18 hrs
   - Concept of set theory, permutations, combinations, factorial, definition of Probability, Multiplicative Law of Probability, addition law of probability, Conditional Probability, and Bayes’ Theorem
   - Random variable, discrete and continuous probability distribution, definition and properties of Binomial, Poisson and Normal probability distribution, Expected value and variance of Binomial, Poisson and Normal distribution

Unit 4. Correlation and regression analysis
   - 20 hrs
   - Definition of correlation, two way scatter plot, Karl pearsons’ correlation coefficient, Spearman rank correlation coefficient and its significance, properties of correlation coefficient
   - Explain the concept of regression analysis for two variables and compute the regression coefficients for simple linear regression model, least square regression equation, basic concept of multivariate regression

Unit 5. Sampling theory, Sampling distribution and Estimation
   - 25 hrs
   - Define terms used in Sampling (population, sample, sampling unit, sampling frame), sample survey & census
   - Different types of sampling techniques (probability – simple random, stratified, systematic, cluster and multistage & non-probability – convenience, judgmental, quota sampling, and snowball,) Sampling errors and non-sampling errors
   - Sampling distributions (distribution of sample mean, sample proportion and difference between two sample means and two sample proportions), Central limit theorem, standard error of mean and proportion, point and interval estimation of the mean, proportion of distribution, sample size estimation
Unit 6. Hypothesis testing  
25 hrs

a. Concept of hypothesis, null and alternative hypothesis, formulation of a statistical hypothesis, level of significance, type I and type II errors, power

b. Parametric and non-parametric test of significance: z-test and t-test for one sample & two samples means and proportions, one way analysis of variance (Parametric test). The sign test, Mann Whitney U test, Wilcoxon Matched Pair signed-rank test, chi-square test, Fisher exact test, McNemar test (non-parametric test), Advantages and disadvantages of nonparametric methods

Teaching learning method

Class lectures, practical problem solving sessions, Review of Journal articles on use of statistical methods,

Evaluation

Internal assessment in different forms 20%
Final examination 80%

References

Paper IV

Course Title | Population studies and Informatics
---|---
Hours: 120 | Full Mark: 100 | Pass Mark: 50

Course Introduction

The course consists of two different groups namely Group A: Population Studies and Group B: Informatics. Each group carries equal total marks of 50 and 60 credit hour.

Group A: Population Studies

Full Mark: 50
Hours: 60

The course imparts the basic knowledge and understanding on population studies, which will provide a better perspective in, managing public health care system and methods for calculating different demographic indicators and their interpretation.

Course Objectives

1. Understand the structure, characteristics, and components of population and population growth.
2. Understand the consequences and the implication of population growth on health and resource base.
3. Conceptualize the interrelationship between population growth and sustainable development.

Course Contents

Unit 1. Introduction to Population Studies 6 hrs

Importance and implication of population study in public health,

Concept and definition of some useful terms such as ratio, rates, proportion, cohort etc

Sources of population data and importance of Population Census, Vital registration system, sample surveys, health institution data, national international publications
Unit 2. Population Structure, Characteristics and Components 6 hrs

Importance of sex and age structure, marital status, literacy rate, sex ratio, religion, ethnicity, dependency ratio

Different, methods of calculating growth of population. Growth of population in Nepal and the growth pattern in the world as well

Concept of young, old age population and aging of population

Unit 3. Population growth and its trend in Nepal with comparison 4 hrs

Present population growth in the Nepal and its growth trends

Present population growth in SAARC countries the world and growth trend of world

Unit 4. Three Components of population growth 12 hrs

1. Fertility
   a. Measure of fertility its importance
   
   Concept of fertility and its different measures such as
   
   Crude Birth Rate, and specific rates, total fertility rate
   
   b. Other measures if Fertility and some concepts
   
   Child women ratio and its use
   
   Standardized birth rates and its purpose
   
   Replacement level of fertility
   
   Population momentum
   
   Factors affecting fertility
   
   Baby Boom and Baby bust syndrome
   
   c. Measures of reproduction
   
   Concepts and importance of gross and net reproduction rate

2. Mortality
   a. Measure of mortality of
   
   Concepts and importance
   
   Crude and specific rates, infant and
   
   Maternal mortality ratio
Other measures of mortality
   Neonatal and post neonatal mortality, foetal, prenatal mortality rates
   Standardized death rate and its importance
b. Factors affecting mortality
3. Migration
   Some measures of migration
      Concepts, some useful terms, types of migration
      Estimation of life time and intercensal migration from place of birth statistics
      Factors affecting migration

Unit 5. Morbidity 6 hrs
   Determination of rates and ratios
   Concept of incidence rate, period prevalence and point prevalence rate

Unit 6. Population Projections 6 hrs
   Importance of population projection, difference between projection and estimation
   Population Projection by balancing equation
   Mathematical methods of population projection and their appropriate use and constraint
      Arithmetical method
      Geometric model
      Exponential model

Unit 7. Population policy and program in Nepal 4 hrs
   Essential requisite of population policy
   Recent Goal, target, strategies and population program of Nepal
   Analyze the population policy of Nepal and comment

Unit 8. Population Theories 6 hrs
   a. Early thinking on Population issues
   b. Malthusian doctrine and Neo-Malthusians, Cornucopias concepts
   c. Demographic transition theory
Unit 9. Measures of Urbanization

Some useful terms

Different definition urban area in Nepal since 1952/54

a. Different measures of urbanization in degree
   
   Percentages of population in urban areas
   Ratio of urban and rural population
   Size of locality of residence of the median inhabitant
   Mean City Population Size

b. Tempo (speed) of urbanization
   
   Different method of Tempo of urbanization
   
   Annual change of percentage points for all degree measures
   Annual average rate of change of percentage urban

c. Factors affecting Urbanization

Teaching learning method

Class room teaching with the use of overhead projector, LCD and group discussion

Evaluation

Internal assessment in different forms  10%
Final examination     40%

References

4. Comprehensive family planning (COFP) course NHIC/Nepal.
Curriculum of BPH – Year one

Group B: Informatics

Full Mark: 50
Hours: 60

Course Introduction

The course imparts the basic knowledge and understanding on computer and Information technology, which will provide a better perspective in, managing public health care system, and health research.

Course Objectives

- Identify appropriate HW and SW for their use
- Acquire knowledge on national health data base and surveillance system
- Able to use different search engine on web
- Handle some database, reference software
- Handle some statistical software
- Interpret the statistical outputs

Contents

Unit 1. Introduction of Information Technology 5 hrs
Introduction, history, Architecture, System, Hardware, Software

Unit 2. Operating system (OS) 5 hrs

Unit 3. Public health and IT 20 hrs
Introduction to public health informatics, Principles of using technology, role of the public health professional in information technology, electronic communication, Information technology and organizational change in PH, National Health Information Management System, IT in public health surveillance, Future directions in public health information technology applications, Ethics in IT, Security, privacy and legal issues of IT, Barriers to IT, IT Disasters, On-line research for PH, WWW site and use in PH, Managing GIS, Evolution of information technology
management in PH, Management information system, Strategic planning for information management, Challenge of teaching information technology in PH

**Unit 4. Database management**  
10 hrs  
Introduction to database systems, Database Administration - Database system architecture and data dictionary- Relational, Hierarchical, Network Models

**Unit 5. Data analysis**  
20 hrs  
Introduction of different commercial and non-commercial data analysis and reference managing software and hands on practice in some software, Introduction to different software used by govt. and non-government organizations for surveillances, mapping, projection, modeling

**Teaching learning method**  
Class lectures, practical problem solving sessions

**Evaluation**

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<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Internal assessment in different forms</td>
<td>25%</td>
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<tr>
<td>Final examination</td>
<td>25%</td>
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**References**

Course Title: Food and Nutrition

Course Introduction
This course has been designed to impart knowledge and applications on food and nutrition. The course intends to impart knowledge and skills to students in understanding the relationship of food, nutrition and health, which will be applied to plan and execute different interventions to overcome the problems related to food and nutrition.

Course Objectives
1. Understand, define and describe the importance of food and nutrition
2. Understand basic concept of food and nutrition science and its relation to health
3. Assess the nutritional status of individuals and groups by different methods
4. Understand the nutritional policies, strategies and programs of Nepal
5. Implement nutrition programs by utilizing different methods
6. Explore and address the socio-cultural factors of food and nutrition in relation to public health promotion

Course Contents

1. Introduction to food science and nutrition  
   Concept and importance of food and nutrition
   Nutrition as a public health science
   Constituents of food, classification of food and nutritive value of food
   Macronutrients and their functions
   Micronutrients and their functions
   Digestion, absorption, metabolism and utilization of nutrients: carbohydrates, proteins, fats, vitamins, minerals and water
   Nutrition related diseases – diabetes, hypertension, obesity

2. Nutritional requirements at different stages of life  
   Recommended dietary allowances, balanced diets and its importance for various age and sex groups
Nutritional requirement of infant, pre-school children, school children, pregnant and lactating mothers, adolescents, adults and old aged
Breast feeding – physiology of milk production, advantages of breast feeding over artificial feeding
Weaning, supplementary and complementary feeding practices
Lifecycle approach in nutrition promotion

3. **Nutritional deficiency diseases**  
   12 hrs  
   Protein energy malnutrition (PEM)  
   Vitamin A deficiency  
   Iron deficiency anemia  
   Iodine deficiency disorders  
   Other nutritional deficiency diseases

4. **Assessment of nutritional status**  
   12 hrs  
   Assessment of nutritional status: anthropometric, biochemical and clinical methods of assessments  
   Nutritional anthropometry: different classifications  
   Dietary survey

5. **Nutrition Intervention**  
   16 hrs  
   Nutrition education: importance, methods, objectives, techniques, selection of appropriate methods and media  
   IEC materials: types, contents and use in nutrition education  
   Food fortification and nutrients supplementation  
   Nutrition surveillance, emergency feeding  
   Nutrition rehabilitation: institution based, community based and home based rehabilitation  
   Comparative effectiveness of pediatric nutrition rehabilitation unit, nutrition rehabilitation center and home based nutrition rehabilitation

6. **Food processing, food hygiene and food adulteration**  
   12 hrs  
   Food processing, preparation, storage and consumption  
   Effects of food processing and storage on nutritive value of foods
Food hygiene and the effects of unhygienic food
Meat hygiene, milk hygiene
Role of mycotoxins on nutrition and control measures
Food adulteration – its causes and health effects
Infection-malnutrition cycle
Poverty, over population and malnutrition cycle

7. Nutrition programs in Nepal
   12 hrs
   Different nutrition programs conducted by government, NGOs and INGOs
   Food fortification and supplementation programs
   School health and nutrition program of Nepal

8. Nutrition survey and research
   12 hrs
   Overview of nutritional surveys and researches conducted in Nepal
   Mapping out the magnitude and geographical distribution of malnutrition as a public health problem
   Utilization of research findings on nutrition programs in Nepal

9. National nutrition plans and policies
   10 hrs
   Nutrition policies, plans and strategies of Nepal
   Health Act and food legislation
   Land resources and ownership
   Food marketing and food transportation

10. Socio-cultural aspect of food and nutrition
    10 hrs
    Trans-cultural impact on food practices and behavior
    Culture as an influencing factor of nutritional status – useful and harmful effects
    Socio-economic aspects of food production distribution and consumption
    Poverty and food security

Teaching learning methods
   Classroom lectures
   Group work and presentation
Concurrent field visits to observe nutrition rehabilitation centers and pediatric hospitals
Concurrent field visits to study nutrition projects run by various organizations

Evaluation
Internal assessment (including regularity and performance of student in classroom, field activities and written assessment exams) 20%
Final examination 80%

References
5. Asian Development Bank, UNICEF. *Investing in Child Nutrition in Asia: Nutrition and Development Series No. 1* edited by Joseph Hunt and M.G. Quibria,
Course Introduction

The course offers an opportunity to understand the role of environment in public health. It also describes the underlying causes of diseases due to deterioration of environment and sustainable preventive measures for enhancing the quality of life in the community.

