

Course Title	Medical Sociology and Anthropology	
Second Year	Fourth Semester	Course code: BPH 204.1-MSA
Credit Hours: 3	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, socialization in health, culture and health, provider consumer relationships in public health, indigenous health care system and alternative health care practices.

Learning objectives

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

- Sociological and anthropological concept applied to public health.
- 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, socialization, indigenous and alternative medical care practices
- Provider-consumer relationship at their work settings

Course Contents

Unit1: Sociology

6 Hours

- Common terminologies: Sociology, Ethnicity, Mores, Folk Ways, Social System, Social Control, Social Disorganization, Social Problems, Acculturation, Enculturation, Socialization, Cooperation, Accommodation, Assimilation, Conflict, Modernization, Westernization, Sanskritisation, Ethnomedicine, Ethnopsychiatry, Value, Beliefs, Perception, Knowledge, Attitude, Behavior, Custom, Habit, Self-Medication, Organization.
- Historical development of society
- Typological subject matter of sociology
- Relationship of sociology with anthropology, psychology, public health and health education
- Sociological contributions in public health

Unit 2: Anthropology

4 Hours

- Introduction, concept and scope of Anthropology
- The sub-division of Anthropology
- The holistic approach

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- Anthropological contributions in Public Health

Unit 3: Concept of Social Processes

6 Hours

- Meaning, definition, characteristics, agent/agencies and stage of socialization.
- Meaning, definition, characteristics, factors favoring assimilation
- Introduction and characteristics of social conflict
- Introduction, definition, characteristics, types and basic function of social institution like marriage, family, kinship system
- Religious, political economical and social institutions and their contribution on health development
- Social change and cultural 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

4 Hours

- Introduction to medical sociology/anthropology
- The present status of medical sociology/anthropology
- Criteria and contributions of sociology/anthropology to public health
- 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) 3 Hours

- 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

5 Hours

- Concept, meaning and definition of culture
- Characteristics and elements of culture
- Cultural Practices and its relation to Health

- Personalistic and naturalistic health care system
- Practice of family/self-medication in Nepal
- Role of indigenous healers and alternative medications in Nepal

Unit 7: Health politics

4 Hours

- **Concepts of Health and politics**

- Health, politics and health politics
- Politics with health executive and government
- Organ of government
- Relationship between health and politics
- Political determinants of health policy

- **Legislative aspects of health**

4 Hours

- Concept about legislative body, function and formation process of structure
- Political decisions and their effects on health policy formation
- Role of health advocacy and lobbying in health policy and Act formation
- Legislative procedure related to health Act development

- **Political aspects of executive health**

4 Hours

- Health related political role and functions of the executive
- Organogram of executive health structure
 - Executive decision-making in health sector
 - The decision making style
 - Executive decision and their effect on health policy formation and program implementation
 - Political commitment and health service

- **Political Issues in Health**

2 Hours

- Business, propaganda and public health
- Political instability, war and their effect on health of public and health service system
- The structural adjustment program and their effect on public health

Unit 8: Health Law and Act

6 Hours

- Concept about judicial health
- Structure and level of judicial body
- Importance of health jurisprudence and law in public health aspects
- Brief about law, Body of monitoring of law
- Brief discussion about the Health service Act 2053, Local governance and decentralization Act

- Brief account of Act and Law related to
 - Health behavior modification through legal measures and challenges
 - Control of contra health products
 - Control of health hazards through health laws and regulation
 - Legal protection against the threats to physical
 - Mental and social health of public
 - Health law and preventive public health
 - Epidemics and health laws
- Implementation strategy of health law for providing of social justice and challenges

