

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 2018-2019)

COURSE STRUCTURE

1ST YEAR

SL No	CODE	Paper	Contact Periods per week			Total Contact Hours	Credits
			L	T	P		
SEMESTER I							
THEORY							
1	MPH 101	INTRODUCTION TO PUBLIC HEALTH- A GLOBAL PERSPECTIVE	2	1		30	3
2	MPH 102	PRINCIPLES OF MANAGEMENT IN PUBLIC HEALTH	2	1		30	3
3	MPH 103	EPIDEMIOLOGY & CHANGING HEALTHCARE SECTOR	2	1		30	3
4	MPH 104	HEALTH EDUCATION & HEALTH COMMUNICATION	2	1		30	3
5	MPH 105	HEALTH INFORMATION MANAGEMENT & DECISION MAKING	2	1		30	3
6	MPH 106	RESEARCH METHODOLOGY-I	2	1		30	3
SESSIONAL							
1	MPH 180	PROJECT			6	60	6
2	MPH 181	SEMINAR ON ASSIGNED TOPIC			6	60	6
Total Credit							30
SEMESTER II							
THEORY							
1	MPH 201	HEALTH ECONOMICS	2	1		30	3
2	MPH 202	FINANCE MANAGEMENT & BUDGETING IN HEALTH SECTOR	2	1		30	3
3	MPH 203	APPLICATION OF QUANTITATIVE METHODS IN PUBLIC HEALTH -I	2	1		30	3
4	MPH 204	HEALTH CARE SERVICES	2	1		30	3
5	MPH 205	ETHICS & LEGISLATIONS IN PUBLIC HEALTH	2	1		30	3
6	MPH 206	RESEARCH METHODOLOGY-II	2	1		30	3
SESSIONAL							
1	MPH 280	WINTER INTERNSHIP			6	60	6
2	MPH 281	RESEARCH PROJECT			6	60	6
Total Credit							30

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2ND YEAR

SL No	CODE	Paper	Contact Periods per week			Total Contact Hours	Credits
			L	T	P		
SEMESTER III							
THEORY							
1	MPH 301	QUALITY MANAGEMNET IN HEALTHCARE	2	1		30	3
2	MPH 302	INVENTORY AND LOGISTICS MANAGEMENT IN HEALTH SYSTEMS	2	1		30	3
3	MPH 303	APPLICATION OF QUANTITATIVE METHODS IN PUBLIC HEALTH -II	2	1		30	3
4	MPH 304	HEALTH INSURANCE & MANAGED CARE	2	1		30	3
5	MPH 305	MANAGING HUMAN RESOURCES FOR HEALTH	2	1		30	3
6	MPH 306	HEALTH POLICIES & RESEARCH IN PUBLIC HEALTH	2	1		30	3
SESSIONAL							
1	MPH 380	SUMMER INTERNSHIP			6	60	6
2	MPH 381	RESEARCH PROJECT			6	60	6
Total Credit							30
SEMESTER IV							
THEORY							
1	MPH 401	SOCIAL & BEHAVIOURAL PERSPECTIVE OF HEALTH	2	1		30	3
2	MPH 402	MANAGING DIVERSE HEALTH SERVICES ORGANISATIONS	2	1		30	3
3	MPH 403	HEALTH & ECOLOGY	2	1		20	2
1	MPH 480	INTERNSHIP			16	160	16
2	MPH 481	MPH DISSERTATION			6	60	6
Total Credit							30

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DETAILED SYLLABUS

SEMESTER-I

Paper: INTRODUCTION TO PUBLIC HEALTH: A GLOBAL PERSPECTIVE

Code: MPH 101

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

<p>Unit 1:</p> <ul style="list-style-type: none">□ 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
<p>Unit 2:</p> <ul style="list-style-type: none">□ 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
<p>Unit 3:</p> <ul style="list-style-type: none">□ 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

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Suggested Readings:

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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Paper: PRINCIPLES OF MANAGEMENT

Code: MPH 102

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

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
- Feedback 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 Readings:

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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Paper: EPIDEMIOLOGY & CHANGING HEALTHCARE SECTOR