Course objectives

Objectives of the course are to make students understand, describe, analyse and explain followings:

1. Concept of Environmental health and Ecohealth and
2. Common Environmental Problems of Nepal
3. Role of sanitation in health
4. Pollutants and health
5. Food security and health
6. Existing policy measures for the sustainable health

Course contents

Unit 1: Introduction 6 hrs

Historical perspective of environmental health
Fundamentals of ecology, ecosystem and environment
Fundamentals of weather, climate and health
Concept of environment and health
Eco-health approach to human health and diseases

Unit 2: Common environmental problems of Nepal 12 hrs

Environmental problem
  - Deforestation
  - Soil erosion
  - River siltation
  - Flooding and drought
Landslide
Desertification
Unsafe drinking water
Poor sanitation and hygiene
Loss of Biodiversity
Solid waste/Liquid waste
Air pollution
Soil pollution

Key Environment and health issue
(a) Process of identification
(b) Process of analysis based on Pressure-State-Impact-Response Framework

Unit 3: Water and health 12 hrs
Sources of water supply
Concept of water quality guideline and standard
Existing water quality/quantity
Water related diseases
Water purification
Prevention and control measures
National water plan and policy

Unit 4: Human excreta disposal practice and health 10 hrs
Present situation and practices
Types/Methods of Human excreta disposal
Promotional aspects of excreta disposal
    Family
    Community
    National
Resource recovery from solid waste (including human excreta)
National Sanitation Policy in Nepal

Unit 5: Waste management 10 hrs
Concept of solid waste management
Sources and types of waste
   General waste
   Hazardous waste
   Health care waste
Waste composition
Collection system
Disposal system
National policy on solid waste management

**Unit 6: Liquid waste management**  10 hrs
Liquid waste and health
Concept of standard/guideline of waste water
Types of liquid waste
   Domestic
   Agricultural
   Industrial
Health care institution/organization
Method of liquid waste disposal/treatment
Management of liquid waste
Policy on liquid waste management

**Unit 7: Air pollution and human health**  10 hrs
Ambient air pollution
   Causes of air pollution
   Sources and status
   Types and sources of air-pollution
   Effects of air pollution on biological system
   Effects of air-pollution on human health
   Guideline /Standard
Indoor air pollution
   Causes of air pollution
   Sources and status
   Energy ladder
Indoor air pollution and Maternal child health
Policy measures
Guideline/ Standard

Unit 8: Pesticides pollution and human health 10 hrs
Pesticides: types and uses
Pesticides pollution
Alternative method of pest control
Pesticide legislation

Unit 9: Food quality and human health 16 hrs
Food security
Food quality
Food borne diseases
Management of food hygiene
   Domestic
   Commercial
   Institutional
Monitoring and evaluation (HACCP)
Food act and food laws

Milk hygiene
Importance of milk and milk products
Milk borne diseases
Management of milk
Dairy farm
Pasteurization

Meat hygiene
Importance of meat in health
Meat borne diseases
Management of meat
Slaughterhouse and practices
Sanitation measures
Quality control of meat

**Unit 10: Shelter and Human Health**

- Concept of shelter
- Detrimental effect of poor housing
- Principles of housing and health
- Standards of housing
- Urbanization and health
- Concept of healthy cities and healthy villages
- Policy /conventions

**Unit 11 Noise pollution**

- Concept of noise pollution
- Sources of noise pollution

**Unit-12: Environmental Law**

- Overview of environmental laws
- Environmental health program in Nepal

**Teaching learning methods**

- Didactic lectures, group work, discussion in class room setting.
- Laboratory demonstration classes, Hands on exercise
- Observation visit to different organizations related to environmental issues

**Evaluation**

- Internal assessment in different forms 20%
- Final examination 80%

**References**

6. WHO (1996), Climate Change and Human Health, WHO/WMO/UNEP.
8. WHO (1996), Biodiversity, Biotechnology and Sustainable Development in Health and Agriculture: Emerging Connection. WHO
10. WHO (1999), Monitoring Ambient Air Quality for Health Impact Assessment, WHO.
11. WHO (1991), Surface Water Drainage for Low-income Communities, WHI/UNEP
12. Whyte, A. (1986), Guidelines for planning community participations in water supply and sanitation project. WHO
### Course Introduction

The course offers an opportunity to develop a holistic understanding of public health, its functions and scope. The course attendants will learn the historical development and methodology of public health and the public health care. The course will also apply the theoretical and conceptual knowledge to bring changes in the health of community. In the light of principles of Primary Health Care, the course is expected to help the students to understand and internalize the dynamics of community development facilitating the integration of health sector with other sectors.

The course consists of the following components

- **a. Fundamentals of public health**
- **b. Primary Health Care (PHC) and its strategies (Community organization and community participation and Community development)**
- **c. Public Health service delivery (theory and field observation)**

### Course objectives

Objective of the course is to help the students to understand, describe and explain

1. Concept, historical development, principles, functions and methods of Public Health
2. Concept of health and disease, spectrum of health, prevention of disease and promotion of health
3. Historical background and development, principles, and strategies of primary health care (PHC)
4. Application of primary health care and health services in Nepal
5. Current public health transition

### Course contents

**Unit 1. Introduction to Public Health**

<table>
<thead>
<tr>
<th>a. Concept of health and disease</th>
<th>40 hrs</th>
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<tr>
<td>Definitions of Health, spectrum of health</td>
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Concept of disease
Determinants of diseases

b. Concept of public health
   Historical development of public health
   The pre-Christian period
   The middle ages
   The age of the black death
   The Renaissance period
   The 18th and 19th centuries - enlightenment period
   Contemporary concept
      Functions of public health
      Core functions of public health
      Essential services of public health
      Activities and programmes of public health

Scope of public Health
   Area requiring community-based public health services and activities
   Field, which deals with preventable illness, disability and premature death
   Scope that demands organizational, managerial and community leadership
   Research in different aspects of health and advocacy

Bio-medical and sociobehavioural concept of public health
Differences and similarities between public health and clinical medicine
Concepts and distinction between public health, community health, social medicine and socialized medicine

b. Methods of public health
   Epidemiological approach
   Demographic approaches
   Public health laboratory science approach
   Economic theory approach
   Management theory approach
   Sociological and anthropological approach
   Psychological and behavioral approaches

c. Preventive Health
   Concept of prevention (communicable and non communicable disease models)
Levels of Prevention
Strategies of prevention
Practices of prevention

d. Health Promotion
   Concept of health promotion
   Ottawa Charter of health promotion
   Priorities for health promotion (in reference to Jakarta Declaration)
   Scope of health promotion

e. Public health systems and factors affecting public health system
   Concept of public health system
   Factors influencing public health and public health system
      Internal factors within the community, country
      External factors outside the country: international relations, resolutions of
global events like Alma-Ata Conference, ICPD, People’s Health
   Assembly and others

f. Current public health problems and issues
   Health transition: changing health problems, values and norms of people,
opportunities and challenges in health
   Epidemiological transition and concept of double /triple burden of diseases, re-
emergence of diseases
      Group I    communicable diseases
      Group II   non-communicable diseases
      Group III  trauma and injuries

g. Development of public health in Nepal
   Ancient and pre unification period
   Pre Rana Regime period
   Rana Regime period
   Public health after 2007 BS

Unit 2. Primary Health Care (PHC)       30 hrs

   a. Historical background of Primary Health Care
      Investment on health and outcomes
      Inequality in health
Success stories in health in some countries
People’s efforts to address health problems

b. Alma-Ata Conference on Primary Health Care
   Concept, principles and strategies of Primary Health Care
   Basic components of Primary Health Care
   Declaration of Alma-Ata Conference
   Challenges and obstacles to PHC: selective PHC, cost recovery of health services,
   Structural adjustment programs and investing in health care.

Unit 3. Operational approaches and strategies of Primary Health Care 30 hrs

a. Community Health Development
   Community Organization: concept, principles, processes and importance
   Role of health workers in community organization
   Application of community organization theory and practice in community health program
   Definition of development: concept and goals of community development
   Health and different economic, political, social aspects of development
   Ways of viewing community development: as a process, method, program, and movement
   Techniques of community development and their application in public health programs: external agent technique, internal resource mobilization technique, multiple agent technique

b. Feature of community development in Nepal and their application in health programs
   Emphasis on all round integrated development, rural development
   Principles of mobilization of local resources /sustainable development
   Participation of the Village Development Committees, role of health workers, NGOs, CBOs and INGOs in community health development
   Poverty alleviation
   Gender and social inclusion

c. Community Participation in Community Health Service
   Concept of community participation with special reference to health service delivery and utilization
Levels of community participation: compliance, collaboration
Concept of community empowerment and local control
Forms and process of community participation in health programs
Involvement of communities in health service delivery and utilization process, participation in phases of resources identification, health needs identification, planning health program, implementation, monitoring and assessment
Enabling factors for health workers related to Community Participation
communication skills: Interpersonal and group communication
process of conducting meetings, discussions and decision making
skills of involving community members in implementing health program

d. Group dynamics and leadership
i. Group dynamics
   Concept of group dynamics
   Propositions about groups
   Natural and planned formation of groups
   Stages of growth of a group
   Group roles
   Group problems and their effects on community health programmes – apathy or non participation, conflict, hip-pocket decision and hidden agenda
   Ways of reducing group problems

ii. Leadership
   Concept of leadership
   Types of leaders
   Techniques of identifying leaders
   Role of community leaders in community health programme
   Health workers’ relationship with leaders and its impact on community health programme

e. Resource mobilization
   Technique of involving community members in identifying resources available in the community for health programs
   Mobilization of existing health committees

Unit 4. Public health service delivery 10 hrs
   Concept of Health service delivery
Various level of health service delivery in Nepal
Various approaches of health service delivery in Nepal
Role of the District Public Health Office
Health work forces in Nepal
Concept and scope of curative, preventive and promotional health as defined in national health policy

Teaching Learning Methods
Teaching learning methods of this course include didactic lectures, seminar, group work, discussion in class room setting.

Observation visit of health institutions and facilities: Hospital, PHCC, HP, SHP, urban health clinics, to learn about the DOTS clinics, Fertility care services, Maternal and child health clinics and relevant organizations, Different Divisions of Department of Health Services, UN Agencies

5. Evaluation

<table>
<thead>
<tr>
<th>Evaluation Method</th>
<th>Percentage</th>
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<tr>
<td>Internal assessment in different forms</td>
<td>20%</td>
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<td>Final examination</td>
<td>80%</td>
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6 Reference Materials

4. Hale C.Shrestha IB. Bhattacharaya A “Community Diagnosis” HLMC1997
12. Cartright D and Zander A “Group Dynamic”.
Bachelor in Public Health

YEAR TWO
### Paper VIII

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Family Health I</th>
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<tr>
<td>Hours: 120</td>
<td>Full Mark: 100</td>
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<td></td>
<td>Pass Mark: 50</td>
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**Course Description**

This course offers an opportunity to develop a holistic understanding of family health with life cycle and continuum of care perspectives. It helps to develop understanding of health status and health problems of the different age groups, the challenges that exist and the approaches being tried to address those.

**Course Objective**

This course is designed to impart the knowledge and skill regarding family health with lifecycle and continuum of care perspectives.

At the end of the course the students will able to explain
1. the concept of family health
2. life cycle perspective of health
3. health status of the different age groups
4. understand the policies, strategies and programmes to address the needs of the different age groups from the governmental and non-governmental sectors
5. understand, plan and implement small projects to address the health needs of different age groups.

