



## **MASTER OF PUBLIC HEALTH (MPH)** **SINGHANIA UNIVERSITY** **Pacheri Bari (Rajasthan)**

### **RULES AND REGULATIONS FOR THE COURSE** **MASTER OF PUBLIC HEALTH (MPH)**

#### **Nomenclature of Degree:**

The name of the course shall be Masters of Public Health (MPH)

#### **Background of the course**

This program has been specially designed to meet the increasing demand for well trained personnel with advanced & appropriate skills and knowledge to plan and implement innovative Public Health Schemes and Programs at regional, national and international level. Public health is branch of medicine concerned with the prevention and control of disease and disability, and the promotion of physical and mental health of the population on the international, national, state or municipal level. The program is aimed at developing public health administrators with expertise in related areas of community health including disease characteristics, their prevention and control, management in crisis situation, forecast strategic disease prevention policies, quality assurance and regulatory affairs.

#### **Eligibility**

- Graduate in Science (Physics, Chemistry, Mathematics, Botany, Zoology, Biotechnology, Dairy Science, Veterinary Science, Home Science, Health Science, Agriculture, etc.)
- Graduate in Social Sciences like Anthropology, Sociology, Psychology, LL.B, Journalism, Social Work
- Graduate in allied health sciences like public health, Health Sciences, nursing, physiotherapy, pharmacy, Veterinary etc
- Graduate in medical sciences - MBBS, BDS, BAMS, BHMS, BUMS.
- From any recognized Indian university or equivalent degree from any foreign university.

#### **Duration of the course:**

Duration of the course will be Two Academic Years (Four Semesters)



## Subject Semester wise:

### SEMESTER I

- MPH -101: Introduction to Public Health
- MPH -102: Human Biology & Public Health Chemistry
- MPH -103: Medical & Health Statistics
- MPH -104: Research Methods in Public Health
- MPH -105: Health Psychology, Communication & Counselling

### SEMESTER II

- MPH – 201: Epidemiology
- MPH – 202: Demography & Population Sciences
- MPH – 203: Project Planning & Management
- MPH – 204: Communicable & Infectious Diseases
- MPH – 205: Non-communicable Diseases
- MPH – 206: Project (Field visits)

### SEMESTER III

- MPH – 301: Health of Vulnerable Populations
- MPH – 302: Environmental Health & Sustainable Development
- MPH – 303: Occupational, Industrial and Urban Health
- MPH – 304: Health Policy, Planning & Economics
- MPH – 305: Public Health Internship
- MPH – 306: Project on Vulnerable Population

### SEMESTER IV

- MPH – 401: Public Health Nutrition
- MPH – 402: Health Systems Development & Management.
- MPH – 403: International Health
- MPH – 404: Research Project work
- MPH – 405: Report on Field Visit



## 7. Syllabus

### Master of Public Health (MPH) -SEMESTER I

#### MPH - 101: Introduction to Public Health

- Introduction- Definition, Significance, Evolution of Public & Community Health
- Genesis and Development of the concept, Healthcare versus Medical Care, Approaches to Public Health
- Determinants of Health – Biological, Behavioral, Socio-economic, Cultural, Environmental, Geographical etc
- Concept of Primary Health Care. Community
- Diagnosis & Needs Assessment
- Community perception and priorities on health and disease
- Disease profiles & Epidemiological transition
- Public Health delivery system in India
- Ecology of health
- Right to health
- Introduction to National Health Policy – 1983 & 2002, National Population Policy – 2005, National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), National Public Health Programs.

#### **Suggested Text Books/Publications:**

1. *Oxford textbook of Public Health* Ed. Roger Detels, James McEwen, Robert Beaglehole, and Heizo Tanaka Oxford University Press (OUP) 4th Edition: 2002.28
2. *Public Health at the Crossroads – Achievements and Prospects.* Robert Beaglehole and Ruth Bonita 2nd Edition Cambridge University Press
3. *Maxcy-Rosenau-Last Public Health & Preventive Medicine, Fourteenth Edition* Ed Robert Wallace, MD, et al.
4. *Epidemiology and Management for Health Care: Sathe, P.V. Sathe, A.P., PopularPrakashan, Mumbai, 1991.*
5. *International Public Health: Diseases, Programs, Systems, and Policies* by Michael Merson, Robert E Black, Anne J Mills - Jones and Bartlett Publishers.
6. *Preventive and Social Medicine, K Park, Bansaridas Bhanot Publishing House.*