Code: MPH 103

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

<p>Unit 1:</p> <ul style="list-style-type: none">□ 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)
<p>Unit 2</p> <ul style="list-style-type: none">□ Host defences Mechanisms, Types of Immunization, Hazards of immunization, Cold Chain & Cold life, Universal & National Immunization Schedules.□ Screening and Survey of a Disease, Disease Investigation and Reporting,□ Disease monitoring and Surveillance, Discussion with Case Studies
<p>Unit 3</p> <ul style="list-style-type: none">□ Healthcare & it's Changing Scenario, Emergence of new diseases, Prevention and control□ The levels of Healthcare - Development of Public & Private Healthcare Institutions in India

Suggested Readings:

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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Paper: HEALTH EDUCATION & HEALTH COMMUNICATION

Code: MPH 104

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

<p>Unit 1:</p> <ul style="list-style-type: none">□ Health Education: Principles & Objectives, Levels of Health Education, Educational Methods, Evaluation & Practice of Health Education in India.□ Health Counselling: Introduction, Theories, Process & Techniques.□ Health Care Reporting, Role of NIC & Other Bodies, Research in Health Education
<p>Unit 2:</p> <ul style="list-style-type: none">□ 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.
<p>Unit 3:</p> <ul style="list-style-type: none">□ 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 Readings:

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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Paper: HEALTH INFORMATION MANAGEMENT & DECISION MAKING

Code: MPH 105

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

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

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Suggested Readings:

1. Data Management Soft Ware's – Galgotia
2. Bharat, Bhaskar: Electronic Commerce – Technologies & Applications. TMH
3. Forouzan : Data Communication & Networking, TMH
4. Joseph, P.T.: E-Commerce An Indian Prespective
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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Paper: RESEARCH METHODOLOGY –I

Code: MPH 106

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

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: Analysing 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

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Suggested Readings:

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
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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SEMESTER-II

Paper: HEALTH ECONOMICS

Code: MPH201

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

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:

- Production and Cost Theory- Production functions- Short Run and Long Run, Production with One Variable Input, Total Product, Average and Marginal Products, Law of Variable proportions, Relationship between TP, AP and MP, Production decisions, Isoquants, Producer's Equilibrium- Production with Two Variable Inputs, Isoquants – Characteristics, Marginal Rate of Technical Substitution, Laws of Returns to Scale.
- Short Run Costs of Production, Fixed and Variable Costs, Short Run Total, Average and Marginal Cost and Relationship between them, Short Run Cost Curves, Iso-cost Curves
- 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.
- Pricing and Cost Decisions: Price Discrimination under Monopoly, Average Cost Pricing, Marginal cost pricing, Peak Load Pricing, Limit Pricing, Multiproduct Pricing, Transfer Pricing. Understand issues in measurement of costs and benefits of health care • Understand the principles of economic evaluation as applied to health care • Cost effectiveness analysis in health care interventions • Quality of life and statistics in health economic evaluation including QALY's and DALY's.

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Unit 3:

- Health Economics: Definition, Scope & Objectives, Demand & Supply for Health Services, Health as a private and a public good. Population, Health & Economic Development.
- Investment in Public & Private Health, Pattern of Health expenditure in India, Health Financing from various sources –Public, Private, TPA.
- Economic Evaluation of National Health Programmes.

Suggested Readings:

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
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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Paper: FINANCE MANAGEMENT & BUDGETING IN HEALTH SECTOR

Code: MPH202

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

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 Readings:

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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Paper: APPLICATION OF QUANTITATIVE METHODS IN PUBLIC HEALTH -I

Code: MPH203

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

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 Readings:

1. Statistics (Part I and II) - N.G. Das
2. Statistics - Goon Gupta, Dasgupta
3. Business Statistics - G.C. Beri- TMH

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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

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Paper: HEALTHCARE SERVICES

Code: MPH204

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

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-centres, 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: Primary and Secondary sources of data collection, Procedures, Uses, 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 – 1983, 2002 & 2017. National Population Policy 2002, 2005.
- National Health Programmes – Objectives, Targets, Action plan, Achievements and

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constraints of National Health Programmes.