**Course contents**

**Unit 1 Introduction to Family health**

*10 hrs*

- Explain concept on family health
- Describe holistic model of family health biomedical, bio-psycho-social models and their determinants
- Functions of family and its importance in health, illness, recovery and rehabilitation

**Unit 2 Life-cycle perspective in health**

*10 hrs*

- Understand the concept of life-cycle perspective of health with examples
- Life cycle perspective with major issues, and determinants, appropriate measures at different stages of life including, newborn health, child health, adolescent health, maternal health and health of elderly
Unit 3 Child health 20 hrs
Child health situation of the Region and Nepal
Major determinants of childhood morbidity and mortality - neonatal, infancy and under five children
Underlying socio-economic, educational and cultural factors affecting child rearing and child care practices in Nepal
Mother’s health and its relation with child health
Child survival strategies historical perspective and the current approaches
Policies, strategies and programmes to address newborn, infancy and under five
Progress in child health indicators and the lessons learnt
Describe importance and methods of child health surveillance

Unit 4 Adolescent Health 15 hrs
Identify the adolescent health needs for growth and development of physical, emotional and social life.
Analyse adolescent’s problems in Nepal, including teenage pregnancy, STDs, drug abuse, alcoholism, smoking, accidents, violence, crime etc.
Approaches to address the adolescent health needs, health promotion, life skill education including national adolescent health strategy

Unit 5 Reproductive Health 15 hrs
Describe the concept of reproductive health, its determinants
Explain major components of reproductive health
Explain the major problems related to reproductive health (STD including HIV/AIDS)
Describe the approaches to address the reproductive health problems

Unit 6 Maternal Health 20 hrs
Describe on maternal health situation (morbidity and mortality) and its determinants
Identify the approaches to address the maternal health problems
Discuss the components of maternal health services for maternal morbidity and mortality including PMTCT
Explain the approaches (Policy, Strategies and Programmes) to address the maternal health problems

Unit 7 Aging and Health 15 hrs
Describe the concept of healthy aging
Identify the issues of healthy aging
Identify the major health problems and their magnitude
Describe approaches to address the health of elderly people
Discuss the role of the state and other sectors for support as well as social security
Unit 8 Family Planning and Contraceptive techniques 10 hrs
Describe types and recent trends in contraception, their mode of action, efficacy, indications and contraindications. Importance of counselling and follow-up; calculation of indicators that are commonly used
Analyse the importance of FP programme in health (social, economic, environment, quality of life etc)
Discuss factors associated with use and non use of contraceptives, benefit, side effects, and contraindication of contraceptive devices
Describe the concepts of contraceptives services
  Overview on concept Menstrual cycle, Conception and Contraception
  Describe the benefit, side effect, contraindication of contraceptive device
  Explain the approaches to conduct the FP programmes
Discuss the role men in family planning

Unit 9 Planning, organizing, managing and evaluating small health projects in child health, maternal health and family planning programmes 5 hrs

Teaching learning methods
Class room lecture, Group work, discussion and presentation, Observation
Practical: Observation of different contraceptive methods, Observation of counselling for family planning, Observation at EPI clinics, Analysis of the secondary data from FP clinics, ANC

Evaluation criteria
  Internal assessment in different forms 20%
  Final examination 80%

References
1. Women of South East Asia, A Health Profile WHO
2. Situation analysis, Women and Children of Nepal, UNICEF
3. Nepal Demographic and Health Survey
4. Child Nutrition and Health, Ramesh Kant Adhikari and Mriam Krantz
5. Reproductive Health, WHO
7. Family Planning Policy and Strategy
8. Safe Motherhood Policy
9. Reproductive Health Protocols
10. STD Case Management Guidelines
13. National Reproductive Health Strategy
14. National Adolescent Health Strategy
16. Active Ageing: A Policy Framework Noncommunicable Disease Prevention and Health Promotion Department, World Health Organization
17. Maternal and Reproductive health journals, journals related to newborn, child and adolescent health and aging.
## Course Title
Health Promotion and Education I

### Course Introduction
This course offers an opportunity to develop a holistic understanding in the field of public health particularly by studying the concept and role of health promotion and health education in promoting health, preventing diseases, protecting health and controlling epidemics. It also helps to develop understating of theories and principles of health promotion and education including various fundamental factors involved in health education process focused on bringing about favourable changes in health behaviours of the people. Helping develop skills in selecting appropriate health education methods and media and their uses is another important aspect of the course. Participants of the course will be crucial in establishing norms of healthy people in healthy environment through the application of health promotion and education theories and principles.

### Course Objectives

1. Describe the role and importance of health promotion and education in public health
2. Describe and differentiate the meaning, definitions, principles, scope, strategies, approaches and various models of health promotion and education
3. Applies the theories, principles of learning, motivation, perception, and behaviour framework in health promotion and education process
4. Describe health belief, behaviour and various behaviour change models in line with health promotion and education process
5. Define and describe the concept, elements, process, types and barriers to communication in health promotion and education process
6. Describe various methods and media of health education and their appropriate selection and use
7. Prepare and use selected health education media in classroom and field setting

### Course Contents

#### Unit 1 Health Promotion  
30 hrs

- Context of health promotion in public health
- Meaning of health promotion: general meaning as promoting health in the context of promotive, preventive, curative and rehabilitative health
- Ottawa Charter and definition of health promotion
- Overview the Health Promotion strategies and actions as proposed by Ottawa Charter
- Build healthy public policy
- Create supportive environment
- Strengthen community action
Develop personal skills
Reorient health services
Overview of international declarations, statements, charter and recommendations supporting the action areas of health promotion and education
   The Adelaide Recommendations on Healthy Public Policy
   The Sundsvall Statement on Supportive Environment
   The Jakarta Declaration on Health Promotion
   The Mexico Statement
   The Bangkok Charter
Vision, mission, goal and objectives of health promotion
The process of health promotion: Focus, strategies, impact and outcomes
Outcomes of health promotion: Intermediate health outcome and health promotion outcomes
Approaches of health promotion: healthy settings, healthy population and healthy lifestyles
Aim, activity and value of general approaches to health promotion: medical, behavior change, educational, planned and social change approaches
Overview of various models and dimensions of health promotion
Overview of International Union for Health Promotion and Education (IUHPE): background, goal, objectives, organization structure, activities
Overview the vision, mission, goal, strategies and activities of Victoria Health Foundation in health promotion

Unit 2 Health Education 30 hrs
Introduction to health education
Concept and role of health education in preventive, promotive, curative and rehabilitative ends
Overview and critical analysis of various definitions of health education: Definition of DB Nyswander, Mayhew Deriberry, Dazzle Ward, Thomas D. Wood C.E. Turner; RE Grout, L.W. Green; C W Stuart, WHO Scientific Group; SOPHE/AAPHER, National Education Association (NEA/AMA)
Aims, purpose, and principles of health education
Scope and content of health education

Health behaviour and behavioural change process
Definition, concept of human behavior
Concept and principles of behaviour change and the change process in health
Various models of behavior change: EM Rogers’s adoption process and Kurt Lewin’s model of health behavior change
Educational process for health behavior change
   Cognitive skill, (knowledge)
   Affective skill (attitude)
   psycho-motor skill (overt)
Meaning, concept and process of voluntary and planned change
Resistance to change and overcoming resistance to change
Community organization strategy for health behavior change
Fundamental factors involved in health education process
a. The process of knowing: stimuli, sensation, perceiving and health knowledge
b. Learning in health education
   Meaning and definitions of learning
   Principles of learning
   Steps in learning as: information, motivation readiness to act, taking action
   Various modes of learning
c. Perception in learning and health education
   Meaning and definition of perception
   Principles of perception
   Factors affecting perception: psychological and socio-cultural
d. Motivation in learning and health education
   Definition of motivation
   Motives and drives
   Theories of motivation propounded by Maslow, Rosenstock, Kurt Lewin and Buchman, Kelly

Unit 3 Health communication and health education methods and media 30 hrs
Health communication
a. Meaning and definition of health communication
b. Elements and process of health communication
c. Various models of communication: Aristotle, Cloud Shannon, Schramm, Leagans and summary of the models
d. Nature of one way and two-way communication
e. Principles of effective health communication
f. Health communication barriers and ways to overcome them
g. Behavioral change communication (BCC)
   Meaning, aims and features of BCC
   Strategies of BCC and their application in health education process
h. The idea of information, education and communication (IEC)

Health education methods
Meaning and importance of health education methods
Meaning, feature, use and strengths and limitations of various types of health education methods:
   Individual methods: counselling, interview
   Group methods: demonstration, group discussion, buzz session, field trip, workshop, symposium, mini-lecture, brain storming, interview forum, role play
   Mass methods: exhibition, advertisement, film show, public addressing system - speeches, miking, radio (AM & FM) broadcasting, television telecast, internet

Selection of appropriate method of health education
Criteria for the selection of suitable method: nature and size of target population, stage in behavioural change (adoption) process, nature of health education contents (messages)
Practice in techniques of use of individual, group and mass method in classroom and field setting

Media of health promotion and education
Meaning and importance of health education media
Meaning, feature, process of preparing/production, use and strengths and limitations of various types of health education media:
  - **Audio media:** songs, stories, radio jingle, spots and announcement
  - **Visual media:** poster, flash cards, flip charts, hand bills, pamphlets, slides, film strip, models, hoardings, banners, stickers
  - **Audio visual media:** film, video, television, hand puppets

Selection of appropriate health education media: Criteria for the selection of health education media: nature and size of target population, stage in behavioural change ( adoption) process, nature of health education contents (messages)
Preparation and use of selected health education media in classroom and field setting:
  - Technique of preparation and use of poster, flash card, flip chart, pamphlet, song, video clips and scripts, radio spots

**Unit 4 Various approaches to health promotion and education**  15 hrs
  - Pedagogy vs andragogy (Non-formal adult education (NFE) approach)
  - Conscientization (Paulo Freire) approach
  - Propaganda approach
  - Social marketing approach
  - Child to Child approach
  - Distance learning approach
  - Risk Approach: Tobacco use, Indoor smoke, Macro/Micro nutrition, sexual behaviour etc

**Unit 5 Roles of health promotion and education in public health programmes**  15 hrs
  - Role and functions of health education specialist
  - Role and functions of non-health education specialist, health professionals and health workers in health education
  - Role and functions of health education and health promotion as disciplines in Primary Health Care
  - Promotion of health, prevention of diseases, and control of epidemics
  - Various public health programmes such as malaria, Dengue, Kala-azar control, tuberculosis control, NPI, FP/MCH, CDD and ARI Programmes

**Teaching Learning Methods**
The teaching learning activities will be continued around mini lecture, group work and discussion, field visit, seminar and report writing. The instructional materials will be
Usual classroom materials: chalk board, flip chart, overhead projector, power point presentations
Flexible classroom for lecture and group work

Governmental and non-governmental organization having on-going health education programme

Computers with multi-media softwares

Sample of evaluation reports

Evaluation

Internal assessment in different forms

(Written class test – 10%, Term paper – 4%, Project work – 6%)  20%
Final examination  80%

References

8. JE Park and K Park; Preventive and Social Medicine, M/S Banarsidas Bhanot Publishers, Prem Nagar, Jabalpur, India, Recent edition
9. David Werner and Bill Bower; Helping health Workers Learn; T Hesperian foundation, Palo Alto, USA
10. HS Ross and PR Mico; Theory and Practice in Health Education; Maryfield Publishing Company; 285 Hamilton Avenue; Palo Alto, California, USA.
11. David Werner: Where There Is No Doctor; revised for India by voluntary health association of India
Total credit hours: 120

Course Introduction

This is a fundamental course of epidemiology designed to define and understand the natural history of disease, classify diseases and measure by Time, place and person and establish causation of disease.

Course objectives

At the end of the course, the students will be able to understand and apply the principles of epidemiology in the prevention and control of diseases and in the planning and evaluation of health services and programmes. Specifically students will be able to

1. explain agent, host, and environment interactions and be familiar with different models of disease occurrence
2. define and describe natural history of disease
3. understand measures of disease frequency
4. understand and describe the types of epidemiological studies
5. understand and appreciate the potential errors in epidemiological studies
6. describe association and causal inference in epidemiology
7. use epidemiological concepts, methods and strategies for prevention and control of diseases
8. apply epidemiological principles and methods for the planning and evaluation of health services and health programmes including screening

Course Contents

Unit 1 General Epidemiology

Terminologies used in epidemiology of communicable diseases:
- infection, communicable disease, pollution, contamination, infestation, epidemic, endemic, sporadic, pandemic, epizootic, enzootic, source of infection, reservoir, case, carrier, host, incubation period, communicable period, secondary attack rate, agent, antigenicity, infectivity, pathogenicity, virulence, infective dose, environment, vector, parasite

Spectrum of health and disease
Natural history of disease

Disease transmission, prevention and control:
  relationship of agent, host and environment
  ways of breaking the infectious disease cycle
  prevention and control of communicable diseases
Concepts of control and eradication of disease including disease surveillance
Defence mechanisms of the body:
  Immunity, immunization, herd immunity, planning and implementation of immunization programmes
Clinical epidemiology:
  Introduction, definition of normality and abnormality, sensitivity, specificity, predictive value, ROC curve (receiver operating characteristic curve), prevention in clinical practice

Unit 2 Basic Epidemiology  80 hrs

Introduction
  Science, research and epidemiology
  Definition, scope, concept, uses of epidemiology and its historical development
Distribution by time, place, and person
  Characteristics of person:
    Intrinsic condition of person: age, sex, religion, ethnic background
    Extrinsic condition of person: education, language, socio-economic status, culture
  Characteristics of place:
    Geographical distribution: rural-urban, regional, national, international
  Characteristics of time
    Short-term fluctuations: common-source, propagated, slow epidemics
    Periodic fluctuations: seasonal and cyclic trends
    Long-term or secular trends
Measures of disease frequency
  Rate, ratio, proportion, population at risk, prevalence (rate), incidence (rate), cumulative incidence proportion
  Mortality and morbidity rates
Measures of association:
  Absolute risk: risk difference, attributable fraction, population attributable risk
  Relative risk/risk ratio
  Odds ratio
Types of epidemiological study
  Descriptive studies/observational studies
  Analytical studies: ecological, cross-sectional, case control, cohort
  Experimental studies: Randomized controlled trials, field trials, community trials
Association and causation
  Epidemiological triad, wheel, and pie models of disease
  Types of associations
Establishing causal relationship
Issues in deriving causal inferences
  Bias
  Confounding
  Interaction
Sources of data
  Principal sources of data and their types and reliability
  Limitations of sources of data: vital records, census, morbidity and mortality surveys,
  Disease notifications, registrations
Epidemiological classification of diseases
  Idea and need for classification
  Principles of classification
  International Classification of Disease (ICD)
  Investigation of an epidemic and its management
  Applying epidemiology to evaluation and policy
  Evaluating health services and screening programmes
  Epidemiology and health policy

Teaching Learning Methods

Lectures, group discussion, interaction, presentations, critical review of article and library study

Evaluation Criteria

Assessment of students will be carried out by teachers during the period of the course, such as class tests, project reports. University exams will take place at the end of each year. Full marks and pass marks for the examination will be as follows:

  1. Internal assessment: 20 (Full marks); 10 (Pass marks)
  2. Final examination: 80 (Full marks); 40 (Pass marks)

Reference

1) R. Bonita, Basic epidemiology 2002
2) Park, Textbook of preventive and social medicine
3) L. Gordin, Epidemiology 4th edition 2008
4) AB Joshi, Fundamentals of epidemiology vol I and II
5) Barker DJP, Practical epidemiology
6) K. Rothman, Epidemiology: an introduction

Curriculum of BPH – Year two 57
Paper XI

Course Title: Community Health Diagnosis (Residential Field)

Hours: 120  Full Mark: 100  Pass Mark: 60

Course Introduction

Community Health Diagnosis is an integrated course comprising several sub-specialties within community medicine course at large. This course is designed to enable the students to apply the principles of Primary Health Care (PHC) in the process of community health diagnosis. The aim of the community health diagnosis is to acquire skills to apply basic methodologies of community medicine – epidemiology, biostatistics, demography, family health, environmental health, health education, and public health sociology/anthropology. The course will also be helpful in learning from the community.

