

Maulana Abul Kalam Azad University of Technology, West Bengal

(Formerly West Bengal University of Technology)

**Syllabus for Master of Public Health
(Effective for Academic Session 2019-2020)**

FIRST SEMESTER

MPH 101: INTRODUCTION TO PUBLIC HEALTH: A GLOBAL PERSPECTIVE

Unit 1:

- Introduction- Definition, Significance, Evolution & Development of Public & Community Health
- Determinants of Health – Biological, Behavioral, Socio-economic, Cultural, Environmental, Geographical etc
- Defining the burden: Local to global for chronic diseases, HIV/AIDS, Cardiovascular Diseases (CVD), Obesity, Injury Prevention and Control, Infant Mortality and Poverty

Unit 2:

- Globalization and Health
- Role of Public Healthcare Institutions in Global Health System, Emergency, Disaster Preparedness and Response activities
- Strengthening Healthcare Systems to Improve Health Outcomes: Reference to High, Low and Middle Income Countries

Unit 3:

- Organization & Management of Public Healthcare Delivery system in India: National, State, District and Block Level
- Health Sector Reforms in India: Development Partners in Public health, Public- Private partnership, M-Health/ E-Health
- The Future of the Public Health in the 21st Century: Challenges and Opportunities

Suggested Books:

1. Schneider. Introduction to Public Health, 3rd Edition. Jones and Bartlett. 2011
2. Public Health Foundations: Concepts and Practices. Andresen and Bouldin Eds. Jossey-Bass 2010. • Introduction to Global Health. Jones and Bartlett
3. Evidence-Based Public Health. Brownson et al. Oxford, 2003.
4. Public Health: What It Is and How It Works, Fifth Edition. Bernard J. Turnock (2012). Sudbury, Massachusetts: Jones and Bartlett Publishers.

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MPH 102: PRINCIPLES OF MANAGEMENT

Unit 1:

- Management : Concept & Definition, Characteristics, Science or Arts, Modern Management Concepts and its Implication in Health sector
- Theories of Management: Pre-scientific Management Period, Classical Theories of Management: Administrative management of Fayol ,Bureaucratic Model of Max Weber
- Neoclassical Theories of Behavioral Approach : Elton Mayo & Hawthorne Experiments
- Modern Theory or System Approach, Contingency Approach

Unit 2:

- Functions of Management: Planning, Organizing, Staffing, Directing, Controlling, Motivating and Leading, Managerial skills required to operate a Healthcare Institution.
- Management Techniques & its Application in Health Care Administration
- Feed back loop, MBO/MBR

Unit 3:

- Organisation: Concept of Organization, Formal and Informal Organization, Types of Organisational structure, –Line and Staff, matrix, Net-work, Geographical, Administrative, Matrix Organization with special emphasis to Hospital Organization
- Organisational Chart: Fundamental concepts of organizing, Division of work and Departmentalization. Delegation of Organizational Authority & Time Management

Suggested Books:

1. Essentials of Management – By Harold Koontz & Heinz Weihrich – 7th Ed. – Tata McGraw Hill
2. Essentials of Management – By Joseph L. Massie – Prentice Hall India.
3. Practice of Management – By Peter Drucker – Allied Publisher.
4. Management: A Global Perspective, By Harold Koontz & Heinz Weihrich
5. Management Challenges for 21 st Century - Peter Drucker

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MPH 103: EPIDEMIOLOGY & CHANGING HEALTHCARE SECTOR

Unit 1:

- Concepts & theories of Health & Disease, Health & Disease Spectrum , Iceberg of Disease
- Epidemiological triad, Principles of Epidemiology, Epidemiology of communicable and non-communicable diseases
- Application of Epidemiological Methods in Disease Control (Observational & Experimental Studies)
- Discussion of Case problems on cohort & case control studies (Association/Causation)

Unit 2

- Host defense Mechanisms, Types of Immunization, Hazards of immunization, Universal & National Immunization Schedules.
- Cold Chain equipments & Cold life
- Screening and Survey of a Disease, Disease Investigation and Reporting,
- Disease monitoring and Surveillance, Discussion with Case Studies

Suggested Books:

1. Preventive And Social Medicine - Dr. K. Park
2. Text Book Of Community Medicine - V K Mahajan
3. Epidemiology by P.V. Sathe, Popular Prakashan
4. Hospital administration - G.D. Kunders

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MPH 104: HEALTH EDUCATION & HEALTH COMMUNICATION

Unit 1:

- Health Education: Principles & Objectives, Levels of Health Education, Educational Methods, Evaluation & Practice of Health Education in India.
- Health Counseling: Introduction, Theories, Process & Techniques.
- Health Care Reporting, Role of NIC & Other Bodies, Research in Health Education

Unit 2:

- Health Communication: Basic Concept & Principles of Communication, Definition, Purpose, Types of Communication
- Communication Process, Directions of Communication: Upward, Downward, Lateral, Factors influencing Communication, Barriers of Effective Communication, How to overcome the Barriers
- Models of communication: Aristotle Model, Shannon and Weaver model, Schramm Model, Laegans Model, Fano Model, Litterer's Model, Westly Maclean's Model.