Suggested Readings:

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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Paper: ETHICS & LEGISLATIONS IN PUBLIC HEALTH

Code: MPH205

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

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

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Suggested Readings:

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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Paper: RESEARCH METHODOLOGY – II

Code: MPH206

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

<p>Unit 1</p> <ul style="list-style-type: none">□ Testing of Hypothesis and Significance – Introduction & Concept of Errors□ Parametric Tests–Small samples & large samples & Quantitative and qualitative data – ANOVA, F test, Multivariate Analysis
<p>Unit 2</p> <ul style="list-style-type: none">□ Non-parametric Tests: Correlation – Concept and Computation of Correlation CoefficientRegression - Concept and Computation of Regression Coefficient
<p>Unit 3</p> <ul style="list-style-type: none">□ Application of statistical software’s in data management and analysis – SPSS, Istat, Systat etc.

Suggested Readings:

1. Business Statistics - G.C. Beri- TMH
2. Aczel – Complete Business Statistics (6th Edition); TMH
3. Anderson, Sweeny, and Williams- Statistics for Business and Economics, (9th Edition); Thomas Learning
4. Research Methodology, Pannneerselvan, PHI Publications,
5. Kothari C R. Research Methodology Methods & Techniques. New Age International Private Ltd., New Delhi:2000
6. Beri G C. Marketing Research. 3rd Ed. Tata McGraw Hill Publishing Company Ltd. New Delhi: 2000
7. Statistical Methods in the Biological & Health Science: J.Susan Milton (McGraw- Hill)
8. An Introduction to Biostatistics, a manual for students in health sciences: P.S.S. Sunder Rao: J. Richard

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SEMESTER-III

Paper: QUALITY MANAGEMENT IN HEALTHCARE

Code: MPH301

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

<p>Unit 1</p> <ul style="list-style-type: none">□ Fundamentals of Quality Management - Definition, Objectives, Principle & Constraints, Theories- Deming, Crosby, Juran, Determinants of Quality: Structure – Process – Outcome. Approaches of Quality Improvement- QC, QA, CQI, TQM□ Continuous Process Improvement, Statistical Process Control (SPC), Quality Systems, Benchmarking, Quality Function Deployment (QFD)□ Application of Six Sigma in Health Care
<p>Unit 2</p> <ul style="list-style-type: none">□ Organization for Quality Improvement in Public Health - Quality Teams (QT) and Quality Control Circles (QCC), Quality Assurance (QA) and Quality Improvement.□ Organization wide Quality Improvement fundamentals: Designing Quality Improvement models of daily Patient Care.□ Assessing Quality Health Care, Attributes of Quality in Health Care and Relationship between patient satisfaction and utilization of services.
<p>Unit 3:</p> <ul style="list-style-type: none">□ Importance of Medical Audit & Accreditation in ensuring Quality Health care: NABH, NABL, BIS, ISO- Documentation and Certification, ISO 14000, ISO 9000 and benefits of ISO certification.

Suggested Readings:

1. Raandi Schmidt J. Trumbo and R. Jonson, Quality in Health Care Sector – ASQC Quality – Press.
2. Quality Improvement in Health Care, 2nd Ed, Nelson Thrones

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3. Sridhar Bhat, Total Quality Management, Himalaya House publications, Mumbai, 2002
4. Sundara Raju, S.M., Total Quality Management: A Primer, Tata McGraw Hill, 1995.
Srinivasan, N.S. and V. Narayana, Managing Quality- concepts and Tasks, New Age International, 1996.

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Paper: INVENTORY & LOGISTICS MANAGEMENT IN HEALTH SYSTEMS

Code: MPH302

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

<p>Unit 1</p> <ul style="list-style-type: none">□ Inventory Control: Meaning, Objectives & Scope of Inventory Control, Classification of Inventory□ Techniques of Inventory Control: ABC, VED, FSN□ Lead-time, Buffer stock, Reorder level, Two Bin System, Periodic Inventory, EOQ models with shortage, without shortage and with price breaks.
<p>Unit 2</p> <ul style="list-style-type: none">□ Principles of Materials Management: Definition, Scope & Objectives, Materials Planning with forecasting & Budgeting. Classification of Materials- Consumables & Non consumables
<p>Unit 3:</p> <ul style="list-style-type: none">□ Purchase Management: Objectives, Legal aspects of purchasing, Out Sourcing of Services, Purchase system- Centralized, Decentralized, & Local purchase, Selection of Suppliers- Tendering procedures, Analyzing bids, Price negotiations, Issue of purchase orders, Rate Contracts, Follow up action, Safety Stock & Lead time, Receipt & Inspection of Materials, Distribution, Standardization, Codification, Preparation of defect/Discrepancy Reports.
<p>Unit 4</p> <ul style="list-style-type: none">□ Store Management: Organization & layout, Functions of Store Manager, Materials handling, Flow of goods/FIFO, Security of stores, Disposal of scrap/unserviceable materials, Sub-stores in various departments, Physical stock taking, Role of computers in Stores Management□ Medical Stores: Functions, Store Monitoring, Expiry Dates & Action, Cold Chain