The course consists of the following components
   Unit 1. Community Health Diagnosis theory
   Unit 2. Community Health Diagnosis residential field

Course Objectives

The course aims to enable the student
1. Describe community health diagnosis
2. Explain importance of community health diagnosis in public health
3. Integrate different public health disciplines to address health problems
4. Acquire basic skills of conducting community health diagnosis

Course contents

Unit 1 Community Health Diagnosis (Theory)

   Introduction to community health diagnosis

   Concept and objectives of Community Health Diagnosis
   Differences and similarities between Community Health Diagnosis and clinical diagnosis
   Discuss the importance and relevance of Community Health Diagnosis for public health professionals
Components and processes of Community Health Diagnosis

- Components of Community health diagnosis
- Steps and processes of community health diagnosis
- Different approaches to Community Health Diagnosis
- Different method/techniques (observation, interviews, focus group discussion, participatory appraisal, etc.) and tools (observation checklist, questionnaire, discussion guideline, etc.) used in Community Health Diagnosis.
- Importance and ways of prioritization of the problems in the community
- Community diagnosis and health surveillance in Primary Health Care
- Concept of micro health project in relation to Community Health Diagnosis

Designing the study to make the community diagnosis

- Setting of objectives
- Choosing variables required meeting objectives.
- Generation of methodology, including sampling method, survey instruments, logistic, data analysis, presentation and communication of health information.
- Interpretation of information
- Content analysis and describe the results obtained.
- Ethical aspects (Ethical aspects of community diagnosis)
- Review of epidemiological studies (Review of theories, formula and indicators)
- Plan and techniques of presentation
- Recommendation

Format for report of community diagnosis.

- Preparation of written community diagnosis report: steps, components and format.

Unit 2 Community Health Diagnosis (Residential field)

Unit objective

a. Communicate with the people in relation to the health problems in the community in socio-cultural context of the community
b. Apply different methods to collect data required for community diagnosis.
c. Use different tools of data collection that is required for community diagnosis
d. Analyze and interpret the data to identify the problems and ways of their solutions in the community
e. Prioritize the problems based on observed and felt needs and available resources.
f. Dissemination of the findings of community diagnosis process by presentation to the community and in the campus.
g. Identify the community resources to address the problems
h. Plan and implement a micro health project based on prioritization of needs with the participation of the community.
i. Write a report of community diagnosis.
Community Health Diagnosis (Field)
In the community – rapport building, meeting with the people, data collection, preliminary analysis, community presentation, prioritization of the problem, implementation of micro health project
Presentation in the campus
Submission of the report to the Department of Community Medicine and Family Health

Methods
There will be separate methods for Unit 1 and Unit 2 of the course. Teaching learning methods of unit 1 include theory lectures, discussions, presentations by the students and integrated teaching.

For Unit 2 the students will be placed in the community for the period of 30 days in small groups. Prior to departure to the field, one week orientation will be given to the students.

Orientation to the students
- Orientation about the community they will be posted
- Orientation about process of field work
- Development of the specific objectives by each group
- Development and pretest of specific tools for data collection,
- Development of work plan in the community
- Organize logistics

Evaluation

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<th>Component</th>
<th>Marks</th>
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<td>Community Health Diagnosis theory and integrated teaching</td>
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<td>Internal assessment</td>
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<td>Final examination</td>
<td>32</td>
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<td>Community Health Diagnosis residential field</td>
<td>60</td>
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<td>20</td>
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<td>Final viva</td>
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</tbody>
</table>
References

2. Mc Curker J “Epidemiology in Community Health; American Medical and Research Foundation” Rural Health series, Kong M.et. al, “Tropical Medicine”.
3. Programme. FJ Bennett [ED]; “Community Diagnosis and Health Action- a manual for tropical and rural areas” 1997.
Course Title: Environmental Health and Occupational Health II

Hours: 120  Full Mark: 100  Pass Mark: 50

Course description

The course offers an opportunity to understand and internalize emerging environmental issues and problems globally and locally. The course is also expected to help the students to link between the major environmental concerns to the implication of public health in general. The course will also apply the theoretical and conceptual knowledge and available environmental policy in understanding human activities in deteriorating and exploiting the environment and find a sustainable way for its mitigation.

The course consists of the following sections
   a. Applied environmental issues and health
   b. Occupational health

Course objectives

Objective of the course is to assist the students to understand, describe, explain and analyse the following

1. Environmental pollution and its health impact
2. Environmental Toxicology assessment and management
3. Environmental regulations at global, regional and national level
4. Environmental biotechnology and Public health
5. Occupational Health and Safety
6. Importance of Ergonomics in work place

Course contents

The course contents are divided into two groups with several units. The contents are elaborated under each of the units.

A: Applied Environmental health

Unit 1 Environmental pollution and its health impact  15 hrs

Concept of environmental burden of disease
Spatial and temporal emerging issues including Arsenic
Acid rain, ozone depletion, global warming
Climate change and health impact

Measures adopted at local to government level to combat climate change impacts
Unit 2 Environmental Toxicology 15 hrs
Fate or sources of pollutants
Environmental Hazards and risks

- Biological hazards
- Chemical hazards
- Physical hazards
- Psychological hazards

Environmental health risk assessment

Unit 3 Environmental health management 15 hrs

Map Reading and Orientation for environment Management
- Type of maps, Map Orientation, Scale, Contour, Drainage, Land use, Settlement, Roads, Infrastructure services Administrative boundary, Index or Legend
- Environmental Impact Assessment (EIA, IEE, SEA)
- Environmental Health Impact Assessment (EHIA)
- Environmental assessment of health organization
- Environmental monitoring and evaluation
- Environmental management in disaster
- Environmental accreditation

Unit 4 Environmental regulation 5 hrs
Global and national initiatives related to environmental health: policies, plan, strategies, and legislations including conventions and treaties and Environment health programmes

Unit 5 Environmental Biotechnology and Public health 10 hrs
Concept of biotechnology to pollution control
- Biodegradation of pollutant
- Microbial bioremediation, phyto-remediation
Bio-safety
- Risk assessment of biotechnological products (genetically modified foods and organisms)
- Bio-safety guidelines
B: Occupational Health

**Unit 1 Occupational Health and Safety** 10 hrs
- Historical development
- Definition
- Concept
- Principles
- Elements

**Unit 2 Industrial Hazards** 20 hrs
- Occupational Dermatitis
- Occupational respiratory diseases
  - Silicosis
  - Pneumoconiosis
  - Asbestosis
  - Byssinosis
  - Bagassosis
  - Farmer’s lung
  - Bird Fanciers lung

**Unit 3 Agriculture is a big industry** 20 hrs
- Sectors
- Health hazards
- Managements
- Occupational health risk factors and their management
- Health problems of aging population
- Health problems of child care workers
- Women workers and their risk factors and their management
- Professional risk factors and their management
- Worker’s compensation
- Ergonomics
- Labour Act, occupation health policy in terms of social, political and economic aspects
Unit 4 Professional health hazards  

10 hrs

- Road Traffic Accident (RTA)
- Chronic Obstructive Pulmonary Disease (COPD)/Bronchial Asthma
- Smokers’ lung
- Health profession

Teaching learning methods

Teaching learning methods of this course includes didactic lectures, group work, and discussion in the classroom setting.
Laboratory demonstration classes will be held along with hands-on exercise. Educational tour will be organized to visit different organizations related to environmental issues.

Evaluation

There would be a separate performance evaluation of section A and B.

Internal assessment in different forms (Written test, term paper, demonstration report, presentation) 20%

Final written examination 80%

References

Course Title | Medical Sociology and Medical Anthropology  
---|---  
Hours: | 120  
Full Mark: | 100  
Pass Mark: | 50

**Course Description**

The course imparts the basic concepts and understanding in Sociological and Anthropological subject matter, theories, concepts, trends and cultural systems. The course aims to impart the basic concepts and the knowledge in medical sociology/anthropology, socialisation in health, culture and health, provider consumer relationships in public health, indigenous health care system, alternative health care practices, behavioural sciences, and research and health politics.

**Course objectives**

Objective of the course is to help the students to understand, describe, explain and analyze

- Sociological and anthropological concept applied to public health
- The concept of Sociology/Anthropology in Public Health Science/sector
- The holistic cross-cultural approach in planning, execution, monitoring and evaluation of health programmes
- Historical development of society and health care practices
- Ethno-medicine, socio-cultural patterns, socialisation, indigenous and alternative health care practices
- Provider-consumer relationship at their work settings
- Sociological and anthropological research methods in public health research
- Social psychological factors for motivation in adopting of innovations on acceptance of appropriate health care facilities as per the need.
- Health politics and develop appropriate system of health

**Course Content**

The course contents are divided into several units. These contents are elaborated under each of the units.

**Unit1 Sociology**  
10 hrs

- Historical Development of Society
- General outline of the subject matter of sociology
Definition of sociology
Typological subject matter of sociology
Relationship of Sociology with Anthropology, Psychology, Public Health and Health Education
Sociological contributions in Public Health

**Unit 2 Anthropology**  
10 hrs

Anthropology
Scope of Anthropology
The holistic approach
The sub-division of Anthropology
Anthropological contributions in Public Health

**Unit 3 Concept of Social Processes**  
15 hrs

Socialization: Meaning, Definition, Characteristics, Agent/Agencies and Stage of Socialization.
Acculturation: Introduction, Characteristics
Assimilation: Meaning, Definition, Characteristics, Factors favoring Assimilation
Enculturation: Meaning and Definition
Conflict: Introduction and Characteristics
Social Institution
Introduction, Definition, Characteristics, Types and Basic Function of Marriage Family, Kinship System,
Religious, Political Economical and social Institutions: Introduction, contribution on health development
Cultural and Social Change
Introduction, Definition, Characteristics of Social Change and Cultural Change
Factors of Socio-cultural Change
Process or Mechanism of Socio-cultural Change
Consequences of Social and Cultural Change

**Unit 4 Medical Sociology/Anthropology**  
15 hrs

Introduction to Medical Sociology/Anthropology
Criteria and Contributions of sociology/anthropology to Public Health
The present status of Medical sociology/Anthropology
Difference between Illness, sickness and diseases

**Stages of Illness**

The symptom experience stage.
Assumption of sick role stage.
The medical care contact stage.
The dependent/patient role stage.
The recovery of rehabilitation stage

**Unit 5 Interpersonal Relationship (Provider-Consumer/user Relationship) 15 hrs**

Meaning and significance of inter-personal/Provider-Consumer/user Relationship
Talcott Parsons model of the doctor – patient relationships applied to Public Health
The Szasz – Hollander model applied to Public Health
Communication pattern between professional and indigenous health care practices

**Unit 6 Culture and health 15 hrs**

Meaning and definition of culture
Characteristics of culture
Elements of culture
Personalistic and naturalistic health care system
Practice of family medications in Nepal
Role of indigenous healers and alternative medications in Nepal

**Unit 7 Sociological/Anthropological Research Methods applied to public health 15 hrs**

Sociological and Anthropological research methods applied to public health
Types of anthropological research methods
Ethical guidelines
Data collection technique and tools
Process of field work
Data processing and presentation
Unit 8 Behavioral Sciences (Psychology) 15 hrs

Terminology: Terminology and concepts useful in studying health problem, body-mind relationship, Level of consciousness, Dynamic system of personality, Drives and motives, Adjustment mechanism, Stress, crisis and disease
Definition and significance of behavioural science
Relationship between sociology, psychology anthropology and public health.

a. Motivation

Meaning and definitions of motivation
Maslow’s concept of human motivation, including hierarchy of needs
Role of motivation in learning and health education
Motivation and adoption of innovation
Motivation towards utilizing modern health facilities

b. Emotion

Meaning, characteristics
Theories of Emotions
States of Emotions: Positive emotion (Love, Laughter, Hope, Optimism, Self Confidence and Negative emotion (Anger, Fear, Sadness, Boredom, Guilt)

Unit 9 Health Politics applied to Public Health 10 hrs

Health Politics (Concepts and challenges)
Primary health care: The root for health politics
Comprehensive or Selective
The health economics of CPHC and SPHC
Executive, Legislative, and judiciary aspects of Health in Nepal

Teaching learning methods
Teaching learning methods of this course include didactic lectures, seminar, group work, presentations review papers discussion in class room setting.