## **MPH - 102: Human Biology & Public Health Chemistry.**

- Public Health Biology – Introduction, Scope and Applications Human Life Cycle
- Medical Terminology- Introduction to bacteriology/virology/Mycology/parasitology/ Genetic diseases/ genetics/Pediatric diseases/problems/Neoplasia/Inflammation & healing
- Human Anatomy - General Anatomy of Human body
- Structure and function of organs and systems - Digestive, Respiratory, Excretory, Circulatory and lymphatic, Endocrine, Musculo-skeletal, Nervous, Reproductive.
- Human Immunology-Basic Principles & concepts of Immunology & Role of Nutrition, immunity to infection and role of vaccination,
- Human Pathology - General Pathology, Disease pathogenesis, diagnosis, diagnostic techniques – its role, importance and applications in public health
- Human Physiology - Introduction, Environmental Physiology (Respiratory), Cardiovascular Physiology, GIT, Reproductive Physiology, Blood Physiology
- Human Microbiology - Introduction, Sterilization, Anatomy of Bacteria, Bacteria in Water and Milk, Culture Media/Methods, T.B., Malaria, STI, RTI, AIDS.
- Medical Biochemistry – Biochemistry of human body and biochemical laboratory investigations – its role, importance and applications in public health

### **Suggested Text Books/Publications:**

1. Guyton Arthur C., 1991, *Textbook of Medical Physiology*, A Prism Book Pvt. Ltd. Bangalore
2. Horton Casey, 1994, *Atlas of Anatomy*, Marshall Cavendish Books, London.
3. Keele, Neil et.al, 1991, *Samson Wright's Applied Physiology*, Oxford University Press, Delhi. 30
4. Winwood R.S, J.L.Smith, 1985, *Anatomy and Physiology for Nurses*, Education Academic and Medicinal Publishing Division of Hodder and Stoughton, London.



## MPH - 103: Medical & Health Statistics

- Introduction, Scope & applications of Biostatistics in Medical & Public Health Sciences
- Concept & applications of descriptive statistics – collection, measurement, presentation and analysis of medical & public health data–Measures of Central Tendency, Measures of Variability, Coefficient of Variation
- Survey methods - quantitative and qualitative survey methods in medical & public health sciences
- Sampling methods and techniques
- Concept, significance of theory and computations of probability in medical and health sciences
- Concept of probability distributions – Binomial, Poison, Normal and t distributions
- Statistical Inference
- Estimation of Population Parameters – Standard Errors, Confidence Intervals Testing of Hypothesis and Significance – Introduction & Concept
- Parametric Tests–Small samples & large samples & Quantitative and qualitative data
  - Z test, t test,  $X^2$  test, ANOVA, F test, Multivariate Analysis
- Non-parametric Tests
- Correlation – Concept and Computation of Correlation
- Coefficient Regression - Concept and Computation of Regression Coefficient
- Health Statistics - Measurement of Health, Sickness, and Disease in a population
- Vital Statistics – Rates & Ratio's
- Hospital Statistics – Hospital Management Information Systems & Medical Records, Classification of Diseases, Procedures (ICPD), and Deaths
- Application of statistical software's in data management and analysis – SPSS, Istat, Systat etc.,

### **Suggested Text Books:**

1. *An Introduction to Biostatistics: A manual for students in Health Sciences: P.S.S. Sundar Rao, J. Richard Prentice Hall, New Delhi, 1996.*
2. *Bio-Statistics: A foundation for Analysis in the Health Sciences: Daniel, W.W., John Wiley and Sons Pub., Canada, 1991.*
3. *Bio-Statistics: A Manual of statistical methods for use in the Health, Nutrition and Anthropology: K. Vishwas Rao, Jaypee Brothers Medical Pub., New Delhi, 1996.*
4. *Bio-Statistics perspective in Health care research and practice: Verma, B.L., Shukla, G.D., et., al , C.B.S. Pub. New Delhi 1993.*
5. *Handbook of Statistics: Krishnaiah, P.K. Rao, C.R. (ed), Elsevier Science Pub. Netherlands, 1988.*
6. *Sample Size Determination in Health Sciences – A Practical Manual by S.K. Lwanga & S. Lemeshow, World Health Organization, Geneva, 1991*
7. *Statistics in Small Doses by W. Castle*
8. *Biostatistics in Clinical Medicine by Ingelfinger*
9. *Primer of Biostatistics by Grant*
10. *Statistical Methods in Medical Research by P. Armitage*
11. *A Short Textbook of Medical Statistics by Bradford Hill*