Teaching learning methods

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

Evaluation

Internal assessment in different forms 20%

Final examination 80%

References

1. Acts and Regulation of Nepal
2. Bhatia and Bhatia: Psychology
3. Constitution of Nepal
4. Dixit, H (1999): Quest for Health, Educational Book Enterprises, Kathmandu
5. Foster, George, M., Anderson, B.R., (1978); Medical Anthropology, Alfred A. Knopf, New York
6. Freeman, E. Howard, Levine, Sol, and Reeder G. Leo edited (1979): Hand book of Medical Sociology; Third Edition, Prentice-Hall, Inc. Englewood Cliffs, New Jersey
7. Gartoulla, RP (1998): An Introduction to Medical Sociology and Medical Anthropology; RECID/Nepal, Kathmandu
8. Pandit, RP. A text bok of medical sociology and anthropology, 2013
9. Gartoulla, RP (1998): Therapy pattern of Conventional medicine; RECID/Nepal, Kathmandu
10. Gartaula, RP (2008): Textbook of Medical Sociology and Medical Anthropology;
11. RECID/Nepal, Kathmandu
12. Ginsberg, M (1967): Sociology, Oxford University Press, London
13. Hoebel E.A. And Frost, E.L. (1979): Cultural and Social Anthropology, Tata McGraw-Hill
14. Publishing Company Ltd, New Delhi
15. Mechanic, D. (1968): Medical Sociology: A selective view, New York, The Free press
16. JK Park: Preventive and Social Medicine, Banaridas, India, Recent edition
17. Warner D (1995): Life and Death of PHC, Mexico

18. Warner, D. Health care and human dignity. Contact, Special series No.3.98.100.(1980).

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Course Title	Applied Environmental and Occupational Health	
Second Year	Fourth Semester	Course Code - BPH 204.2-AEOH
Credit Hours: 3	Full Mark: 100	Pass Mark: 50

Course Description

This course provides a broad perspective on human environment interaction, human impact on the degradation of resources base and its consequences on human health. This course specifically aims to describe management of excreta, analysis of environmental hazards, governmental policy and law and emerging global environmental health problems. Along with occupational health issues and hazards also be studied.

Learning Objectives

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

- Develop general understanding of human impacts on the degradation of resource base consequently affecting human health.
- Inter-relate the casual linkages between environmental pollutants and human health. Acquire the necessary knowledge on the fundamentals of occupational health, diseases and safety measures.
- Develop general understanding of the its excreta, environmental hazards on human health and its management.

Course Content

Unit 1: Healthcare waste management

5 Hours

1. Nature and types of healthcare waste (**General waste ,Pathological waste or Anatomical waste, Chemical waste, Pharmaceutical waste , Waste with a high content of heavy metals, Pressurized containers, Sharps waste , Radioactive waste, Infectious waste, Genotoxic waste.**)
1. Health hazard from healthcare waste (**Hazards from infectious waste and sharps, Hazards from chemical and pharmaceutical waste, Hazards from genotoxic waste, Hazards from radioactive waste, Public sensitivity**)

Management of healthcare waste in public and private health facilities

National guideline of management of health care waste

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Unit 2: Hazards and risk analysis

10 Hours

- Concept, Emphasis is place on hazard identification, (**Hazard Identification**
- **Process- Hazard Identification, Risk Assessment, Control, Monitor, New hazard**
- **Exposure assessment,**
- - 1 hr

Major Steps In Exposure Assessment Strategy

- 1 hr

Steps

1. Start
2. Basic Characterization
3. Exposure assessment
4. Further Information Gathering
5. Health Hazard Control
6. Reassessment
7. Communication and documentation

Risk characterization

- 3 hrs

(Risk characterization Phases- a. Hazard Identification, b. Dose-Response Assessment, and c. Exposure Assessment.)

- ✓ Principles of conducting risk characterization.
- ✓ Components of risk characterization process
- 1. Review outputs from toxicity and exposure assessments
- 2. Quantify risks from individual chemicals
- 3. Determine individual pathway risk by quantifying risks from multiple chemicals
- 4. Combine risks across exposure pathways
- 5. Summarize and present results qualitatively and quantitatively

Regulatory aspects of risk assessment in the promulgation of environmental standards

Analysis of risk of burden of environmental hazards

- 1 hr

Major environmental accident in and out of Nepal and its epidemiology

-

2 hr

Global experiences of environmental problem and threat to Nepal

Environmental – 1

monitoring and evaluation Risk management and communicating risks – 1 hr

- Communication and early information to minimize the health risk

Unit 3: Environmental impact assessment

5 Hours

- Concept and definition of Environmental impact assessment and institutional impact assessment - 1 hr

Process of EIA, IIA- (Screening, Scoping, Baseline data collection, Impact analysis and prediction