Unit 3:

- Mass communication & Role of Media in health education
- Information Communication Technologies (ICT) in health care and awareness. (Telemedicine & e-health, community radio)
- Future trends in information and communications systems :

Suggested Books:

1. Health Education – A new approach – L. Ramachandran & T. Dharmalingan
2. Health Communication in the 21st Century, By Kevin B. Wright, Lisa Sparks, H. Dan O'Hair, Blackwell publishing limited, 2013, first edition
3. Health Communication: From Theory to Practice, By Renata Schiavo, Published by Jossey Bash.
4. Health Communication, R.D. Karma Published by Mohit Publications 2008.
5. Counseling Skills for Health Care Professionals, 1st Edition, Rajinikanth AM, Jaypee Brothers, 2010.

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MPH 105: HEALTH INFORMATION MANAGEMENT & DECISION MAKING

Unit 1:

- Introduction to Health Information System: Objectives, Concept of Data & Information, Source of Health Information, Importance in Research.
- Electronic Medical Records and its Importance, Data Standards in Public Health
- System Concept, Components of a system, Components of a data Communication system Interfaces & boundaries, Environment of a system, Types of Systems, System Software & Application Software
- Data communication & Networking , Need for Computer Networking, Types of networks: LAN, MAN , WAN; Application of networking in public health

Unit 2:

- Decision Support System (DSS), Definition, Relationship with MIS, Evolution of DSS, Characteristics, Classification, Objectives, Components, Applications of DSS.
- Database Management System (DBMS): Need for using DBMS, Concept of tables, records, attributes.
- SQL, Outsourcing: Concept of BPO, KPO

Unit 3:

- Data Warehousing and Data Mining: Concepts of Data warehousing, data mart, meta data, multi-dimensional modelling
- Online Analytical Processing (OLAP), Online Transaction Processing (OLTP)
- Basics of Computer: Components of computer, Knowledge about computer softwares & programmes commonly used in healthcare sector
- Emerging communications technology in Public Health practice

Suggested Books:

1. Data Management Soft Ware's – Galgotia
2. Bharat, Bhaskar : Electronic Commerce – Technologies & Applications. TMH
3. Forouzan : Data Communication & Networking, TMH

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4. Joseph, P.T.: E-Commerce An Indian Perspective
5. Management Information Systems. M.M.Oka. EPH
6. Management Information Systems, O'Brien , TMH
7. Management Information Systems, Arora & Bhatia , EXCEL BOOKS

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MPH 106: APPLICATION OF QUANTITATIVE METHODS IN PUBLIC HEALTH -I

Unit 1:

- Introduction, Scope & Application of Statistics in Public Health
- Vital Statistics in Public Health: Rates & Ratios, Health Reports, Measurement of Health & Disease in a Population.
- Survey methods: Quantitative and Qualitative methods used in public health surveys, Collection and presentation of Primary and secondary data
- Tabular and diagrammatic representation: Frequency Distribution, Relative Frequency, Cumulative Frequency, Bar and Pie chart, Histogram

Unit 2:

- Measurement of Central Tendency: Arithmetic Mean, median, mode. Percentile, Quartile
- Measurement of Dispersion – Range, Mean Deviation, Variance, Standard Deviation.

Unit 3:

- Introduction to Probability, Measurement of Probability and Law of Probability for independent events- Conditional Probability
- Baye's Theorem, Probability Distribution, Binomial Distribution, Poison- Population – Sample
- Statistical Inference- Type- I and Type II error.

Suggested Books:

1. Statistics (Part I and II) - N.G. Das
2. Statistics - Goon Gupta, Dasgupta
3. Business Statistics - G.C. Beri- TMH
4. Aczel – Complete Business Statistics (6th Edition); TMH
5. Anderson, Sweeny, and Williams- Statistics for Business and Economics, (9th Edition); Thomas Learning
6. Statistical Methods in the Biological & Health Science: J.Susan Milton (McGraw- Hill)
7. An Introduction to Biostatistics, a manual for students in health sciences: P.S.S. Sunder Rao: J. Richard