## **MPH - 104: Research Methods in Public Health**

- Introduction to Research- Definition, Types, Strategies &
- Designs Research Process and Cycle
- Descriptive/epidemiological studies–Cross sectional, Operational Research and correlation studies.
- Analytical Studies-Case control study, Cohort study
- Experimental Studies- Quasi-Experimental Studies & Clinical trials- Introduction to various types and its application
- Research Methods -Qualitative (Development of conceptual framework, - Qualitative methods: FGDs, in-depth interviews, ethnographies, participatory methods, participant observation etc. Data collection, recording) & Quantitative.
- Statistical Methods in Public Health Research-Application and Interpretation
- Research Data Collection Tools & Methods-Sampling and survey methods, Sample size, Survey design & Planning, Interview schedule, questionnaire construction, validation etc
- Research Data Collection, Management, Coding
- procedures Participatory Research and Analysis (PRA)
- Methods Ethical Aspects in health research.
- Research paper/Proposal-Formulation, writing & critical review.
- Bibliography-Review of literature and bibliography

### **Suggested Text Books:**

1. *Health Research Methods – A Guide for Training in Research Methods, World Health Organization, Manila, 2001*
2. *Research Methodology by A.P.Kulkarni Power Publication, Calcutta*
3. *Research Methods by Ranjit Kumar*
4. *Research Methods by Good & Hatt*
5. *Research Methods by P. V. Young*
6. *Research Methods by Media research methods by Barrie Gunter.*



## **MPH - 105: Health Psychology, Communication & Counseling**

- Human Psychology-Nature, scope & Factors influencing human behavior.
- Human growth and development across the Life span, Conflict resolution.
- Health Psychology- Concepts, Understanding, & health seeking behaviors, factors influencing health psychology
- Society & Health - socio-psychological barriers (Social taboos, blind faiths, beliefs, myths that affect health)
- Communication – Process, Types, Barriers, Tools & Techniques
- Health education/communication- Principles & Practice, Approach, Models, Content
- Information Communication Technologies (ICT) in health care and awareness. (Tele-medicine & e-health, community radio)
- Health Counseling- Introduction, theories, process & techniques.
- Stigma and discrimination: Definitions, context and role of stigma and discrimination in health and disease.
- Counselor- Personal and interpersonal development of the Counselor.
- Teaching technologies, methods and Microteaching

## **Suggested Books**

1. Health Psychology, By Taylor Shelly E, Tata McGraw-Hill , first edition, 2006
2. Handbook of Cultural Health Psychology edited by Shahe S. Kazarian, David R. Evans, Academic press, 2001
3. Health Psychology: A Critical Introduction By Antonia C. Lyons, Kerry Chamberlain, Cambridge University Press
4. Health Communication in the 21st Century, By Kevin B. Wright, Lisa Sparks, H. Dan O'Hair, Blackwell publishing limited, 2013, first edition
5. Health Communication: From Theory to Practice, By Renata Schiavo, Published by Jossey Bash.
6. Health Communication R.D. Karma Published by Mohit Publications 2008.



## Master of Public Health (MPH) : SEMESTER II

### MPH - 201: Epidemiology

- Introduction to Epidemiology- Definition, History, Aims, Basic principles, Uses of Epidemiology
- Epidemiological methods: Descriptive Epidemiology, Analytical Epidemiology, Experimental Epidemiology
- Epidemiological study designs –Descriptive (cross-sectional), analytical (case control & Cohort) and experimental
- Determinants of disease, Natural history of disease
- Epidemic investigations
- Association and causation
- Risk measurement, Measurement of morbidity and mortality: Incidence, Prevalence, Age-adjustment and survival analysis, use of morbidity and mortality.
- Epidemiology of Communicable & Non-communicable Diseases- Risk factors, global profile and predictions prevention and control.
- Social epidemiology- Definition, History, Aims, Basic principles & Methods

### **Suggested text Books:**

1. *Epidemiology by P.V.Sathe, Popular Prakashan*
2. *Gordis Leon Epidemiology (3rd edition) ,W B Saunders and Co.*
3. *Beaglehole. R. Bonita, et. al Basic Epidemiology .:, WHO Publication, Geneva, 1993.*
4. *David E., et. al. Foundations of Epidemiology : Oxford University Press, New York, 1984.*
5. *Barkar, D.J.P., Practical Epidemiology: Churchill pub, Livingstone, 1982.*
6. *Epidemiology in health care planning: E.A. Knox (ed), Oxford University Press, New York,1979.*
7. *Katz Mitchell: Study Design and Statistical Analysis: A Practical Guide for Clinicians*
8. *Last, J.M., Spasoff, R.A. Harris, S. S. and Thuriaux, M.C. (Eds): A Dictionary of Epidemiology, Oxford University Press, New York, 4th Ed., 2001.*