Analysis of alternatives, Mitigation and impact management, Environmental impact statement, Decision making - 2 hrs

Methods for quantifying environmental health impacts (a. Checklist method b. Matrix method) - 1 hr

Environmental burden of disease Series (EBD Series) - 1 hr

Unit 4: WASH program

4 Hours

- Concept of WASH, objective, components and activities
- Central level WASH structure
- Global and national situational analysis of sanitation and drinking water (general overview, chronological history of sanitation initiatives in Nepal, situation of sanitation in Nepal)
- National strategy of sanitation (2012 -2017)
- Role of CBOs, community people, family, individual in WASH
- Sanitation context in the Nepal – MDGs, local regulations, and best practice

Unit 5: Human excreta

4 Hours

- Concept, health risk, and management of human excreta (Excreta management method- Centralized excreta vats, Fermentation settling tanks, Biogas Tanks)
- Analysis of risk of infection of excreta, vulnerability assessment in context of community
- Concept of open defecation free declaration
- Situation of open defecation in Nepal and its health impact
- Strategies and activities of ODF
- Access of toilet
- Characteristics of proper use of toilet

Unit 6: Environmental health policy and law of Nepal

4 Hours

- National environmental health laws, policies, regulations, and statutes in the context of public health
- Environmental health policy and law of Nepal

Unit 7: Occupational health and safety

16 Hours

- Introduction (concept, definition, and scope) 1 hr

Historical development of Occupational Health-1
hr

Principles of Occupational Health and Safety – 2
hr Occupational health Problems and hazards (
Physical hazard and problems, chemical hazard
and problems, Biological hazard and problems ,
Mechanical hazard and Problems, psychological
hazard and problems) 1 hr

Occupational Health safety and prevention (
Medical measure, engineering measure,
Legislation) – 1 hr

Industrial health, its situation in Nepalese context and safety
– 1 hr

Concept of ergonomics(Definition, Purposes, Work risk
factors, Principles of ergonomics, Preventive measure of
ergonomic risk condition- a. engineering control, b.
Administrative control, c. Use of PPE - 5 hr

Stress at Work – 2 hr

Legal aspects of occupational health and safety (Labour Act, and compensation Act)

-2 h

Teaching learning methods

Multiple methods will be used to acquire the above mentioned specific objectives;
Teaching learning methods of this course include didactic lectures, seminar, group work, and presentations review papers discussion in class room setting.

Evaluation

Internal assessment in different forms 20%
Final examination 80%

References

1. Elliot D, (2004) Energy, Society and Environment Taylor and Francis e-library
2. Asthana DK, Asthana M (1998) Environment Problems and Solutions: S Chand and
3. James A Listori, Fadi M Doumani: Environmental Health, Bridging the Gaps
4. Subedi N., Occupational Health and Safety in Nepal. 2012.
5. CCH, Australia. (2000). *Planning Occupational Safety and Health*. 5th edn. Sydney: CCH, Australia.
6. Pandit RN and Paudel DP. Occupational health and safety, 2010
7. Poudel R. Bastolla S. and Pahari D., A text book of Occupational Health and safety.2068
8. Guarnieri, M. (1992). Landmarks in the History of Safety. *Journal of Safety Research*, 23(3), 151–8.
9. Haddon, W. (Jr.) (1963). A Note Concerning Accident Theory and Research with Special Reference to Motor Vehicle Accidents. *Annals of the NY Academy of Sciences*, 107, 635 46.
10. Haddon, W. (Jr.) (1967). The Prevention of Accidents, Chapter 33 in *Textbook of Preventive Medicine* (Clark and MacMahon (eds)), Boston, Mass.: Little Brown.
11. Heinrich, H. (1959). *Industrial Accident Prevention*, 4th ed. New York: McGraw-Hill Company, Inc.
12. Holt, A. St. J. (1998). *Principles of Health and Safety at Work*. 2nd ed. Wigston Leicestershire: IOSH.
13. ILO Convention 155, Recommendation 164. *Occupational Health and Safety and the Working Environment*. Geneva: ILO

Course Title	Applied Epidemiology	
Second Year	Fourth Semester	Course code BPH 204.3-AE
Credit Hours: 3	Full Mark: 100	Pass Mark: 50

Course Description

This course will give the epidemiological research perspective of various infectious and non infectious diseases. The course also aims to impart skills and techniques to evaluate, assess and examine different interventions, surveillances and monitoring programs in the field of public health.