Evaluation

Internal assessment in different forms 20%
Final examination 80%
References
1. Acts and Rules of Nepal
2. Bhatia and Bhatia: Psychology
3. Constitution of Nepal
13. Park and Park: Preventive and Social Medicine, Banaridas, India, Recent edition
Course Title: Public Health Administration and Management I

Hours: 120  Full Mark: 100  Pass Mark: 50

Course Introduction

The course offers opportunity to learn the modern concepts and principles of administration in general and public health administration in particular. The student will also get opportunity to familiarize with the basic concept of the health economics, financing and health budgeting. The course attendant will also develop the competency of project formulation and management.

Course Objectives

1. Introduction to the concepts of administration and management, general administration, development administration and health administration.
2. Explain the modern concept of administration and principles of management.
3. Explain the components of public health administration.
4. Explain the need for competent administration in health services.
5. Describe organizational development and techniques of improving administrative and management effectiveness.

Course Contents

Unit 1 Introduction to Public Health Administration & Management  20 hrs

Concept, Principles and scope of public health administration and Management
Philosophy, methods and objective of the delivery of public health services
Functions of public health management \ administration

Unit 2 Models of PHA and Management  80 hrs

POSDCROB model
Planning of Health Service
   Introduction to health services
   Strategy formulation
   Elements of planning
   Different method of planning
   Setting objectives: operations, research for planning
   Management approach in planning
Types of health planning
   Problem solving planning
   Programme planning
   Co-ordination of efforts and activities planning
   Planning for the allocation for resources
Creation of a plan
Design of standard operating Procedure
Project Planning

Organization of Health Service
  Introduction
  Importance of organization structures [organs gram]
  Organization theory: a] Classical b] modern

Staffing Aspects of the Organizing Functions
  Staffing pattern
  Role and responsibilities
  Recruitment and placement
  Career planning opportunities training promotion
  Performances appraisal
  Staff grievances and negotiations
  Human resources development

Directing
  Introduction
  Human factor
  Keys to successful directing
  Delegation as a means of directing
  Motivational aspects
  Leadership
  Communication
  Monitoring, supervision and evaluation

Controlling function in health services administration

Co-ordination of Health Services
  Introduction
  Types of co-ordination
  Conceptual co-ordination
  Functional co-ordination
  Organizational co-ordination

Budget
  Introduction, Process of budgeting
  Fiscal planning [budgeting, accounting and auditing]

Reporting
  Importance
  Techniques of report writing format and content
### Unit 3 Management Promotion Strategies 10 hrs

- Organizational communication
- Organizational development
- Organizational behavior management
- Management evaluation

### Unit 4 Project Formulation and Management 10 hrs

- Project identification
- Project proposal writing
- Identifications of funding sources
- Project management
- Project monitoring
- Programme evaluation review technique\ critical path method

#### Teaching learning methods

Teaching learning methods of this course include didactic lectures, seminar, group work, and presentations review papers discussion in class room setting.

#### Evaluation

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<tr>
<td>Final examination</td>
<td>80%</td>
</tr>
</tbody>
</table>

#### References

5. Honion, Homian “Public Health Administration”.
7. Tripathy PC and Reddy PN “ Principles of Management”
Bachelor in Public Health

YEAR THREE
Paper XV

Course Title | Family Health II
Hours: 120 | Full Mark: 100 | Pass Mark: 50

Course Introduction
This course builds on the family health content of the second year and deals with the application of the knowledge in the respective fields. Additional knowledge and skills are gained in the area of responsible parenthood, gender, gender analysis and mainstreaming, gender sensitive health planning with a right based approach. Gender based violence as public health problem and the role of health worker/manager in addressing the problem; the basic concept and the root causes of inequity and measures to address it in the health sector are also dealt with.

Course Objectives
This course is designed to impart the knowledge and skill in applied aspects of family health with gender and life cycle perspective for health development.

Objective of the course is to help the students to understand, describe and explain
1. Importance of family in health, illness and recovery
2. Responsible parenthood and its importance for family and beyond
3. Concept of some child health problems as social problems
4. Concept of women’s health, gender and development
5. Gender and its effect on health
6. Basic concept of gender analysis and mainstreaming
7. Gender based violence
8. Basic concept of marginalisation and its impact on health

Course contents

Unit 1. Family Health and Responsible Parenthood 20 hrs
- Family health needs and determinants of healthy family
- Functional and dysfunctional families
- Reproductive health concept and elements
- Meaning and concept of responsible parenthood
- Preparation of parenthood, practices and requirements
- Responsible parenthood practices and its effect on family health
Unit 2. Social problems in children 20 hrs

Street children
Physical and sexual abuse of children,
Abandoned children, street children and child labour
Conflicting situation, urbanization and refugee situation on children
Child trafficking
Drug and alcohol abuse among children

Unit 3. Disability and Rehabilitation 15 hrs

Concept of disease, impairment, disability and major factors leading to disability
Concepts of rehabilitation including community based rehabilitation
Preventive measures
Policies, security and legal issues regarding persons who are differently able

Unit 4. Women health, gender and development 25 hrs

Introduction to gender and health
Concept of sex and gender
Gender roles, gender norms and gender based discrimination, including its impact on health (both the health of men and women with a life cycle perspective)
Development approaches (WID, WAD and GAD)

Introduction to women and health
Status of women’s health in national and international contexts, Concept of women and health, difference between the health of men and women
Difficult life circumstances and its impact on women, the policy and programs in place to meet the basic health needs of socially and politically displaced persons:
Destitutes (society, family)
Refugee (political)
Internally displaced (political and social)
Disaster and war
Gender sensitive health policy, program planning, monitoring and interventions programs

Basic concept of gender analysis

- Basic concept of gender mainstreaming including the national policy of mainstreaming gender
- Role of men in bridging the gender gap
- Gender friendly health services
- Women’s empowerment and agenda for empowerment (legislation, female education, social and political participation, labour saving technologies, economic upliftment opportunities)

Unit 5. Gender Based Violence and Family Health 30 hrs

- Concept, Scope and evolution of gender based violence
- Factors contributing to violence
- Types of violence including girl trafficking
- Life cycle of violence
- Social and health effect of violence on age groups: children, adolescents, youth and adult

Steps towards eliminating gender based violence:

- Public health responsibilities for preventing violence
- Education for violence prevention, including the role of the media
- Roles of family members for prevention of violence at home

Roles of family members on STDs, HIV/AIDS cases along with other chronic problems, feasibilities, violence created problems, drug abuse and sexual abuse

Unit 6. Equity and access 10 hrs

- Basic concept of inequity, social exclusion and marginalisation and its impact on health
- Addressing equity and access issues in health sector

Teaching learning methods

- Class room lecture, Group work, discussion and presentation, Observation

Evaluation criteria

- Internal assessment in different forms 20%
- Final examination 80%
References

1. WHO “Women of South East Asia, A Health Profile”
3. Gender Based Violence, Health System Response, Management Protocol for Health Service Providers and Managers, DoHS/ MoH&P/WHO, Family Health Division, 2005
4. Integrating Poverty and Gender into Health Programmes: Module on Ageing A Sourcebook for Health Professionals, www.wpro.who.int, World Health Organization
Course Title: Health Promotion and Education II

Hours: 120  
Full Mark: 100  
Pass Mark: 50

Course Introduction
Health Promotion and Education is indispensable in order to ensure success, quality and sustainability of any health programs and services. It is a cross-cutting issue and one of the important responsibilities of public health professional. Therefore, they need to have a clear concept of planning, implementation and evaluation of overall health promotion and education programmes and skills to apply the theories and principles in real job situation. Hence, the course aims at development of necessary knowledge and skills at professional level to ensure proper planning, implementation and evaluation of health promotion and education programs and services in public and private organizations and facilities.

Course Objectives
Objective of the course is to help the students to
1. Describe the need for application of health promotion and education theories and principles in promoting health, preventing diseases among people in various social and occupational settings
2. Describe need for a planned health promotion and education programme for various settings and population groups
3. Describe various components of planning, implementation and evaluation of health promotion and education programme
4. Assess the need and prepare a sample plan for implementation and evaluation of health promotion and education programme for selected settings and population groups
5. Implement and evaluate a miniature health promotion and education project (field work – practical) in a selected occupation settings and population groups
6. Critically appraise the health promotion and education situation in Nepal and recommend suitable action.

Course Contents
Unit 1. Application of health promotion and education (HP&E) theories and principles including planning, implementation and evaluation  
20 hrs
Concept of and application of HP&E in various settings
Characteristics of various settings and people for the application of HP&E theories and principles

Community at large, village/urban settlements, family, school, health service centers etc.

Occupational settings: agricultural, business, industries, hospitality and entertainment etc.

Schools: public and private concern for formal and non-formal education

Special risk groups: drug users, commercial sex workers, PLWHIV/AIDS, rack pickers, adolescents, consumers

Organizations concerned with special communicable diseases (Malaria, Dengue, Kala-azar, TB, leprosy, HIV/AIDS, etc.) and non-communicable disease risk factors.

Unit 2. Concept of planning of health education programme

25 hrs

Concept of and need for planned health promotion and education programme - proactive and reactive planning

Classical and PRECEDE/PROCEED framework for diagnosis, planning and implementation of health promotion and education programs

Steps in planning health promotion and education programme

Identification of the health problem to be dealt with by educational process

Identification of target population or target group

Health behaviour, its foundation (knowledge, attitude and practice) and comprehensive framework for Educational Diagnosis (PRECEDE)

Setting priorities for an educational intervention

Setting goals, behavioral and instructional objectives and indicators for health promotion and education program

Development of contents and messages for health promotion and education

Selection of appropriate methods and media of health promotion and education

Identification of resources to be utilized in health promotion and education process

Development of a detailed plan of operation for health promotion and education program

Development of a detailed plan for monitoring and evaluation of health promotion and education programme
Unit 3. Implementation of health promotion and education program  
10 hrs

Organizational and individual commitment to the action plan
Committing financial resources
Mobilizing human resources
Recruitment, training and development of human resources health promotion and education
Conducting health education session following the plan
Supervision and monitoring in health education program
   Concept of health promotion and education supervision and monitoring
   Tools of educational supervision
   Supervisory system of health promotion and education activities in Nepal
Recording and reporting of health education program implementation including Health Education Management Information System (HEMIS)

Unit 4. Evaluation health education programme  
15 hrs

Concept and purposes of evaluation of health education program
Types or stages of evaluation
   Process evaluation
   Effect
   Impacts
Evaluation plan
   Identification of programme goals and setting evaluation objectives with suitable indicators
   Setting evaluation criteria: appropriateness, adequacy, effectiveness, efficiency as applied to survey areas
   Choosing appropriate evaluation methods/techniques
   Constructing measurement tools (questionnaire, checklist, etc.)
   Collecting information
   Processing and analyzing information
   Interpreting information and presenting findings
   Concluding and recommending
Unit 5. Planning, implementation and evaluation of health promotion and education activities in various settings  10 hrs