## **MPH-202: Demography & Population Sciences**

- Introduction: Definitions, Scope and nature, importance of the study, Historical review, difference and similarities between Demography and Population Sciences.
- Methods of Demographic Data Collection: Primary and Secondary sources of data collection, Procedures, Uses, Strengths and weakness of census, vital statistics, sample survey, dual reporting system – SRS, Data from national health program/disease surveillance, hospital statistics, police records, remand homes etc.
- Population composition: Sex composition, factors affecting sex composition, Age structure Population pyramids, impact of various demographic processes on the age structure. Comparison – developed and developing countries.
- Demographic transition
- Fertility: Determinants: Social economic, political, natural fertility levels and trends in India and world, Measures of fertility, Impact of level of fertility on reproductive health, selected theories of fertility, policies about fertility control.
- Mortality: Measures of mortality, Causes of Death: epidemiological perspective, Infant & neonatal mortality rates, maternal mortality, disease wise mortality, Trends of Mortality in India, differentials in mortality in developed and developing countries.
- Migration and urbanization: General terms and concepts, internal migration, measures of migration, Differential migration, International migration, Migration in India. Urban challenge of health and environment.
- Population Growth and Problems: Population growth, reasons for sudden growth in population, problems emerging out of that. Rural-urban distribution of growth pattern, population growth and related problems.
- Population Policy: Health planning in terms of Family planning, Health services, Vital processes. Policies and programmes influencing demographic processes in the context in India's population.
- Demographic dividend-Concept, scope and applications.

### **Suggested Text Books/References:**

1. *Principles of population Studies: Asha Bhende and Tara Kanitkar, Himalaya Pub, Houses, Mumbai, 1996*
2. *Population: John Weeks, Wordsworth pub., California, USA, 1994.*
3. *Population Transition In India: S.N.Singh, M.K.Premi, P.S.Bhatia, B.R.Publishing Corporation, Delhi, 1989.*
4. *Population in the context of India's development: P.B. Desai UGC – UNFPA project, Ahmedabad, 1987.*



## **MPH - 203: Project Planning & Management**

- Introduction to project planning and management in health care & public health
- Project Planning, Structure & Content – Personnel, Financial, Operational planning
- Decision making tools for project planning - Logical Framework Analysis (LFA) tools, SWOT Analysis for project development
- Project Life Cycle
- Project identification, preparation & formulation Project Proposal Writing Project
- budgeting and financing
- Project review and approval
- Project execution/implementation
- Project management – History, Roles & Responsibilities, Types of management (Strategic management, Operations management, Crisis management)
- Project evaluation – Internal and external evaluation, Participatory evaluation Methods, Tools & Techniques (PERT, CPM) & Indicators for project evaluation
- Fund raising for projects

### **Suggested Text Books/References:**

1. *Project Management for Healthcare* By David Shirley, CRS Press, 2011
2. *Project Management in Health and Community Services-Getting good ideas to work*, By Judith Dwyer, Pauline Stanton, Valerie Thiessen, National Library of Australia,
3. *The ABCs of Program or Project Planning* By Sunny O'Flynn, Strategic book rights and publishing company, Houston

## **MPH - 204: Communicable & Infectious Diseases**

- General overview of communicable diseases, impact of communicable diseases on developing countries. Characteristics of prokaryotes and eukaryotes, Structure and function of typical bacterial cell.
- Virulence factors, mode of action of toxins, cellular basis of disease
- Microbial subversion of host defense mechanisms
- Anti-microbial agents, mode of action, genetic basis of drug resistance, multi-drug resistance
- Biology of viruses, classification, and mechanism of pathogenesis
- Anti-viral agents
- Biology, pathogenesis and pathology, clinical presentation, of common infections -  
Respiratory : Tuberculosis, leprosy, ARI's including pneumonia, measles, mumps , rubella
- Intestinal : Diarrhoea, typhoid, polio, hepatitis, worm infestations
- Contact : STDs and AIDS
- Vector borne : Plague, rabies, malaria and filaria, JE, dengue
- Disease prevention and control
- Malnutrition and infection
- Health aspects of Disaster management-Definition, types and management

### **Suggested Text Books/Publications:**

1. *World Health Organization: Report on infectious diseases, and Report on Multidrug resistance, World Health Organization, Geneva*
2. *Principles and Practice of Medicine: Davidson, Edward, Bouchier et. Al., Pearson Professional Ltd. London, 1995*
3. *Biology of Disease: Jonathan Phillips, Paul Murray, Blackwell Science Ltd. Australia, 1995*
4. *Practical Medical Microbiology : Mackie and M.C. Cartney, Longman Group, U.K. 1995*
5. *Human Virology : A textbook of Students of Medicine and Microbiology, Dentistry, Leslie collier, John Oxford, Oxford University Press, Tokyo, 1993*
6. *Textbook of Medicine: Cecil, Bennett, et al., Harcourt Brace Joanvich Inc. U.S.A. 1992*
7. *Medical microbiology: Greenwood et al., Churchill Livingstone Longman group, London, 1992*
8. *Textbook of Medical Parasitology: Jayram Paniker, Jaypee Brothers, New Delhi, 1993*



