

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)**

SECOND SEMESTER

MPH 201: HEALTH ECONOMICS

Unit 1:

- Introduction to Managerial Economics - Meaning, nature and scope, business decision making- role of a manager, fundamental concepts of Managerial Economics.
- Demand and Supply Analysis - meaning, determinants and types of demand, supply meaning, Law of supply, Elasticity of demand (Price, income and cross price).
- Shifts in Demand and Movement along demand curve, Change in Total Revenue, AR, MR and Price elasticity, Classification of goods: Substitutes and Complements.

Unit 2:

- Health Economics: Definition, Scope & Objectives, Demand & Supply for Health Services.
- Health as a private and a public good. Investment in Public & Private Health, Pattern of Health expenditure in India,
- Health Financing from various sources –Public, Private, TPA.
- Health care Market Structures- Market models in different aspects of health care, cases of market failure, roles and limitations of market and government in the organization of health care.

Unit 3:

- Principles of economic evaluation as applied to health care: Cost effectiveness analysis, Cost Benefit Analysis, Input- output Analysis
- Population, Health & Economic Development. HDI: Concept and application
- Quality of life and statistics in health economic evaluation including QALY's and DALY's.

Suggested Books:

1. Damodaran, Suma – Managerial Economics – Oxford University Press
2. Pindyck and Rubinfeld (Sixth Edition) - Micro Economics – Prentice Hall of India Pvt. Ltd/Pearson Education Salvatore,
3. Dominick - Managerial Economics in a Global Economy –Oxford University Press

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4. Health Economics in India Hardcover – by Prasant Panda (Editor), Himanshu Rout ,
Publisher: New Century Publications; 1 edition
5. Michael Drummond and et al, Methods for the Economics Evaluation of Health Care
Programme (Oxford University Press, Second Edition)

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MPH 202: FINANCE MANAGEMENT & BUDGETING IN HEALTH SECTOR

Unit 1:

- Financial Management- an Overview: Nature, scope & function. Difference between Accounts, Costing, Finance, Taxation, Audit, etc.
- Working capital Management: Need & Estimation of Working Capital, Sources of finance.
- Basic accounting Rules, Classification of accounts, Introduction of accounting standards, Generally Accepted Accounting Principles (GAAP)
- Journal, Ledger and Trial Balance
- Profit vs. Goal maximization, Scope of financial management in decision making areas.
- Preparation of Balance Sheet, Cash Flow & Fund flow statement
- Income Statement

Unit 2:

- Cost Accounting: Fixed / Variable costs, Direct / indirect Costs, Activity Based Costing
- Profit analysis, Breakeven analysis & marginal analysis
- Overhead distribution, ROI and RI

Unit 3:

- Budgeting in Health Sector: Difference between Budget, Estimate & Projection
- Types, Purpose and Importance of a Budget
- Budget Procedure and Administration

Suggested Books:

1. Basic Accounts & Finance for Non-Accounts – By Prof. D.K.Chatterjee - Himalaya Publishing House.
2. Modern Accounting – By Hanif & Mukharjee
3. Financial Management – By Prasanna Chandra – Tata McGraw Hill.
4. Fundamentals of Healthcare Finance: by Louis C. Gapenski, 2009•
5. Financial Management of Health Care Organizations: An Introduction to Fundamental Tools, Concepts, and Applications, Blackwell Publishers; January 1998.

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MPH 203: RESEARCH METHODOLOGY –I

Unit 1:

- Introduction to Research Methodology: Definition, Objectives of Research, Types of Research, Importance of Research in Public Health,
- Research Design, Features of a good Research
- Research Proposal: Identification & Formulation of a Research Problem
- 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

Unit 2:

- Sampling and survey methods, Selecting a 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 and Clinical trials.

Unit 3:

- Parametric tests: Analyzing Small and large Samples: t- tests, Z – tests, and Chi- square distribution
- Estimation of Population Parameters – Standard Errors, Confidence Intervals, Tests of Significance
- Bibliography: Writing Review of literature and Bibliography

Suggested Books:

1. Health Research Methods – A Guide for Training in Research Methods, World Health Organization, Second Edition
2. Research Methodology by A.P. Kulkarni Power Publication, Calcutta

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3. Research Methodology, Pannneerselvan, PHI Publications,
4. Kothari C R. Research Methodology Methods & Techniques. New Age International Private Ltd., New Delhi:2000
5. Beri G C. Marketing Research. 3rd Ed. Tata McGraw Hill Publishing Company Ltd. New Delhi: 2000
6. Introduction To Epidemiologic Research Methods In Public Health Practice by Susan Bailey, Deepa Handu, Published by Jones and Bartlett Publishers, 1st edition, 2012

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MPH 204: HEALTHCARE SERVICES

Unit 1:

- Healthcare Delivery System in India: Primary, Secondary, and Tertiary level.
- Issues in Healthcare Delivery System: Accessibility, Efficiency, Equity, Affordability, Quality & Sustainability
- Organization & Management of Public Health Institutions: District Hospitals, Sub- district Hospitals, CHC's, PHC's, Sub-centers, First Referral Units, SNCU & Urban Health Institutions (UPHC)

Unit 2:

- Demography And Population Studies, Vital Events of Life and Its Impact on Demography. Significance And Recording Of Vital Statistics, Human Development Index
- Methods of Demographic Data Collection: Dual reporting system – SRS, Data from national health program/disease surveillance, hospital statistics.
- Census: Sex composition, factors affecting sex composition, Age structure, Population pyramids, impact of various demographic processes on the age structure. Comparison – developed and developing countries. Census and Its Impact On Health Policies

Unit 3:

- The National Health Mission: Goals, Strategies, Components & Outcome of National Health Mission, Framework for Implementation of National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), State & District Health Mission.
- Introduction to National Health Policy – 2017. National Population Policy 2005.
- National Health Programmes – Objectives, Targets, Action plan, Achievements and constraints of National Health Programmes (NMEP, RNTCP, NACP, NBCP, RCH, DIABETES CONTROL, MENTAL HEALTH, CVD & STROKE)

Suggested Books:

1. Preventive And Social Medicine - Dr. K. Park
2. Text Book Of Community Medicine - V K Mahajan
3. Text Book Of Community Medicine - Prabhakar Rao
4. Hospital & Health Services Administration-Principles & practices, Tabish, OUP

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MPH 205: ETHICS & LEGISLATIONS IN PUBLIC HEALTH

Unit 1

- Law & Ethics: Origin of Law, Code of medical ethics, The Hippocratic Oath, Declaration of Geneva, Law & ethics -a comparison.
- Medical ethics: Basic issues, importance, ICMR guidelines of medical research- death, dying & incurable ill patient. Euthanasia. Ethical Principles in Public Health Practice, Developing and implementing ethics and values in a Public Healthcare Institution.
- Medico- Legal aspects of healthcare: Role of professional bodies such as IMC, IMA, MCI. Duties & responsibilities of doctors, Rights of a Doctor & Patient, Informed Consent, Professional negligence, Professional misconduct & Privileged communication, Disciplinary Committee & Penal Procedures.

Unit 2:

- Healthcare Legislations in India: The Consumer Protection Act- Redressal Agencies & Forums, Medical Negligence & Compensation, Clinical Establishment Act, Medical Termination of Pregnancy Act, The Transplantation of Human Organs Act, PNDT Act, The Registration of Birth and Death Act, Biomedical Waste Management & Handling Rules.

Unit 3:

- Law of Torts: Meaning, Essential conditions of liability in Tort, Principle of Omission & Commission with examples.
- Preventive Steps for Doctors/Hospitals to Avoid Litigation: High Risk Patient & Consent Form, Life Support, Dying Declaration, Issue of Death Certificate, Post Mortem
- Illustrative Cases of Medical Negligence in India: Surgery & Medicine, Anaesthesia, Obstetrics & Gynecology, Pediatrics, Other Disciplines

Suggested Books:

1. Industrial Laws: N.D. Kapoor
2. Medical Negligence & Compensation – By Jagdish Singh – Bharat Law, Jaipur.
3. Medical Negligence & Legal Remedies – By Anoop K. Kaushal – Universal.
4. Medico-legal Aid to Hospitals & Doctors, with Consumer Protection Law – By M.S. Pandit & Shobha Pandit – Pandit Publications.

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MPH 206: APPLICATION OF QUANTITATIVE METHODS IN PUBLIC HEALTH- II

Unit 1:

- Evolution of OR, Application of O.R Techniques - PERT, CPM, Simplex method, etc.

Unit 2

- Linear Programming: Introduction, Mathematical Formulation of a LPP, Graphical Solution Method, Various types of LPP and its applications in Public Health
- Decision Tree Analysis: Introduction, Decision making Problems & Process, Decision under uncertainty or risk.

Unit 3

- Queuing Theory: Introduction, Elements of Queuing systems, Operating Characteristics of Queuing system, classification of queuing models, Probability Distribution in queuing system
- Network Models: PERT, CPM. Advantages, limitations, Differences, Use in Resource Allocation

Suggested Books:

1. Introduction to Operations Research- Kanti Swarup, P. K.Gupta & Man Mohon, Sultan Chand & Sons Publications, New Delhi.
2. Hamdy. A. Taha, "Operations Research an Introduction", Pearson Education, 17th Edition, 2002. 2. S.D Sharma, "Operation Research", Kedar Nath and Ram Nath - Meerut , 2008.
3. Roger G., Operations Management - Decision Making in Operations Function, rawHILL., New Delhi.
4. Albright S, Winston W, Zappe C. (2009). Data Analysis and Decision Making. 4th Edition, Mason, OH: South-Western Publications
5. International Journal of Operations and Quantitative Management, (IJOQM) released by Nirma Institute of Management – Ahmedabad