Rural setting (rural population)/
Urban settings (including slums and squatters),
Family setting (Family Health),
School/colleges (School)
Health service centers: hospitals, health posts (Health Promoting hospital)
Agriculture setting (farmers)
Business setting (shopkeepers, vendors, employees)
Industrial setting (Health Promoting workplace)
Hospitality and entertainment setting (food handlers, customers, entertainers)
Health Education and Promotion during Disaster and Epidemics

Unit 6. Planning, implementation and evaluation of education program on selected health problems  10 hrs

Malaria, TB, HIV/AIDS,
Gastro-intestinal diseases
Diabetes, Heart diseases (NCD)
Nutrition and malnutrition,
Immunization
Reproductive health and Family planning
Environmental health, hygiene and sanitation

Unit 7. Training in and overview of health promotion and education in Nepal  10 hrs

Overview of human resource in health education in Nepal
Role, functions and activities of National Health Training Center and other academic institutes in training in health education
Development of health promotion and health education in Nepal
Health education in National health policy and five years plan
Overview of health education program of MoH; INGO, NGOs and bilateral organizations
Career opportunities in health education
Role, functions and activities of National Health Information, Education and Communication Center (NHIECC)
Teaching Learning Methods

The teaching learning activities will be continued around mini lecture, group work and discussion, field visit, seminar and report writing. The instructional materials will be

- Usual classroom materials: chalk board, flip chart, overhead projector, power point presentations
- Flexible classroom for lecture and group work
- Governmental and non-governmental organization having on - going health education programme
- Computers with multi-media soft wares
- Sample of evaluation reports

Evaluation

Internal assessment in different forms

(Written class test – 10%, Term paper – 4%, Project work – 6%) 20%
Final examination 80%

References

3. Shrestha, DB and Pradhananga, YP., Samudaya Swasthyo Shikshyako Ruprekha, Kathmandu
5. David Werner and Bill Bower; Helping health Workers Learn; T Hesperian foundation, Palo Alto, USA
6. HS Ross and PR Mico; Theory and Practice in Health Education; Maryfield Publishing Company; 285 Hamilton Avanue; Palo Alto, California, USA.
7. David Werner: Where There Is No Doctor; revised for India by Voluntary Health association of India
Curriculum of BPH – Year three

Paper XVII

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Epidemiology II</th>
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<tr>
<td>Hours:</td>
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**Course Introduction**

This course will give the epidemiological research perspective of various infectious and non-infectious diseases. Adequate techniques will be discussed to evaluate, assess and manage different surveillance, monitoring programs and interventions in the field of public health.

**Course Objectives**

After completion of the course students will be able to:

a. understand and describe the application of epidemiological principles and methods in prevention and control of communicable and non-communicable diseases

b. appreciate importance of screening and surveillance programs in public health services

c. apply burden of disease concept to plan, organize and manage health programs

d. explore epidemiological aspects of conflict and disaster management

e. understand concept and principles of social epidemiology

f. conduct field epidemiological studies

**Course Contents**

**Unit 1. Applied Epidemiology of major diseases prevalent in Nepal**

**Infectious diseases:**

a. Water-borne:

Protozoal infections: amoebiasis, giardiasis,
Parasitic infections: taeniasis, ascariasis
Bacterial infections: E. Coli infection, cholera, typhoid and paratyphoid,
Salmonellosis, botulism, shigella dysentery, salmonella dysentery, leptospirosis,
viral infections: hepatitis A, poliomyelitis, rotavirus

b. Vector-borne:

Dengue, Japanese encephalitis, kala-azar, malaria, filariasis, plague, trachoma

c. Air-borne:

Bacterial infections: pulmonary tuberculosis, diphtheria, pertussis, anthrax
Viral infections: influenza, chickenpox, measles, mumps, rubella
Bacterial and viral infections: pneumonia, meningitis

d. Contagious:

HIV, STIs, hepatitis B, Leprosy, scabies
e. Fungal infections:
   Dermatophytosis, candidiasis, aspergillosis
f. Others:
   Snakebite, scorpion bite

**Zoonotic diseases**
Rabies, bovine tuberculosis, brucellosis, echinococcosis
Collaboration between veterinary and medical services

**Noncommunicable diseases**
Multifactorial determinants, growing nature of problems, and methods of analyzing information to determine etiology of noncommunicable diseases; road traffic accidents, diabetes, cardiovascular disease, chronic obstructive respiratory disease, cancer, drug abuse

**Nutritional deficiencies:** malnutrition, micronutrient deficiency (nightblindness, anaemia, iodine deficiency disorders)

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**Unit 2. Screening and Surveillance Programme**
10 hrs

Screening programs
Disease surveillance programs in Nepal

**Unit 3. Major Public Health Programs in Nepal**
20 hrs

**Unit 4. Field Epidemiology**
10 hrs

Concept of field epidemiology
Field techniques
   - Concept of research proposal
   - Development of test instruments
Methods of collecting information
   - Interview techniques and tools
   - key informant interview
   - Observation: concept and observation checklist
   - Secondary data analysis

**Unit 5. Social epidemiology**
10 hrs

Evolution of epidemiology with reference to social epidemiology
Meaning, scope and application social epidemiology in Public Health
Concept of Stratification and Social class
Role of social epidemiology in designing disease control plan and strategies
Limitations of social epidemiology

Unit 6. Epidemiological aspects of Conflict and Disaster Management 10 hrs
Application of epidemiology during conflict and disaster
Epidemiological studies during conflict and disaster
Consequences of conflict and disaster
casualties
disease outbreak
famine and starvation
higher morbidity and mortality
Disaster planning, preparedness and prevention
short-term management:
management of health problems
intersectoral cooperation and coordination
mobilization of resources
long-term management (forecasting of disasters)
Conflict management

Teaching Learning Methods
Lectures, group discussions, library study assignments, home Assignments, and field trips.
Students will be assigned an example of a common disease for which they will conduct an epidemiological study using different study designs in a real life situation in order to understand the current prevalence, disease trends, and management for the prevention of that disease. In this unit following specific areas of applied epidemiology will be addressed.

Evaluation
Internal assessment in different forms 20%
Final examination 80%

References
b. DOHS, Epidemiology and Disease Control Division. Control of Communicable Disease Manual 2003.
d. DOHS. Epidemiology and Disease Control Division. National Recommended Case Definitions and Surveillance Standards 2003.
i. Principles of Epidemiology: An Introduction to applied Epidemiology and Biostatistics. 2nd Edition. US Department of Health and Human Service, CDC, Atlanta Georgia
l. Park K "Textbook of social and preventive medicine” 21st edition
Paper XVIII

Course Title | Health Economics and Health Financing
Hours: 120 | Full Mark: 100 | Pass Mark: 50

Course Introduction

This course deals with Health Economics and Health Financing concepts, principles, theories and issues and it is helpful to the students for Programming, implementation and evaluation of the Public Health Program and Health Planning.

Course Objectives

1. Develop the knowledge and skills on micro and macro level economic intervention and appraisal in health.
2. Clarify the basic concepts, terms, contribution and technique of economics to the health sector.
3. Illustrate and state the role of demand and supply in health care market.
4. Identify the sources of financing in health sector and analyse the equity, efficiency and sustainability of various alternative financing schemes.
5. Describe the process of budgeting and prepare budget for District Health Office.

Course Contents

Unit 1. Introduction 5 hrs

Definition of Economics
Definition of the common terms used in Economics; Goods, utility, value production, consumption, price and cost
Meaning, concept and scope of Health Economics
Application of Health Economics in developing and developed countries
Significance of Health Economics in Health planning and health financing

Unit 2. Micro and Macro Economics 10 hrs

Concept of Micro and Macro Economy
Concept of Micro and Macro Economy in Health care market
G.D.P and G.N.P
National income
Sources of National Income

Unit 3. Micro Economic Tools for Health care

- Concept of law of diminishing marginal utility
  - Demand/ Supply
  - Definition, law, limitation, importance of the law of demand and supply
  - Supplier induced demand
  - Market equilibrium in Social and Health care market
  - Elasticity of demand and supply
  - Definition, price elasticity, income elasticity and cross elasticity
  - Importance of elasticity of demand and supply
  - Elasticity of demand for health care and its measurement

Unit 4. Markets and Market Failure in Health Care

- Definition of Market
  - Market mechanism in health care
  - Public goods, externalities (positive and negative)
  - Marketing system from monopolistic to perfect competition in social and health care market
  - Role of government in health care market

Unit 5. Cost Concept

- Definition, Direct/Indirect cost, Average, Marginal and Total cost, Unit cost, Capital and Recurrent cost, Fixed and Variable cost, Tangible and Intangible cost, Financial and Economic cost.

Cost Analysis

- Discount rate, Break-even Analysis and Present Net Value of Cost

Unit 6. Economic Evaluation

- Definition, Steps, Importance and Constraints of Economic Evaluation
  - Tools and Techniques of Economic Appraisal
  - Cost minimization analysis
  - Cost benefit analysis
Cost effectiveness analysis
Cost utility analysis (QALY, DALY)

Unit 7. Health Care Financing  
Meaning and scope of health care financing
Alternative health care financing
Health Insurance
   Social health insurance, community health insurance, micro health insurance
   and private health insurance

Unit 8. Equity and Efficiency  
Concept of equity in health
Vertical equity and horizontal equity
Concept of efficiency
   Economic efficiency, Allocative efficiency and Technical efficiency

Unit 9. Health Budgeting  
Concept, types of budget- Regular, development, program and operating budget
Overview of national health budget
Principle of budgeting
Characteristics of budgeting
Preparation, screening, sanction and receipt of budget
Agencies involved in budgetary process

Unit 10. Health service resource identification and allocation  
Government and private sources
Historical allocation
Modern allocation
Advantages and disadvantages

Unit 11. Book keeping  
Definition of book keeping
Concept of entry, transaction, assets, capital and liabilities, capital and operating expenditure, debit and credit, ledger and journal

Different methods: Single and Double entry system

Account

Concept, classification of accounts (real and nominal accounts, suspense accounts)

**Unit 12. Audit**

5 hrs

Concept of audit, types of audit.

**Teaching Learning Methods**

Didactic lectures, seminar, group work, discussion in classroom setting, observation visit of relevant institutions and organizations

**Evaluation**

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<tr>
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<td>80%</td>
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</tbody>
</table>

**References**

6. Health Economics Education Website: [http://www.economicsnetwork.ac.uk/health/](http://www.economicsnetwork.ac.uk/health/)
Course Title: District Health Field Practice

Hours: 120  Full Mark: 100  Pass Mark: 50

Course Introduction

This comprehensive field practice will provide the students an opportunity to develop skills which will make them a competent public health professional with the ability to identify health problems and needs of the district and community. This course will also enable them to assess resource potentials and constraints, prioritize the health problems and set strategies for solving them, collaborate to develop suitable options and action plans for addressing the health problems in district. They will also be able to work in promotive, preventive, curative and rehabilitative health services as part of district health team. Students will learn supervision and monitoring of district health programs, developing action plans for feasible and effective solution to problems found in collaboration with district stakeholders.

The total duration of this residential field will be 60 days in the district. One group composed 5-6 students will be sent to the field.

Course Objectives

Upon successful completion of this course the students will be able to

- Explore health problems and needs in the district including factors associated with those problems
- Assess existing and potential resources for addressing the health problems
- Identify constraints which may hinder successful application of solutions
- Prioritize health problems and needs of district and generate appropriate strategies for health development
- Coordinate health and non-health sector activities in order to accomplish health service goals
- Perform organizational management skills including
  - Inter and intra-sectoral coordination
  - Direction training and motivation of health personnel
  - Supervision and monitoring of different health personnel and health programs towards achieving goals
  - Development of sense of team spirit and taking collective responsibility and participation in fulfilling goals and objectives of District Health Office
  - Recording and reporting system
  - Two-way referral and feedback system from grass-roots level through health post to district hospital and back down
- Develop him / her as a qualified public health professional able to act as an adviser and counselor in public management, public health services and research.
**Course Contents**

Orientation on comprehensive field practice
- Orientation to rationale for field program
- Orientation to district field site and logistics
- Orientation to field activities

Activities in district health organization

Group activities in district health organizations (DHO/DPHO, NGOs, INGOs, hospital, private sector, DEO and other health and health related organizations) to

Prepare management profile including present status of
- Major health problems of the district
- Health planning process and programs/projects in district level
- Health services organization structure
- Staffing patterns
- Coordination with other related organizations (line agencies, NGOs, INGOs)
- Supervision and monitoring system
- Budgeting
- Health management information system
- Logistics system and
- Recording and Reporting System

Critically analyze the status, strength and weakness of each of the management components

Closely observe organizational manager’s work activities in the organization

Recommend alternate strategies for strengthening the management components

Organize a seminar to present the district health management profile in district and campus

Apply the knowledge and skills learned in anyone of the following subjects e.g. epidemiology, biostatistics, health education, food and nutrition, school health, mental health and environment, family planning, MCH etc as to carry out a mini action project.
- Develop a mini action project based on prioritization of problems and health needs.
- Implement the mini action project developed as above.
- Evaluate mini action project and give suggestions and recommendations.