## MPH 205: Non-Communicable Diseases

- Overview and introduction to NCDs
- Epidemiology of NCDs, risk factors, prevention and management: general strategies New approaches and policies of NCDs.
- NCDs programs of WHO, PAHO, and Government of India.
- Some important NCDs: Following diseases will be covered for Etiology, Pathophysiology, Epidemiology, Prevention and Control. -Asthma , Cancer , Cardiovascular diseases , Chronic , rheumatic diseases , Diabetes , Tobacco use
- Mental Health: Classification, biochemistry, clinical manifestations, diagnosis and treatment and intervention and support services
- Concept of Mental Health
- Burden of Mental diseases
- Depression, Schizophrenia, Alzheimer's, Parkinson's, Senile dementia ,Suicides Substance Abuse
- National Mental Health Programme
- Emerging & re-emerging diseases
- Role of Voluntary organizations, self-help groups

### Suggested Text Books/Publications:

1. *Global Handbook On Non-Communicable Diseases And Health Promotion* By David V. Mcqueen, Springer Publication.
2. *Education Of Communicable And Non-Communicable Diseases* S.L. Goel Published By Deep & Deep Publications Pvt. Ltd., 2009
3. *Burden Of Non Communicable Diseases (Paperback)*By (Author) M D Richa, By (Author) Gyan Prakash Singh, By (Author) C P Mishra Published By Lap Lambert Academic Publishing. 2012
4. *Park's Textbook Of Preventive And Social Medicine 21 Edition* By K. Park Published February 2011 By Banarsidas Bhanot Publishers .



## MPH. - 206- Public Health Practical/Field Visits

Practical based on MPH. - 201 to MPH. - 205

1. Epidemiological Exercise on Water
2. Epidemiological Exercise on epidemiology
3. Medical Important Arthropods.
4. Measurement of morbidity and sickness-rates and ratio's.
5. Measurement of Risk Analysis for various morbidity, mortality and survival.
6. Exercise on Life tables-Life expectancy at birth and at different ages.
7. Exercise on RCH Logistics
8. Exercises on population trends and growth.
9. Exercises on mortality and fertility- rates and ratios.
10. Formulation of a project proposal on selective topic/problem based on all the concepts of project planning and management learnt in the theory topics.
11. Community Needs Assessment-To conduct the community needs assessment for different stakeholders- **Users**-Migrant workers, villagers, women, children, tribal, industrial workers, farmers etc. & **Doers**-Govt., NGO, Private sector etc.
12. Visit to Vector Breeding Places in villages as well as hotels, market place, slaughter houses, market, livestock shed etc.
13. Visit to district vector control office.
14. Visit to STI Clinics & ART Centre.
15. Visit to rehabilitations homes for mentally sick people.
16. Visit to police stations for collecting data on road traffic accidents and injuries.
17. Visit to Cancer Centre for study of cancer registry and various cancer prevention and treatment facilities.



## Master of Public Health (MPH) : SEMESTER III

### MPH 301: Health of Vulnerable Populations

- Definition and Concept of Vulnerable Populations
- Vulnerable groups their health and human rights
- Vulnerable Groups facing Structural Discrimination in India–Women, children, SC, ST etc
- Vulnerability by different factors- Race and ethnicity (Tribal, Dalits, Indigenous populations), Gender (male, female, transgender), Geographical area (rural/urban, remote & hilly areas), Age (Child, adolescent, elderly), Disability (Physical & Mental – Social and health inequalities) Migration & Displacement, Stigma and Discrimination (PLW HIV/AIDS, Sexual Minorities, Sex workers), High Risk Occupations (Farmers-Farm workers, Industrial workers, Mining workers, Sex Workers, Child Labour, Street Children) Environment, War and Natural Calamities .
- Violation of right to health of vulnerable populations- Concept of gender, Social structure and gender, Gender discrimination, Consequences of gender discrimination on health, Gender in the context of development, Violence against women, Girl trafficking, Global issues related to gender, Legal aspects and acts related to gender:MTP,PNDT,Prostitution, homosexuality etc.
- Issues related to Children and Adolescent- Child abuse/Child labour/Street Children & malnutrition, Girl Trafficking & anemia in adolescents, reproductive rights of adolescents.
- Health inequality and health care disparities among vulnerable populations
- Advocacy of health and human rights of vulnerable groups
- Public health preparedness of vulnerable populations
- Vulnerable populations in medical/health research
- Assessment & addressing the needs of vulnerable populations
- Special schemes, projects, programs for vulnerable populations
- International aid agencies supporting vulnerable populations