Learning Objectives

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

- Describe the applied epidemiology of infectious, non-infectious disease and health problems commonly prevalent in Nepal.
- Understand and describe the application of epidemiological principles and methods in prevention and control of communicable and non- communicable diseases
- Apply burden of disease concept to plan, organize and manage health programs
- Conduct field epidemiological studies

Course Content

Unit 1: Epidemiological features of infectious diseases prevalent in Nepal 30 Hours
• Viral Infections: Introduction, characteristics and types of viruses - 1 hr

Epidemiology (Introduction, etiologic agents, causes, mode of transmission, consequences, treatment, prevention and controlling measures) of:

- Chickenpox, Measles, Mumps, Rubella, Herpes Zoster, Herpes Simplex, Influenza, Common cold, Poliomyelitis, Rotavirus and other viral gastro-enteritis, viral hepatitis, Japanese encephalitis, etc.
- 6 hrs
- Rickettsial diseases and chlamydial infections **- 1 hr**
- Epidemic typhus, endemic typhus, trachoma, etc. **- 1 hr**
- **Bacterial infections: Introduction, characteristics and types of bacterias – 1 hr**
 - **Introduction of** Streptococcal infections, meningococcal infection, staphylococcal infections,

Epidemiology (Introduction, etiologic agents, causes, mode of transmission, consequences, treatment, prevention and controlling measures) of:

- Diphtheria, whooping cough, typhoid, and para-typhoid fevers, dysentery, cholera, tetanus, tuberculosis, STDs of bacterial etiology, food poisoning of bacterial etiology, including bacillus cereus, salmonellosis, staphylococcal and various E. coli strains of importance.

- 6
hrs

- **Fungal infections (General introduction)**

- Dermatophytosis, candidiasis, aspergillosis.

- 1 hr

- **Helminth infestations**

Epidemiology (Introduction, etiologic agents, causes, mode of transmission, consequences, treatment, prevention and controlling measures) of:

- Filaria,
- **General introduction** of infestation by hookworms, roundworm, strongyloides, toxocara and visceral larva migrans, taenia saginata and solium hymenolepis nana and dimunita, diphyllbothrium latum, echninococcus granulosus and hydatid cyst infestations, trematodes and their infestations.

- 1/12 hr

- 3 hrs

- **Protozoal infections**

Epidemiology (Introduction, etiologic agents, causes, mode of transmission, consequences, treatment, prevention and controlling measures) of:

- Malaria, leishmaniasis, amoebiasis, giardiasis,
- trichomoniasis, toxoplasmosis, pneumocystis carinii infection,

- 2 hrs

- 1 hr

- **Zoonotic diseases (General introduction)**

- Rabies, bovine tuberculosis, brucellosis, echinococcosis, Bird flu, swine flu
- Area of collaboration between veterinary and public health services.

- 2 hrs

- **Contagious diseases**

- **Epidemiology (Introduction, etiologic agents, causes, mode of transmission, consequences, treatment, prevention and controlling measures) of :**

- HIV, STIs, Hepatitis B, Leprosy,

- 2 1/2 hrs

- **General introduction** scabies

- 1/2 hr

- **Miscellaneous (General introduction**

- Snakebite, scorpion bites. – 1 hr

Unit 2: Applied epidemiology of non-communicable disease and health problems commonly prevalent in Nepal **14**
Hours

Introduction, characteristics, and risk factors of Non-Infectious diseases - 1
 1/2 hrs

● **Multi-factorial Determinants**

- Identification of problems encountered in investigations with respect non-communicable diseases and health problems commonly prevalent in Nepal.
 -1 1/2 hrs

● **Non-communicable diseases**

- Multifactorial determinants, growing nature of problems, and methods of analyzing information to determine etiology of non-communicable diseases;
 - 2 hrs
 - Road Traffic Accidents, - 1 hr
 - Diabetes, - 1 hr
 - Cardiovascular Disease, - 1 hr
 - Chronic Obstructive Respiratory Disease, - 1 hr
 - Cancer, - 1 hr
 - Drug Abuse - 1 hr
- **Nutritional deficiencies:** Malnutrition, PEM (Kwashiokar, Marasmus), Night Blindness, Xerophthalmia, Rickets, Osteomalacia, Beriberi, iodine deficiency disorders and Anaemia

- 2 hrs
 4

Unit 3: Field epidemiology
Hours

- Concept and principle of field epidemiology - 1 hr
- Field techniques
 - Development of test instruments
 - Methods of collecting information
 - Interview techniques and tools
 - Observation: concept and observation checklist
 - Secondary data analysis

Teaching Learning Methods

Lectures, group discussions, library study assignments, home assignments.