**Preparation of District Health Management Profile**

Major health problems of the district
Health planning process and programs/projects in district level
Health services organization structure
Staffing patterns
Coordination with other related organizations (line agencies, NGOs, INGOs)
Supervision and monitoring system
Budgeting
Health management information system
Logistics system
Recording and reporting system

Critical Appraisal of Health Management
- Analyze the status, strength and weaknesses of each of the management components mentioned above using appropriate models.
- Observe management system work activities in the organizations towards goal achievement.
- Recommend for alternative strategy or re-strengthening the management component of overcoming the weakness for better management.
- Organize a seminar to present a health management profile of organization in district/College

Mini Action Project
- Apply the knowledge and skills learned in various disciplines of health sciences (epidemiology, bio-statistics, health education, food and nutrition, school health, health & environment, family planning, MCH, etc) to develop mini-action project in a group.
- Develop a mini-action project with objectives formulated on the prioritized basis of problem and health needs.
- Implement the mini-action project developed and discrimination of findings at district level.
- Evaluate mini-action project.

Preparation and Submission of Field Study Reports
- Prepare baseline demographic and health profile of the district acquired from secondary data on the basis of which write additional specific papers.
- Develop a plan to improve the effectiveness of specific aspect of the district health system.

Teaching learning method

Workshop, Seminar, Group discussion, Field work

Evaluation

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<td>Evaluation by department (campus) supervisor</td>
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<td>District seminar</td>
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<tr>
<td>Presentation of field work at campus</td>
<td>20 %</td>
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<tr>
<td>Mini Action Project</td>
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<td>Oral defence and written report</td>
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References

1. Field Manual
Course Title: School and Community Health

Hours: 120  Full Mark: 100  Pass Mark: 50

Course Introduction
This course cultivates the students a holistic understanding of health promoting school, mental health, oral health, eye health and ear care and its application in public health. The course consists of following components.

1. Health Promoting School
2. Mental health in public health
3. Oral health in public health
4. Primary ear care and prevention of hearing impairment
5. Primary eye care and prevention of blindness/visual impairment

Course Objectives
This course is designed to impart the knowledge and skill in applied public health aspects of school health, mental health, oral health, eye health and ear health. This course will develop knowledge and skill to plan, implement and evaluate the health promoting school in the community.

Objective of the course is to help the students to understand, describe and explain
- Concept of health promoting school including its components
- Process to develop health promoting school in a community
- Planning, management of health promoting school
- School health policy and rules on health
- Linkages and coordination with existing health and education sectors to develop health promoting school

Course contents

Unit 1. School health: Health promoting school  30 hrs

Basic concepts (Theory)
- Introduction to Health promoting school and its components
- Rationale of Health Promoting school
- Overview on health promoting school program
- Methods of developing health promoting school in community
- Management of health promoting school
Coordination and linkages with concerned stakeholders, health education etc to develop health promoting school

Components of Health Promoting school (theory)
- School health policy
- Health teaching
- Healthful school environment
- School health services
- School community participation for HP

Practical
- Overview on Planning, implementation and evaluation
- Planning of SHP
- Implementation: Process orientation to conduct practical on HP school promoting school in a community using the theoretical knowledge
- Selection of community/school
- Planning, implementation and evaluation
- Practical to conduct health promoting School program
- Evaluation of health promoting school

Unit 2. Mental Health in Public Health 20 hrs

Concept of Mental Health
- Concept of normalcy, normal mind, characteristics of abnormalities
- Prevailing misconception about occurrence and treatment of mental illness
- Description of measurable indicators of positive well being, good psychological adjustment
- Personality development [including behavioural, psychodynamic, cognitive, moral and other schools of personality development]
- Brain and behaviour: mind body relationship

General psychopathology
- Providing information to the health community about type, causes, clinical features, treatment and prevention of the following groups of mental disorders
  a. Organic, including symptomatic mental disorders
- Mental and behavioural disorders due to psychoactive substance use [with special emphasis on prevention of substance abuse]
  Schizophrenia, schizotypal and delusional disorders
b. Functional
Mood disorders
Neurotic, stress-related and somatoform disorders
Behavioural syndromes associate with physiological disturbances and physical factors
Disorders of adult personality and behaviour
Disorders of psychological development
Behavioural and emotional disorders with onset usually occurring in childhood and adolescence
Community Mental Health program
Mental health education for the individual and the community
Providing information about the concept of integration of mental health with general health services
Techniques of case finding, information about treatment facilities
Epidemiology of mental illness

Applications of principles of prevention of mental illness
  Primary Prevention
  Secondary Prevention
  Tertiary Prevention
Assistance in rehabilitation of mental oil and retarded
  Psychosocial rehabilitation
  Social rehabilitation
  Occupational rehabilitation
Institutionalization and deinstitutionalisation
  Mental health of children and women
  School mental health
  Planning mental health services for the community
  Behaviour implication of mental illness
  Role of traditional healers and other community leaders in the improvement

Unit 3. Oral Health in public health 20 hrs
  Oral health education: concept of, magnitude of the problem types of oral health problem, its determinants and management process
Distinguish between normal and decayed teeth
Identify plaque and calculus
Describes between normal and diseases gums
Describes caries and periodontal diseases
To explain less harmful food stuff and eating habits
Explain the way of preventing dental caries and periodontal diseases
Plan, implement school program on oral health and hygiene
Oral Disease Prevention and Health Promotion
- Public Health Agenda to Improve Oral Health
- Oral Disease Burden
- Interventions for Oral Disease Prevention
- Public Health Agenda
- Oral Hygiene and Gum Diseases
- Gum Disease Could Cause Heart Failure and Respiratory Problems.
- Ways to Help Kids Avoid Periodontal Disease
- Dental Care and Pregnancy

Unit 4. Primary Ear and Hearing Care
- Chronic Disease Prevention and Management
- Introduction to hearing loss mean
- Congenital hearing loss problem
- Hearing loss among children, and adult
- Causes of hearing loss before or during birth and after birth
- Assessing hearing and counseling
- Symptoms to look for if a child has an ear infection
- Ability of Deaf and hard of hearing people
- Care of our ears
- Hearing aids
- Raising awareness

Unit 5. Primary Eye care
- Prevention of avoidable blindness and visual impairment
Global trends of blindness and visual impairments
Causes of blindness
Common Eye problems
Risk factors of ocular problems
Prevention and control of ocular problems
Strategies and policy of prevention and control of blindness: National and International
Raising awareness

Teaching Learning Methods
Didactic lectures, seminar, group work, discussion in class room setting, observation visit of relevant institutions and organizations

Evaluation

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<tr>
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<td>Internal assessment in different forms</td>
<td>20%</td>
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<tr>
<td>Final examination</td>
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</tbody>
</table>

References

1. Glde ifalis "Oxford Textbook of Psychiatry".
2. Gibbons, "Integrated Clinical Science Psychiatry".
3. Lawson RA "Essentials of Dental Surgery and Pathology".
Course Introduction

This course offers an opportunity for conceptual understanding of human resource development [HRD] and its specific application in human resource for health [HRH] development. The course attendants will attend lecture sessions as well as participate in seminar classes to discuss the modern concepts. Along with principles and strategies in the context of national health manpower development of Nepal, the course also provides opportunity to develop specific skills in the process of designing training courses and implementation and evaluation.

Course Objectives

Objective of the course is to help the students to

b. Critically analyse the HRH concepts as applied in the context of Nepal.
c. Apply the concept of educational planning in the process of design, implementation and evaluation a training program.

Course Contents

Unit 1. Human Resource Management

Introduction to Human Resources Development
   Human Resources for Health
   Human Resources Planning
   Human Resources Production

Human Resources Management Functions & Activities
   Planning Function
   Production Functions
   Staffing Functions
   Development Functions
   Direction Functions
   Evaluation Functions

Curriculum Development in Public Health Training
   Introduction and Purpose to Curriculum Development
   Concept of Curriculum
   Process of Curriculum Planning
Principles of Curriculum Development
Types of Curriculum Development

Health Manpower Training
Concept of health manpower training and education
  Training need identification, Task analysis, Purpose of training, Training Plan
Types of training
Planning for health manpower training
Selecting an instructional method according to need of the trainees
Implementation of training programme
Evaluation of training programme
Concept, need and organization of training of trainers (TOT)
National Policies, plans and programs related to training

Unit 2. Management Information System 30 hrs

Introduction to Management Information System
  Definition and evolution, components of an information system
  Information system resources, objectives and limitations
  Concept of health information system, clinical information system
Information System Frameworks
  Different perspectives on information system
  System analysis: concept, system approach, system selection procedure
  Types of information system, need for system analysis, role of system analyst
Health Systems Information System (HSIS)
  Purposes and features of HSIS
  HSIS tools and information dissemination
  HSIS as monitoring and evaluation tool
  Concept of health management information system, logistic management information system, financial management information system and human resource information centre
Ethical and Social Issues in Information System
  A mode of thinking about ethical, social and political issues
  Ethics in an information society: responsibilities, accountability, liabilities
  Information rights: privacy and freedom in an information society
  Property rights: intellectual property
E-commerce & E-bidding
  Introduction to e-commerce
  Electronic payment procedures
  E-commerce trends, and
  E-bidding procedure in health services management

Unit 3. Disaster Management 20 hrs

Disaster – Concept, history, types, causes and consequences
Disaster Planning and Preparedness
Medical management of mass causalities
Patterns of injuries and trauma
Post-disaster assessment and recovery
Post-disaster assessment and recovery
Pitfalls and barriers in disaster planning and response
Understanding the needs of special populations (ie, children, elderly, disabled)
Disaster management cycle
National policies, plans and programs related to disaster management in Nepal

Teaching Learning Methods

Didactic lectures, seminar, group work, discussion in class room setting, observation visit of relevant institutions and organizations

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</table>

References

1. Leiyu Shi “Managing Human Resources in Health Care Organizations”
Bachelor in Public Health

YEAR FOUR
Course Title: Public Health Research Methodology and Public Health Project Planning and Development

| Hours: 120 | Full Mark: 100 | Pass Mark: 50 |

Group A: Public Health Research Methodology

Full Marks: 50
Total Hours: 60

Course Introduction
This course has been designed to equip the student with the basic research tools and methods in public health sciences. The course aims to impart the basic knowledge on the concepts, methods, techniques and the process of developing suitable Research Proposal. The attendants of the course will be able to design and conduct public health research activities in the field to generate relevant information, which can be used for the improvement of the public health program in the country.

Course Objectives
Upon the successful completion of the course, students will be able to:

1. Explain the meaning, purpose and importance of research in public health sciences.
2. Define and conceptualize basic terminology used in research.
3. Describe the various types of research methods applicable in public health sciences.
4. Identify public health problems of Nepal on which research study can be carried out.
5. Describe the fundamental steps involved in the research process.
6. Apply qualitative and quantitative techniques of health research.
8. Produce a research report on selected issues in public health.

Course Contents

Unit 1. Introduction to Research 5 hrs
Meaning, definition and purpose of research
Importance of research in public health
Basic terms used in research concepts
Unit 2. Types of Research and Research Methods  
Basic and applied research
Types of research: description, action, operational research, evaluative and Quantitative type of research
Analytical research methods (causal, experimental, content, analysis etc)

Unit 3. Steps of the Research Process  
Selection of the problem
Sources of problems
Examples of problems
Review of the literature
Locating relevant literature
Documentation of literature
Note- taking (note – card preparation)
Preparation of bibliography
Computer search
Formulation of research objectives and hypothesis
Meaning and types of research objectives
Purpose of research hypothesis
Definition of research hypothesis
Types of hypothesis
Variables (independent and dependent, etc)
Operational definition
Research methodology
Research design
Meaning of research design
Need for research design
Features of good research design
Type of research design
One short case study
Randomized control group: presentation- test, post –test
Non- random control group presentation –test
One group time series
Control group time series
Sampling design and procedures
- Census versus sample
- Selection of sampling design
- Population under study
- Sampling frame
- Sampling unit
- Determination of sample size
- Sampling techniques

Instrumentation
- Scale and its management
- Checklist
- Questionnaire (designing, drafting, feature, of a good questionnaire)
- Focus group discussion
- Group interview
- Participatory research appraisal good questionnaire
- Pre-testing
- Reliability and validity
- Pilot study
- Data collection
  - Primary methods of data collection: Interview, Mailed questionnaire, Direct observation, and Objective test
  - Secondary methods of data collection: Data from office records of institutions, journals, bulletins.