### **Suggestive Text Books/References:**

1. *Vulnerable Groups in India* by Chandrima Chatterjee & Gunjan Sheoran, CEHAT, Mumbai
2. *Vulnerable Populations in the United Nations* by Leiyu Shi & Gregory D. Stevans, 2<sup>nd</sup> Edition, Published by Jossey-Bass, A Wiley Imprint, San Francisco
3. *Public Health Preparedness and Response for at-risk populations* by Anne Rader, Margo Edmunds, John Bishop, Booz Allen Hamilton Publications
4. *Vulnerable Populations in Research (ppt)* by Dr. G.D. Ravindran, St. John's Medical College, Bangalore
5. *Tribal Health Problems, Disease Burden and Ameliorative Challenges in Tribal Communities with special emphasis on Tribes of Orissa* by R.S. Balgir,



## **MPH (302): Environmental Health & Sustainable Development**

### **Environmental Health**

- **Environment**-Definition, Concept, Components
- **Environmental Pollution**- Sources, Impacts and treatments of Air (Indoor/Outdoor), Water, Soil, Nuclear, Solid waste, Biomedical waste, e- waste etc.
- **Development & Environmental issues** -Environmental Ethics, Global Warming, Climate Change, Ozone Depletion, Acid Rain etc.
- **Eco-friendly environmental practices**-Waste management, Energy practices, Agriculture Practices.
- **Environmental Disaster**- Definition, types and management.
- **Environment & Health Impact Assessment**-Concept, Steps and application

### **Sustainable Development**

- **Development**- Definitions & Concept
- **Development theories**- Modernization, structuralism, dependency, basic needs, neoclassical, sustainable, human development.
- **Sustainable Development** –Introduction, principles, models
- Rights Based Approach for development and health
- **Developmental Planning**-Macro & Micro level
- **Healthy Settings**-Cities, Villages, Schools.
- Poverty & Its Measurements
- Wellbeing and its measurements
- Human Development and Its measurements.
- Societal Health & Development. Community
- Organization and participation

### **Suggested Text Books/References**

1. *Environmental and Health Impact Assessment of Development Projects: A* edited by Robert G. H. Turnbull, Elsevier Sciences Publication
2. *Environmental Chemistry*, B.K.Sharma, Krishna Prakashan Media.
3. *Environmental Science* by S C Santra, Publisher: : New Central Book Agency Calcutta , 2001
4. *Perspectives in Environmental Health -Vector and Water Borne Diseases* Mukhopadhyay Aniruddha, De A K
5. *Sociology Anthropology, and Development*, Michael M. Cernea, The World Bank Washington, D.C, 1994
6. *Development and the Environment*, Lewis T. Preston, The World Bank Washington, D.C, 1992



## MPH - 303: Occupational, Industrial and Urban Health

- Fundamentals of occupational Health.
- Principles and Relevance of Industrial and occupational Health
- **Occupational Health** – Prevention, promotion, access to health services, legal aspects.
- **Occupational Safety & Health:** Chemical and physical exposures, control of occupational exposures, injury control
- Occupational health disorders and diseases
- Industrial Hygiene
- Ergonomics
- Industrial Psychology
- Occupational Services at workplace
- Legislations related to occupational health and safety
- **Occupational health of working population of organized and unorganized sectors-**Farmers, Industrial Workers, health workers, CSW, etc.
- **Urban population:** Definition, demography and trends
- Determinants of urban health
- Consequences of urbanization and Urban health
- services Concept of urban health planning and
- practices. National Urban Health Mission.

### **Suggested Text Books/References**

1. *Occupational Health: Management and Practice for Health Practitioners* By S. P. Hattingh, 3<sup>rd</sup> edition.
2. *Urban Health: Global Perspectives* edited by David Vlahov, Jo Ivey Boufford, Clarence E. Pearson, Laurie Norris, published by Jossey bass
3. *Industrial Health* Jack E. Peterson American Conference of Governmental Industrial Hygienists, 1991



## MPH - 304: Health Care Policy, Planning & Economics

### Health Care Policy

- **Health Policy**:-Understanding, need and goals for various policies related to public health - Health policy, population policy, nutritional policy-food security, research policy, women policy, child policy etc.
- Health Policy environment
- Methods to assess the needs of for the policy development / assessment process.
- Frameworks for policy analysis, applying these to the assessment of current policies.
- Factors influencing the policy: external factors (interest groups as one example), politics, globalization and the like.
- **Healthcare Legislation in India**: Legal aspects of healthcare, the Medical, Termination of Pregnancy Act, The maternity benefit act, The immoral traffic, (prevention) act, The transplantation of human organs act, PNDDT Act, The registration of birth and Death act, The child labour (prohibition and regulation) act, Biomedical waste Rules, COPRA Act, Indian factories act, ESI act.