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

1. MoHP/DoHS [Nepal]. Annual Report.
2. DOHS, Epidemiology and Disease Control Division. Control of Communicable Disease Manual 2003.
3. Regmi B and Myia S: Principle and practice of fundamentals and clinical epidemiology
4. Chin J. Control of Communicable Disease Manual, an Official Report of the American Public Health Association, 2000.
5. DOHS, Epidemiology and Disease Control Division. National Recommended Case Definitions and Surveillance Standards 2003.
6. Vazquez M, LaRussa PE, Gershon A, et al. The effectiveness of the varicella vaccine in clinical practice. N Engl J Med 2001; 344: 955-960.
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8. Gordis L Epidemiology. 2nd Edition, WB Saunders Company, Harcourt Health Sciences Company, Philadelphia, 2000.
9. MacMahon B, Trichopoulos D. Epidemiology: Principles and Methods. 2nd Edition. Boston: Little, Brown, 1996.
10. Principles of Epidemiology: An Introduction to applied Epidemiology and Biostatistics. 2nd Edition. US Department of Health and Human Service, CDC, Atlanta Georgia
11. Rothman KJ, Greenland S. Modern Epidemiology. 2nd Edition, Lippincott- Raven publishers: 1998.
12. Rothman KJ. Epidemiology: an Introduction. Oxford University Press, 2002
13. Park K "Textbook of social and preventive medicine" Latest edition
14. A text book on Applied Epidemiology by Prof. Jagat Man Shrestha, NAMS

Course Title	Applied Biostatistics	
Second Year	Fourth Semester	Course Code-BPH: 204.4-AB
Credit Hours: 3	Full Mark: 100	Pass Mark: 50

Course description

This course will develop the student's skills on the basic statistics used in public health research. This course intends to understand about the sampling procedure, inferential statistics tools on the public health activities and analysis.

Learning Objectives

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

- Understand the key concepts on applied statistics.
- Identify and use of appropriate descriptive and analytic statistical measures.
- Describe and apply statistical concepts and knowledge in planning, implementing and monitoring public health programmes
- 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
- Describe and generate information on the health status of a community

Course Contents

Unit 1: Correlation and regression analysis

10 Hours

- Concepts of correlation scatter plot, Karl Pearson's coefficient correlation, Spearman rank correlation coefficient and its meaning and significance, properties of correlation coefficient and solve numerical problems
- Explain the concept of regression analysis for two variables, cause and effect relationship, compute the regression coefficients and fit for simple linear regression model, concepts of least square methods, residual analysis and coefficient of determination and its meaning and interpretation and solve numerical problems
- Concept of multiple correlation coefficients, partial correlation coefficient and multiple regression analysis, assumption, examples and interpretation.

Unit 2: Sampling theory, Sampling distribution and Estimation

10 Hours

- Define terms used in sampling: population, study population, reference population, sample, sampling unit, sampling frame, Parameter and statistic
- Census and sample survey ; merits and demerits
- Criteria for selection of appropriate sampling technique in survey

- Differentiation between probability and non probability sampling
- Describing probability sampling technique: simple random, stratified, systematic, cluster, multistage and probability proportionate to size sampling (PPS sampling)
- Describing non-probability sampling technique: convenience, judgmental, quota sampling, and snowball
- Lot quality assurance sampling
- 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 for finite and infinite case
- Estimation: point and interval estimation of the mean, proportion of distribution and confidence interval
- Determination of sample size