Data Processing
- Coding/editing
  - Preparation of master tables \ master field book
  - Tabulation

Analysis of data and findings:
- Presentation of data
- Selection on appropriate statistical techniques
  - Descriptive and analytical statistical method e.g. means, standard deviation, probability, and normal distribution, parametric, and non-parametric, Inference and correlation and regression analysis.
- Conclusion, summary and recommendations
Preparation of research proposal [list of public health issues]

- Health behaviour
- Effectiveness of health promotion, disease prevention programs
- Organizational problems in health services
- Development of health intervention model
- Community health status
- Development of health education PROGRAM activities
- Effectiveness of health education PROGRAM activities
- Knowledge, attitude and practice surveys of health service delivery and health service utilization
- Performance of health workers
- Conducting research on a selected public health issue

Unit 4. Preparation of Report 5 hrs
Guidelines for students for the preparation of report

Unit 5. Process of Writing a Research Report 5 hrs
Preliminaries
Title of report
  Approval sheet
  Acknowledgements
  Table of contents and figures
Body of report:
  Introduction
  Review of literature
  Methodology [materials and methods]
  Result and discussion
  Findings
  Conclusions and recommendations,
Reference cited

Evaluation
Internal assessment in different forms 10%
Final examination 40%
References


Group B: Public Health Project Planning and Development

Full Marks: 50 Total Hours: 60

Course Introduction
This course builds upon the skills and knowledge developed in Health project Planning and Development. This unit will provide an overview of project planning, development and implementation (including planning approaches, models and frameworks).

Course Objectives
Upon the successful completion of this practicum, students will be able to:
1. Understand the principles of project planning;
2. understand project resourcing and simple project budgeting processes;
3. select appropriate evaluation strategies; and
4. design a project strategy including needs assessment, problem identification, project design, implementation and evaluation strategy.

Unit 1. Project planning 25 hrs
Concept on project, importance and its types
Project Management Approach
Project Management Components
Project Life Cycle
Needs assessment, problem identification,
Tools of Problem Analysis
Planning and evaluation approaches, models and frameworks
Project design principles,

Unit 2. Budgeting, resourcing and long term sustainability 15 hrs
A best practice approach to project development and management

Unit 3. Project analysis principles and framework 20 hrs
Project assessment tools and framework (SWOT)
Project evaluation framework (Logical Framework Matrix)
Teaching learning method
Lecture and group work method will be adapted to develop knowledge and skill on project planning and development
During Practicum - the students apply the principles of project planning, development and implementation to real world health problems; and - evaluate health projects using standardized indicators.

Evaluation
Internal assessment in different forms 10%
Final examination 40%

References
Course Title | Individual Health Research (Field based Practicum)
---|---
Hours: | 120
Full Mark: | 100
Pass Mark: | 60

Course Introduction
The course is designed to develop knowledge and skill on research method applied in the public health field. The basis of the research will be theoretical in out on research methodology dealt in paper... This practical based research work will help students to use the techniques of research methods to conduct or evaluate specific public health issue. In this paper students should develop proposal, conduct research work at field, analysis of data, preparation of research report and defense in external evaluation.

Activities of Individual Health Research
1. Selection of public health issues for research
2. Proposal development on selected public health issue
3. Proposal presentation
4. Supervisor assignment and consultation for further refinement of proposal
5. Field work for data collection
6. Data management, analysis and interpretation
7. Preparation of preliminary research report
8. Presentation of research findings
9. Final report submission
10. Final research report defense (external evaluator)

Format of individual health research report will be provided by the Department of Community Medicine and Family Health, Maharajgunj Medical Campus, Institute of Medicine.

Evaluation

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<td>Supervisor evaluation</td>
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<td>External Assessment</td>
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<td>Final defense</td>
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References
Group A: Health System Management in Nepal

Full Marks: 50
Total Hours: 60

Course Introduction
This course provides an opportunity to the students to get acquainted with the history of health services development in Nepal. The course also helps the students to better conceptualize the national health policy and how the policy has been enacted at the central, district and grass root levels. It is expected that the students will develop a critical awareness of the problems and issues facing the health service management at various levels and will equip them with appropriate measures to address the problems.

Course Objectives
Upon the successful completion of the course, students will be able to:
1. Describe the history of the development of health services in Nepal.
2. Develop a profound understanding of the National Health policy.
3. Critically analyze the Problems and issues of the health services management at the central, district and the grassroots levels.
4. Develop, ensure and provide quality health services in Nepal.

Course contents

Unit 1 Health Services
- Concept of health services
- Development of health care services in Nepal
- Categories of health systems: Home-based, Traditional Faith Healing, Ayurvedic, Homeopathic, Unani, Naturopathic, Allopathic, and other alternative systems

Unit 2 Health Policies and Plans
- Health planning and overview of the health planning process
- Long-term health plans, periodic plans, Nepal Health Sector Programmes, national health policies
- Essential health care services, free health services programme, sector wide approach (SWAP), integrated health services
- Health sector reforms, public private joint initiatives
Millennium Development Goals for Health

Unit 3 Central Health Services Management 15 hrs
Organizational structure of health services: central, regional, and district levels
Descriptions and analysis of roles and responsibilities of departments and centres
Inter-sectoral coordination between all levels including central level (between ministries), district level (district level authorities), and grass-root level (local level GOs, and NGOs)
Logistic management: definition, goal, logistics cycle, components, logistic system of the health ministry, logistic management information system, Web-based LMIS, e-bidding in logistics management (e-management)

Unit 4 District Health Services Management 15 hrs
Management of district health services: functions, organizational structure, human resources, job description of all levels of health workers, monitoring and supervision system, on-the-job training and performance appraisal policies, district level programmes, monitoring and evaluation of district health programmes, responsibility towards regional health directorate
Management of primary health centres: functions, organization structure, human resources, role and responsibilities of PHC in-charge, programmes run by PHC, monitoring and supervision of the programmes.
Management of health posts, sub-health posts: management committee, functions, organizational structure, human resources, programmes, responsibility towards DPHO/DHO.
Local level programmes such as immunization, FP/MCH, nutrition, HIV/AIDS, and others.

Unit 5 Emerging Trends and Practices 5 hrs
eHealth applications, tele-medicine practices, traditional and complementary medicine (TCM), nutraceuticals.
Emerging issues and challenges in health systems and management.

Unit 6 Quality Assurance in Health Services 10 hrs
Definition and concept of quality assurance in health services
Standard guidelines for different types of health services/health institutions
Hindering factors to assure the quality in health services
Role of HMG/Professionals/individual role in order to maintain quality in health services.
The professional and individual role in order to maintain the standard health services.

Evaluation
Internal assessment in different forms 10
Final examination 40
Group B: International Health

Full Marks: 50
Total Hours: 60

Course Introduction
The course is designed to provide fundamental concepts of International Health with the aim of helping students to understand and critically analyze the implications of global relation in health system and public health. It consists of several sub-units. Each of the units is further elaborated with the teaching learning contents. The figures in the margin of each sub-unit indicate the hour of teaching.

Course Objectives
Specific/behavioural objectives of the course are stated under each of the units.

Course contents

Unit 1. Fundamentals of International Health 10 hrs
The students will be able to describe
  - Concept of International Health
  - Scope and methods
  - Relevance of International Health in public health

Unit 2. Comparative analysis of health status across the globe 10 hrs
The students will be able to
  - Compare the health status between different countries –international and regional - based on important indicators like life expectancy, infant mortality, childhood mortality, maternal mortality, disability and other burden of diseases.
  - Explain possible underlying causes of difference in health status between the countries.

Unit 3. Major partners of International Health 25 hrs
The students will be able to
  - List and concepts of the following major partners of International Health
    - Multi-lateral agencies (WHO, UNICEF, UNFPA, WB, EU, SAARK, etc)
    - Bilateral agencies (DFID, USAID, AUSAID, JICA, etc)
    - Donors - Foundations
    - International Non Governmental Organizations
    - Transnational/Multinational Corporate
  - Describe roles and functioning of International Health partners

Unit 4. International collaborations, regulations and global events 15 hrs
Describe the main features of:
  - World Summit for Children, UN Convention on Child Right.
  - Legal issues regarding handicapped persons.
  - International Covenant on Civil and Political Rights.
  - UN declaration on women right.
  - Convention on the Elimination of all forms of discrimination against women (CEDAW), Cairo resolution on women health, Beijing declaration.
  - Bamako initiative, Ottawa Charter.
  - People’s Health Assembly.
Framework Convention on Tobacco Control (FCTC).

Teaching learning methods

Multiple methods will be used to acquire the above mentioned specific objectives
1. Didactic lecture: mainly on the basic concepts, principles and theories
2. Presentations and seminars: mainly on the events and issues of debate and diverse opinions
3. Participation in different academic events like guest lectures, national workshops/seminars
4. Self learning: mainly on the issues, where further explanations are desired and materials are easily available for reading.

Evaluation:
- Internal assessment in different forms: 10
- Final examination: 40

References
10. Pradhananga YP. “Health and Health services in Nepal”.
13. Relevant materials and national and international publications on the topics of course contents.
Course Title: Comprehensive Public Health Practicum

| Duration: 6 months | Full Mark: 400 | Pass Mark: 200 |

Course Introduction
Bachelor students in public health are given theoretical inputs and some practical exposure to the community and districts to understand fundamentals of different disciplines in public health and acquire relevant skills. This course is designed to provide the students with a full opportunity to experience and practice these knowledge and skills in extended way as a public health graduate.

The course is developed considering the core functions of public health: assessment of the situation, development of policies and assurance of service delivery.

Course Objectives
Objective of the course is to help the student to
1. Acquire skills to assess and describe the situation of public health problems and issues
2. Describe public health services delivered at different levels.
3. Acquire skills to manage and administer these public health services

The course components and activities
The course consists of four main components
1. Assessment of health situation
2. Policies and planning to address the health problems
3. Public health service delivery
4. Public health management and administration

Activities of the students during the practicum will be in relation to each of these course components.

Course Contents

Unit 1. Assessment of health situation
The student will carry out the following activities
- Identify different sources of relevant health information within and outside health sectors,
- Collect necessary additional primary information using different techniques and tools,
- Review and analysis of health and health related information collected from different sources,
- Observe the process of health and health related data collection, analysis and reporting,
Assess environmental determinants of health: drinking water situation, sanitation, health hazards, food and nutrition, socio-cultural determinants and factors affecting health.

**Unit 2. Policy and planning to address the health situation**
The students will be engaged in following activities
- Participate in planning and decision making processes and observe the steps and process,
- Interact with relevant people about the policy development and planning health services,
- Review of relevant documents about the health policy and planning.

**Unit 3. Public health services**
The students will carry out the following activities
- Review of public health services - promotive, preventive, curative, and rehabilitative provided by government, non government and private sectors; formal and non formal; modern, traditional, indigenous services.
- Participate in different public health service delivery process in the community and in the health service delivery facilities.
- Review of documents on the public health service delivery.
- Assess distribution, adequacy and access to health services.
- Assess equity, gender and social inclusion in health services.

**Unit 4. Public health management and administration**
The students will carry out the following tasks
- Participate and assist to management – materials, human resource and administration.
- Participate in evaluation, supervision and monitoring processes.
- Participate in the process of coordination with other health and non health sectors.
- Review of emergency and disaster preparedness and planning.

[Note: Students will prepare a comprehensive report of each of the unit]

**Teaching learning method**

An orientation programme will be organized to provide the information about the objectives and methods of practicum prior to placement. The students will be placed in different government and non governmental institutions, where the required learning facilities, as mentioned above, are available. Within the institution, student will be rotated in relevant sections or units closely work with the staff of the section. If required, student can be placed in other relevant institution for short period of time for specific purpose as demanded by the course. The total placement for practicum will be 6 months. Each of the students will be supported by a local mentor. The students will be supervised and provided with inputs and feedbacks by the faculty of IOM.
The student will periodically present own observation and impression to the concerned and relevant people for sharing and validation.

The student will be provided a manual explaining the details of learning approaches and processes.

**Evaluation**

1. The students will be evaluated in different stages and by different people. During the placement in practicum local supervisor or mentor and IOM faculty, during supervision, will evaluate the students.
2. The report of the student will be evaluated by the Department of Community Medicine and Family Health.
3. These evaluations will be considered internal and will carry 40%
4. IOM will conduct the final evaluation as oral viva, which will carry 60% of the total marks of practicum.

**References**

3. Previous report on District Health Management, project reports, annual reports, progress reports and relevant documents.