### Health Planning

- **Health Planning** –History, Concept, models
- Strategic planning, implementation and
- evaluating Health care manpower planning and
- development Health Care Utilization Patterns
- Management of Primary Health Care
- Health Sector Reforms
- Organizational behavior and development
- Privatization, commercialization & globalization of health care
- Public- Private partnership
- Health care quality assurance

### Health Economics, Budgeting and Financing

- Health economics
- Investment in Health Care & Public health
- Financing of Health Care – Public, Private & Community/Individual
- Health Insurance Schemes
- Development Partners in Public health

### Suggested Books/References:

1. *Health Care Financing, Regional Seminar on Health Care Financing, Asian Development Bank, Economic Development Institute and East-West Center, 27- July 3 August 1987*
2. *Health Care Policy: Issues and Trends, Jennie Jacobs Kronenfeld, Publisher: Praege, 2002*
3. *Health Care and Public Policy by David A. Reisman, published by Edward Elgar publishing, UK, 2007.*
4. *Health Planning in India by G. Ramachandrud.*
5. *Health economics, H P S Rana by Alfa Publications (2009)*
6. *Health Economics: An International Perspective by Barbara McPake, Charles Normand, Samantha Smith, Publisher: Routledge; 3 edition*

## **MPH 305: Public Health Internship**

Four Weeks of Public Health Internship is part of the MPH Program which should be facilitated by the Constituent Unit of PIMS University at any approved regional/national renowned Public/Community Health, Development, Research & Academic/Training Organizations. This course will be scheduled between Semester II & III. Report may be submitted at the end of Semester III.

### **Purpose of the Public Health Internship**

To expose the student to various programmes/activities in Public Health and develop a comprehensive understanding of programme design, strategies and planned intervention, research etc

### **Objectives of Public Health Internship:**

- To collect the information about organization-Areas of expertise, bonafides, stakeholders, length of the work, type of organization (govt., semi-govt., NGO, voluntary, corporate etc.)
- To learn about the different projects/programs (institutional/community based) run by the organization.
- To be familiar with communication procedure between health workers and community.
- To acquire practical knowledge & practices about project planning and implementation.
- To discover the problems encountered & solutions arrived while implementing the project.
- To learn about working of the Management information system (MIS).
- To know about method and source of evaluation.

### **Suggestive Format for Internship Report Writing**

1. Title of the project
2. About the organization
3. Introduction and objectives of the project/programme / organization
4. Funding agency— about the agency, how to get funding, Nature of funding agency
5. Staffing pattern of the project with their functions
6. Major activities being undertaken under the project
7. Results achieved so far (target Vs achievement)
8. Role of the candidate in the project/programme / organization
9. Project/Program Evaluation by the candidate.



## **MPH.306- Project (Vulnerable Population)**

1. Visit to Tribal Population of Hilly/mountainous area
2. Visit to Blind, Deaf & Dumb School
3. Visit to Migratory Sugarcane Harvest Workers Families
4. Visit to CSWs, MSM and Migrant population Projects
5. Visit to Old Age Homes, Rehabilitation & Remand Homes
6. Visit to ART Centre for PLW HIV/AIDS & NGOs
7. Visit to sewage/effluent treatment Plant
8. Estimation of available chlorine in bleaching powder and disinfection of open well/ bore well/tank water.
9. Estimation of quality of water through water quality testing (OT, pH, TDS, Hardness, Nitrate, Chloride, Iron, Fluoride, Bacteria etc.)
10. Visit to community water purification/treatment Plant
11. Visit to Biomedical waste treatment Plant



## Master of Public Health (MPH) : SEMESTER IV

### MPH - 401: Public Health Nutrition

- Principles of human nutrition – relationship between nutrition, health & disease
- **Nutrition and Health:** Classification and Nutritional profiles of various foods and drinks, Balanced diet, Diet survey, consumption unit, nutritional classification, Nutritional problems e.g. LBW, PEM, Xerophthalmia, IDD, etc. Nutritional factors in selected/ major diseases (Cardiovascular, Diabetes, Obesity, Cancer),
- Digestive absorption, metabolism of carbohydrates, proteins and lipids
- Energy, water, minerals, vitamins
- Applied nutrition
- Nutrition assessment
- Community nutrition – Recommended dietary allowances, nutrition throughout life cycle, malnutrition and chronic energy, micronutrient disorders, Food toxicity, socio-ecology of nutrition
- Maternal and child nutrition,
- Methods of promoting dietary change
- Effect of processing on nutritive values of foods
- Habitual diets in India and their adequacy
- Nutritional deficiencies-prevention and control
- Nutrients and their functions.