Unit 3: Inferential Statistics or hypothesis testing

28 Hours

- Concept of hypothesis: state and define null and alternative hypothesis and formulation of statistical hypothesis.
- Type I and type II errors in testing of hypothesis
- Normal distribution ; concept, definition and characteristics
- Level of significance , p value and its interpretation and power of the test
- Parametric and non parametric test: Assumptions, examples and test statistics.
- z-test for one sample & two samples means and proportions: Assumptions, examples and interpretation
- t-test for one sample & two samples means: Assumptions, examples and interpretations.
- t- test for correlation coefficient and regression coefficient
- One way analysis of variance, two ways ANOVA: Assumptions, examples and interpretations.
- ANOVA test for regression coefficient
- Non-parametric test of significance:
 - Chi-square test (test for proportion, goodness of fit and independence or association) , Mc-Nemar test , Fisher Exact test: Assumptions, examples and interpretations , Run test, Median test , sign test , Mann Whitney U test, Wilcoxon Matched Pair signed-rank test : Assumptions, examples and interpretations

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

1. K.S. Negi., Biostatistics. AITBS publisher, India 2008.
2. Blair R Clifford, Taylor Richard A, Biostatistics for health sciences, Pearson education inc, Prentice Hall, Indian edition Dorling Kindersley India Pvt Ltd, 2009
3. Pagano Marcello and Gauvreau Kimberlee, Principles of Biostatistics, Cengage LearningIndia Private Ltd, New Delhi, 2008
4. Rosner Bernard, Fundamentals of Biostatistics, Duxbuey Thomson Learning, seventh edition, 2010
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7. Zar Jerrolad H. Biostatistical Analysis, Prentice Hall, 1999
8. Sukubhattu Narendra Prasad Probability theory & Statistical Methods Edition, 2066
9. Mahajan BK "Method in Biostatistics" latest edition published by Smt. Indu Mahajan Pusa Road, New Delhi, latest edition, recent publication.

Course Title	Applied Public Health Nutrition	
Second Year	Fourth Semester	Course code: BPH 204.5-APHN
Credit Hours: 3	Full Marks: 100	Pass Marks: 50

Course Description

This course has been designed to impart applied and practical knowledge on public health nutrition to the students. The course intends to impart practical and theoretical ground to students about nutritional assessment, food security and food sovereignty, application of nutrition intervention. This course also demands for imparting knowledge and current practices of nutrition plan, policies, food laws including the practical experience of National nutritional programme, surveys and researches in Nepal

Learning Objectives

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

- understand, define and develop skill in assessment of nutritional problem through the use of different anthropometric measurement tools
- understand basic concept and implementation of food security, food laws and national and global level nutritional programme
- **Policies** plan and **National activities of** Nutritional programme

Course Content:

Unit 1: Nutritional assessment

7 Hours

- Different methods of nutritional assessment: Dietary intake, anthropometric (WHO New Growth Standards), biochemical and clinical methods Socio-behavioral surveys, Diet Surveys (Dietary Metho, Biochemical (Lab orat Method) Anthropometrics measurement: Different classifications Clinical Assessment (**Children and pregnant and lactating mothers**) Indirect parameters of nutritional assessment
 - Major nutrition related indicators (**Normal, Wasting, Stunting, wasting & Stunting**)
 - Conceptual framework of (under-nutrition and over nutrition) malnutrition (UNICEF Model), **BMI**

Unit 2: Nutrition, food security and development

4 Hours

- Food security **need and importance and Types**
- Agriculture, food and nutrition
- Poverty, over population and malnutrition cycle
- Effects of malnutrition on economic productivity, health and survival

Unit 3: Nutritional interventions

15 Hours

- **Behavioural Interventions: Complimentary feeding, Breast feeding, Exclusive breast feeding, Feeding of Low Birth Weight infants, Feeding of HIV Child, Infant feeding,**
- Nutrition education and counselling: importance, methods, objectives, techniques, selection of appropriate methods and media
IEC materials: types, contents and use in nutrition education
Food fortification: Home fortification with **Micro Nutrient Powder**, Iodisation of salt, Flour fortification, Use of MNPs
- Health related actions: Bio-fortification of cereal crops, deworming, Insecticide treated nets to prevent malaria and anaemia in pregnant women, Water, Sanitation and hygiene interventions
Situational health actions, emergency feeding
Nutrition surveillance
Malnutrition management and rehabilitation: institution, community and home based management and rehabilitation
- Comparative effectiveness of paediatric nutrition rehabilitation unit, nutrition rehabilitation centre and community and home based nutrition rehabilitation
- HACCCP (Hazard Analysis and Critical Control Point)

Unit 4: Nutrition plan, policies and initiatives

8 Hours

Historical overview
Nutrition policies, plans and strategies of Nepal
Multi-sectoral nutrition plan
Health and food act and legislation
Land resources and ownership
Food marketing and food transportation
SUN and REACH Initiatives, First 1000 days
Agriculture Development Strategy
Food act and food laws.