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Suggested Readings:

1. Shakti Gupta, Sunilkanth – Hospital Stores Management, Jaypee Brothers
2. Srinivasan A.V. (ed), Managing a modern hospital, Chapters 6, 7, 8, 9, Response Books, New Delhi, 2000.
3. Gopalakrishna, P., Materials Management, Prentice Hall, New Delhi, 1997.
4. Gopalakrishna, P., Purchasing and Materials Management, Tata MC.Graw Hill, New Delhi, 1995

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Paper: APPLICATION OF QUANTITATIVE METHODS IN PUBLIC HEALTH- II
Code: MPH303
Contacts Hours / Week: 2L+1T
Credits: 3

Course Content:

Unit 1: <ul style="list-style-type: none">□ Evolution of OR, Application of O.R Techniques - PERT, CPM, Simplex method, etc.
Unit 2 <ul style="list-style-type: none">□ 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 <ul style="list-style-type: none">□ 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 Readings:

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

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Paper: HEALTH INSURANCE & MANAGED CARE

Code: MPH304

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

<p>Unit 1</p> <ul style="list-style-type: none">□ Introduction to insurance: History and Evolution of Insurance in India, Principles of insurance, insurance documentation.□ Health Insurance: Concept of Asset, Risk & Pooling. Insurance for the Patient, Premium and factors influencing premium for various policies. Managed Care: The Key “Ingredients” of Managed Care, Health insurance products, Professional Indemnity Schemes for doctors□ Medical Care system & Health Insurance System in different countries (USA, UK, India) Role of Insurance in Economic Development of a country
<p>Unit 2</p> <ul style="list-style-type: none">□ Evolution of Health Insurance in India, Social security Schemes in India– CGHS, ESI,□ Insurance schemes: RSBY, JSY, Pradhan Mantri Suraksha Bima Yojana
<p>Unit 3</p> <ul style="list-style-type: none">□ Insurance Regulatory Authority of India (IRDA): Role, function and Control□ Third Party Administration- Function, Importance & Challenges,□ TPA: Intermediary between provider & Patient, Role of Health Insurance companies

Suggested Readings:

1. IRDA Regulations on Health Insurance, GOI, New Delhi
2. U. Jawaharlal (editor), Insurance Industry, the current scenario, the ICFAI University Press, Hyderabad, 2005.
3. Commercial Laws: N. D. Kapoor
4. Commercial Laws: Sen & Mitra

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Paper: MANAGING HUMAN RESOURCES FOR HEALTH

Code: MPH305

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

<p>Unit 1</p> <ul style="list-style-type: none">□ Human Resource Management in Health Care Organization: Definition & Importance, The role of Human Resources in healthcare organizations.□ HR as a strategic tool: Staffing & Manpower planning in Healthcare Institutions, Systems Approach to Staffing, Staff Recruitment & Selection, Training and Development, Training Needs, Types of Training. Case presentation and discussion with reference to Health Sector
<p>Unit 2</p> <ul style="list-style-type: none">□ Job analysis, Job description, Job evaluation, Job enrichment□ Workforce productivity, Measuring Performance, Providing feedback & Performance Appraisal
<p>Unit 3</p> <ul style="list-style-type: none">□ Leadership, Leadership Styles, Motivation, Motivational Theories, Motivational Techniques□ Controlling Functions, Steps in Controlling, Types of Controlling, Control Techniques□ Globalization and the health care workforce, Managing Workforce Diversity in Healthcare

Suggested Readings:

1. Aswathappa, Human Resource & Personal Management, TMH
2. Gomez –Mezia, Managing Human Resources, Pearson Education
3. Fried BJ, Fottler MD, ed. Human resources management in healthcare: managing for success. 3rd ed. Chicago, IL: Health Administration Press; 2008
4. Ellis L, Morrow D, Bradley A. Case 3: Performance feedback now and then. In: Fried BJ, Fottler MD, ed. Human resources management in healthcare: managing for success. 3rd ed. Chicago, IL: Health Administration Press; 2008: 523- 528
5. Case Study 10: Too much diversity? In: Nkomo S, Fottler M, McAfee RB. Applications in Human Resource Management. 5th ed. US: Thompson/South-Western; 2005: 37-39

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Paper: HEALTH POLICIES & RESEARCH IN PUBLIC HEALTH

Code: MPH306

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

<p>Unit 1:</p> <ul style="list-style-type: none">□ Introduction to Health Policies: Key Characteristics of Health Policy and Systems Research, Elements of HPSR- Health systems • Health policy • Health system development or strengthening • Health policy analysis□ Health Planning in India (Committees, Planning commission, Five year plans, National Health Policies) Health for all.
<p>Unit 2:</p> <ul style="list-style-type: none">□ Policy making: Foundations of health policy making, Theories of policy process□ Equity, Access and Quality, Policy Analysis & Policy Brief, Writing a Policy Brief & Implementation□ Policy and Strategy, Formulation of Strategy, Overview of Health Policies and Five Year Plans.
<p>Unit 3</p> <ul style="list-style-type: none">□ Overview of Health Systems: Comparative Health Systems, National Health Policies and Programmes□ Health Sector Reforms: Public-Pvt Partnerships, Role of health services research in health policy

Suggested Readings:

1. Park K: 2005. Text Book of Preventive and Social Medicine. Banarsidas Bhanot Publishers: Jabalpur. 18th Ed.
2. Goel S L. 2001. Health Care System and Management: Primary Health Care management. Deep & Deep Publications: New Delhi. Vol 4
3. Essentials of Public Health - BJ Turnock. Jones & Bartlett, 2007
4. Oxford Textbook of Public Health, 4th edn

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SEMESTER-IV

Paper: SOCIAL & BEHAVIOURAL PERSPECTIVE OF HEALTH
Code: MPH401
Contacts Hours / Week: 2L+1T
Credits: 3

Course Content:

<p>Unit 1:</p> <ul style="list-style-type: none">□ The Ecological Model, Overview of Key Health Behaviour Theories.□ Individual Behaviour: Personality – Learning – Attitudes – Perception – Motivation – Ability. Individual influences on health, Health Belief Model (HBM), Theory of Reasoned Action/Planned Behaviour□ Individual influences on health: Social Cognitive Theory (SCT) & Trans theoretical Model/Stages of Change (TTM)
<p>Unit 2:</p> <ul style="list-style-type: none">□ Organizational influences on Health: Schools, Workplace□ Community influences on health and health behaviour□ Social Determinants: Race, Ethnicity, and Gender, Socioeconomic factors and Health Care Access, Social ecological models of health inequality, Disparities in health care access and treatment
<p>Unit 3:</p> <ul style="list-style-type: none">□ Media & Policy influences on Health□ Modelling Social Networks in Public Health

Suggested Readings:

1. Baranowski, T. (1997). Families and Health Actions. In D. S. Gochman (Ed.),
2. Handbook of Health Behavior Research I, Personal and Social Determinants. Plenum Press. New York.
3. Organizational Behaviour – Stephen Robbins, – Prentice Hall 5.
4. Glanz, K., Rimer, B.K., & Viswanath, K. Health Behavior and Health Education: Theory, Research and Practice 4th Edition. San Francisco, Jossey Bass.
5. Keane, C. A Network Approach to Public Health Research in Emerging Methods in Community Public Health Research. New York: Springer.

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Paper: MANAGING DIVERSE HEALTH SERVICE ORGANIZATIONS

Code: MPH402

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

Unit 1

- Organizational Culture: Meaning, significance – Organizational climate – Implications on organization behaviour –
- Organizational change – Need and nature – Causes of change – Resistance to change – Management of change in healthcare organizations, Cultural Diversity in Health Care.