### **Suggested Text Books/References:**

1. *Advanced textbook on food and Nutrition: Dr. M Swaminathan, The Bangalore Publishing Co. Ltd. Bangalore, 1974*
2. *Recent Trends in Nutrition: C Gopalan, Oxford University Press, New York 1993.*
3. *Nutrition for Developing Countries: E. Savage King, Oxford University Press, Oxford, 1992.*
4. *Nutrition problems and Programmes in South East Asia: Dr. C. Gopalan, World Health Organization, New Delhi, 1987.*
5. *Perspective in Nutrition: Gordon M. Wardlaw, Paul M. Injel, Time/Mosby College Publishing, St. Louis, 1990.*



## **MPH - 402: Health Systems Development & Management**

### **Health Systems Development**

- Introduction to various Health System
- Models Health services philosophies
- Levels of health care-Primary, Secondary & Tertiary
- Health care providers (Government, Private, Voluntary/NGO, Indigenous)
- Alternative systems of medicine (AYUSH)
- Integrated health care delivery-Preventive, promotive, curative & rehabilitative
- Inter-sectoral approach for health care delivery
- Decentralized health care delivery system
- Sustainable, Grassroots & Comprehensive Health
- Models Appropriate technology in health
- Health Systems research – 10/90 Gap in medical research

### **Health Management:**

- Strategic management in Public Health
- Organization Behavior and Design
- Human Resource Development Quality &
- Assurance. Management Information and Evaluation
- System. Health resources & Management
- Total Quality Management & ISO certification of health systems

### **Suggested Books/References:**

1. *Health Care Administration: Planning, Implementing, and Managing Organized Delivery Systems, Third Edition, by Lawrence Wolper, Jones and Bartlett Publishers International, UK.*
2. *Essentials of Public Health Management by L. Fleming Fallon Jr., Eric Zgodzinski, Jones & Bartlett Publishers, 2011*
3. *Health Management by Preeti Oberoi, Sarup & Sons publication*



## **MPH - 403: International Health**

- Introduction to international health, scope & importance.
- Socio-cultural perspectives of International health
- Health Problems, Issues and concerns that transcend national boundaries
- Policy development in international health, health care, educational and economic development.
- Globalization-Cultural, Political, Social and economic globalizing processes at work in today's world.
- Global burden of Diseases-How disease burden is measured and the causes of morbidity and mortality at global scale.
- Global Governance-Neoliberal and neorealist regime theory, critical theory approaches, international law, role of corporations and private authority and the activity of global civil society.
- Public Health in developing & developed countries
- International Drug Policies & programmes
- International health legislations-Recruitment laws, Health Insurance Policies, academic equivalence etc.
- International funding for health care & conditions-Structural Adjustment Program (SAP).
- International Health Agencies and their role and contribution
- International Public Health Programs- Millennium Development Goals
- (MDG) International Health tourism
- Ethical issues in international health research.

## **Suggested Text Books/Publications:**

1. *Textbook of International Health: Global Health in a Dynamic World* By Yogan Pillay, Timothy H. Holtz, 3<sup>rd</sup> Edition. Oxford University Press.
2. *Textbook of International Health* By Paul F. Basch, Oxford University Press
3. *Global Health 101*, By Richard Skolnik, 2nd Edition,
4. *An Introduction to International Health*, By Michael Seear, Published by Canadian Scholars Press Inc.
5. *Essentials of International Health* By Manoj Sharma, Ashutosh Atri,
6. *Global Health –Disease, Programmes, Systems and Policies* edited by Michael Merson, Robert E, 3<sup>rd</sup> Edition.

## **MPH - 404 -Research Project**



Based on the actual training imparted in the course, the student shall conduct a research project. The topic for the research project may be related to any current public health issue.

### **MPH - 405-Practical's/Field Visits-**

1. Visits to approved public health organization working in the field of international health either locally or nationally. (The visits should cover study of the theory, the concepts taught in the subject to real life practices)
2. Planning, preparation and nutritional evaluation of diets in relation to activity levels and physiological state.
  - a. Planning and preparation of a balanced diet for a pregnant woman.
  - b. Diet during complication of pregnancy.
  - c. Planning and preparation of a balanced diet for a lactating woman.
  - d. Preparation of weaning foods.
3. Nutritional value & criteria of food selection in Indian diet according to ICMR Diet and nutrition surveys:
  - (a) Identification of vulnerable and risk groups.
  - (b) Diet survey for breast-feeding and weaning practices of specific groups.
  - (c) Use of anthropometric measurement in children.
4. - Dietary planning for HIV and Aids
5. Problem Based Learning
6. Group Discussion
7. Seminar