Unit 5: National nutrition programs

10 Hours

Different nutrition programs and projects: IYCF and CMAM/IMAM
Food fortification and supplementation programs
School Health and Nutrition Program
Food and Nutrition in humanitarian emergencies
Monitoring and Evaluation of nutrition and food security programs
Role of different government agencies in nutrition

Unit 6: Nutrition survey and research

4 Hours

Overview of nutritional surveys and researches conducted in Nepal
Current nutrition research studies 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

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

Internal assessment in different forms
20% Final examination 80%

Reference

1. National Nutritional Policy and Strategy 2008, DoHS
2. Multi-sectoral nutrition Plan, NPC
3. Clinical dietetic and nutrition - FPA Nepal.
4. Child Nutrition and Health – Ramesh Kanta Adhikari and Miriam Kranz
5. Food and Nutrition for developing countries
6. Human nutrition - Benjamin T. Borton, Wills R. Foster
7. Text book of physiology - Gautam
8. Text book of Social and preventive medicine - K. Park
9. Regmi B and Myia S: Public health nutrition, 2012
10. Nutrition in Developing Countries – Maurice King. Oxford University Press
11. Gartaula RP (2008,2012). Text book of medical sociology and anthropology and medical anthropology, RECIDIN, Kathmandu.
12. Nutrition Assessment and Gap Analysis
13. National Nutrition Policy 2008
14. Food, Nutrition and Dietetics 2015, Prof. Jagat Man Shrestha

Course Title	School Health and Oral Health	
Second Year	Fourth Semester	Course Code : BPH 204.6-SHOH
Credit Hours: 3	Full Mark: 100	Pass Mark: 50

Course description

This course has been designed to impart a holistic understanding of health promoting school, oral health, eye health and ear care and its application in public health. This course is the combination

of healthy school environment, oral health and eye health in health promoting school. This course will develop knowledge and skill to plan, implement and evaluate the health promoting school in the community.

Learning Objectives

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

- 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
- Identification of eye and ear problems and their primary management

Course contents

Unit 1: School health: Health promoting school

15 Hours

- Introduction
 - 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
 - School health policy
 - Health teaching
 - Healthful school environment
 - School health services
 - School community participation for Health Promotion

Unit 2. Oral Health in public health

15 Hours

- 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
- 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 and Oral Hygiene
 - Gum Diseases and their consequences like Heart Failure and Respiratory Problems
 - Interventions for Oral Disease Prevention
 - Ways to Help Kids Avoid Periodontal Disease
 - Dental Care and Pregnancy

Unit 3. Primary Ear and Hearing Care

9 Hours

- Introduction to hearing loss, means that can cause hearing loss (before or during birth and after birth)
- Congenital hearing loss problem
- Hearing loss among children, and adult
- Symptoms to look for if a child has an ear infection
- Care of ears (especially children and adults)
- Prevention of ear infection in children
- Hearing aids

Unit 4. Primary Eye care

9 Hours

- Global trends of blindness and visual impairments
- Blindness and causes of blindness
- Prevention of avoidable blindness and visual impairment
- Common Eye problems/ ocular problems and their risk factors
- Prevention and control Eye problems/ ocular problems
- Strategies and policy of prevention and control of blindness: National and International

Teaching Learning Methods

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

Evaluation

Internal assessment in different forms 20%
Final examination 80%

References

1. Lawson RA "Essentials of Dental Surgery and Pathology".
2. Strategies to Programme Girl's Education. Education Section. Program Divisions. UNICEF 1995.
3. Wallace HM & Girk K, "Health Care of Women and Children in Developing Countries"1990.