Unit 2

- Organization & Management of Public Health Institutions: District Hospitals, Sub- district Hospitals, CHC's, PHC's, Sub-centres, First Referral Units, SNCU & Urban Health Institutions (UPHC)
- Management of Private-for-profit Hospitals- Concept of Corporate Hospitals- Nursing Homes -Other hospitals.
- Management of Private- not – for –profit sector, NGO'- Voluntary Agencies.
- International Health Organizations: Red Cross, WHO and Other United Nations Agencies

Suggested Readings:

1. Organizational Behaviour – Stephen Robbins, – Prentice Hall 5.
2. Organisational Behaviour – Fred Luthans, – Tata Mc Graw hill
3. Managing Health Services Organizations and Systems, Sixth Edition (MHSOS), Beaufort B. Longest; Jr.& Kurt J. Darr, Published by Health Professions Press (2008)
4. Park K: 2005. Text Book of Preventive and Social Medicine. Banarsidas Bhanot Publishers: Jabalpur. 18th Ed.

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Paper: HEALTH & ECOLOGY

Code: MPH403

Contacts Hours / Week: 2L+1T

Credits: 3

Course Content:

Unit 1:

- Ecology & Environment: Definition, Concept, Components, Major environmental health problems in Industrialized and Developing countries.
- Environmental Pollution & its Impact on Human Health - Sources, Health Problems and Prevention of Air (Indoor/Outdoor), Water, Noise, Soil, Nuclear, Solid waste, Biomedical waste, e- waste etc. Global Warming, Climate Change, Ozone Depletion, Acid Rain etc.
- Environment & Health Impact Assessment- Concept, Steps and Application

Unit 2:

- Achieving Sustainable Development: Definitions & Concept, Introduction, principles, models, Rights Based Approach for Development and Health
- Brief outline of the Environment (Protection) Act 1986- Importance for Hospitals- Legislation vs. Social obligation of Healthcare Settings. Eco-friendly environmental practices -Waste management
- Developmental Planning for Healthy Settings in Cities- Villages- Towns. Community Organization and Participation

Unit 3:

- Occupational Health: Ergonomics, Control of Physical, Chemical, Mechanical, Psychosocial and Biological Environment at Workplace, Occupational Diseases.
- Occupational Safety in Healthcare Organizations: Occupational Hazards in a Healthcare Setting, HAI & Role of Hospital Infection Control Committee

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Suggested Readings:

1. Environmental and Health Impact Assessment of Development Projects: edited by Robert G. H. Turnbull, Elsevier Sciences Publication
2. Environmental Science, S C Santra, Publisher: New Central Book Agency, Calcutta 2001
3. Perspectives in Environmental Health -Vector and Water Borne Diseases, Mukhopadhyay Aniruddha, De A K
4. Occupational Health: Management and Practice for Health Practitioners, S. P. Hattingh, 3rd edition.

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GUIDELINES FOR PREPARATION OF PROJECT WORK

M. Sc of Public Health Program requires mandatory fulfillment of a project work at the end of each Semester of the coursework. The Project should have a direct or indirect relevance to areas of Public Health. Each student has to individually conduct this project work. Students can choose a project on any of the categories:

- Any research project following the research methods studied in that particular semester.
- A review of a health policy or an issue of public health importance.
- An exploratory study in the area of public health.
- A health management issue.
- A systematic review in health studies area.

Project Process

- a. Allocation of a project supervisor. A minimum of 1 and maximum of 2 co-supervisors are allowed.
- b. In consultation with the main project supervisor and co-supervisor, the student should select any topic that falls into the category of the project described above to work on.
- c. A brief synopsis of the project, consisting of the title, background, objectives and proposed methods (data collection tools) of the study, with outline analysis plan should be submitted to the guide.
- d. For survey of human participants, consent and information sheets for participants needs to be submitted for clearance from ethics committee.
- e. On approval of the ethics committee, and concerned authorities the data collection can be undertaken in the time period allocated for the same.
- f. A project report described as under has to be presented and defended as part of the assessment and examination for the project work in the time period specified.

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Project Report

The project report shall follow the guidelines as specified as under.

- 1 hard and 1 soft copy of the project report has to be submitted to the supervisor within the time specified.
- The report shall not exceed 50 pages and maintain standard format. It should have 1.5 lines spacing with 12 point Times New Roman font.
- The report should include the title page, certificate of fulfillment (duly signed by supervisor and co-supervisors) content page, introduction, review of literature, objectives, methods, results, discussions, recommendations, conclusions, any limitations, references and annexures.
- The hard copy of the Project report should be spiral bound while the Final MPH Dissertation should be hard bound.