



महाराष्ट्र आरोग्य विज्ञान विद्यापीठ, नाशिक

MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

दिंडोरी रोड, म्हसळ, नाशिक -422004 Dindori Road, Mhasrul, Nashik-422004

Tel : (0253) 2539292, Fax : (0253) 2539295

Website : www.muhs.ac.in, E-mail : registrar@muhs.ac.in

MASTER OF BUSINESS ADMINISTRATION

IN

HEALTH CARE ADMINISTRATION

SYLLABUS

Preamble

Healthcare is one of the fastest growing fields and is the third largest service sector in India. The industry is emerging as one of the promising sectors in the economy. Existing healthcare organizations are expanding by opening hospitals in new service areas and new organizations are entering with latest Technology and Marketing Strategies. Besides, India is also eyeing the global Healthcare market to emerge as one of the possible destinations for international patients.

An explosion of Technology has occurred that will require managers to have a new set of skills, coupled with knowledge of traditional healthcare organizations. The educational programme in HealthCare Administration aims to impart the knowledge of basic as well as specific areas of management to professionals responsible for management of healthcare service. To meet the educational challenges of this rapidly evolving field, the Healthcare Administration programme provides students with a managerial and technical foundation for careers in consulting, Medical Products, Pharmaceuticals, Biotechnology, Financial Services, Venture Capital, Healthcare Systems, Health Plan Management and Insurance, IT Sector, Associations and Government.

This course aims to prepare dynamic, young, creative and highly qualified managers and administrators for efficient management of Hospitals and Healthcare organizations by applying modern management techniques. The course also imparts necessary knowledge and skills with practical orientation and help formulate strategies for more efficient management of super-specialty hospitals, especially in highly competitive corporate and private sector. It is an effort to provide knowledge, vocabulary & advanced skills concerning all areas of the healthcare delivery system to make administrators proficient and creative, under any challenging situations. The training also will help in developing leadership skills in students through understanding of organizational and community problems, human psychology, organizational behavior and global trends. This will also inculcate in students a strong desire for learning and an urge for research in the field of management, through involvement in the actual healthcare administration practices.

Overall goal:

To provide health professionals with a broad background and training in management skills, and prepare them for career opportunities in a health care system.

Objectives of the course :

At the end of the course the student should be able

- To plan and implement health care activities in health / hospital set up.
- To monitor health care services in health centre / hospital set up.
- To Procure drugs and supplies required for health care set up.
- To monitor activities of health personnel.
- To liaison with Govt. / Private organizations in health care.
- To plan activities of health personnel.
- To conduct operations research related to various health care activities.
- To implement quality improvement techniques for health interventions.
- To have good communication to superior & juniors about the and should be able work in the team and be able to build team
- To plan and prepare budget for the activities for hospitals. \
- To be able to assess quality of health care organization

Career prospects :

Candidates opting for MBA (Health Care Administration) are excellent as it is a well-known fact that hospitals have to be managed like business organizations for creating surplus for survival and growth. Thus there is large enough scope to provide ample job opportunities in management of corporate and private Hospitals in India and abroad. MBA (Health Care Administration) degree holders will have a wide range of attractive career options to choose from the healthcare industries which are enumerated below

a) Health Care Industry:

Corporate Hospitals, Nursing Homes, Pharmaceutical Firms, Diagnostic Services, Insurance Companies and TPA Services (Operating in Health Insurance Schemes), NGOs (Operating in Health Care Sector), Health Projects in WHO and UNICEF

a) Clinical Research: Management of Clinical Research.

b) Public Health: For Medical Officers at various levels of Hierarchy.

c) Industry: Medical Tourism Industry, Consultancy Firms (Hospital - Planning & Designing), IT Industry (Application in Healthcare Field), Wellness Industry.

Syllabus : MBA (HealthCare Administration)

1st Semester

CORE SUBJECT

Sr.	NAME OF THE MODULE	CREDITS	Practical component	Page No.
1	Management principles & Process	4		6
2	Organizational Behaviour	4		6
3	Epidemiology & Biostatistics	4		7
4	Marketing Management & Consumer Behavior	4		8
5	Basics of Computer & Health Information System	4	*CL	9
6	Health Service Delivery	4	*(FW) 1 week	10
TOTAL CREDITS		24		

*CL –computer laboratory

*FW - Field work

2nd Semester

Sr.	NAME OF THE MODULE	CREDITS	Practical component	Page No.
7	Health Care Planning	4		11
8	Materials Management & Inventory Control of health care	4		12
9	Research Methodology & Clinical Research Management	4	*CL (weekly)	13-14
10	Human Resource Management	4		15
11	Project Management and Strategic Management	4		16
12	Medical Record & Health Care Statistics	2	*HV (1 day)	17
13	Basics of Accounts and Economics	4		18
	Total	26		
Electives				
Any 2	Computers –Advance Excel	2	*CL	
	Language laboratory	2	*Wksp	
	Communication skills	2	Wksp	
TOTAL CREDITS		30		

*HV – Hospital visit to medical record section, Wksp- workshop

Summer Training- A two months training would be conducted for each student in affiliated institutes.

3rd Semester

Sr. No.	NAME OF THE MODULE	CREDITS	Practical component	Page No.
14	Operations Management of Health Care Organization	4	*HV	19
15	Emergency Preparedness & Disaster Management	2		20
16	Health Insurance Management & TPA	2		21
17	Healthcare Industry Relation & Labor laws	4		22
18	Financial Management & Business analytics	4		23
19	Pharmaceutical Management	2		23
20	Summer Training Project	4		23
	Total	22		
Electives	Personality Development	2	Wksp	
Any 2	Health Information portal / HMIS	2	CL	
	HIPPA	2		
	TOTAL CREDITS	26		

*HV-visit to government hospitals, multispecialty & super specialty hospital (3days)

4th Semester

Sr. No.	NAME OF THE MODULE	CREDITS	Practical component	Page no
21	Hospital Infection Control & Biomedical Waste Management	2	*HV 1day	24
22	Health Care Services Marketing & Medical Tourism	4		24-25
23	Ethics & Legal Aspects of Health Care	4		26
24	Health Service Quality	4		27
25	National Health Policy & programs	2		28
26	Health Informatics	2	*CL	29
	Total	18		
Electives	NABH Accreditation	2		30
Any 2	HL7 – Health Level 7	2		30
	ICD	2		30
	Patient safety	2		30
	TOTAL CREDITS	22		

*HV – hospital visit to Biomedical waste unit *CL –computer laboratory 7 days

TOTAL COURSE CREDITS – 102

1 Credit = 15 hours of teaching ,12 hours direct teaching and 3 hours for assessment in the form presentations, online tests, short answer questions, MCQs.

A paper with full (4) credit - 48 Teaching hours/ term (direct teaching) 12 hours for assessment

a paper with half (2) credits - 24 Teaching hrs/term. (direct teaching) 6 hours for assessment

One term equal to minimum 15 weeks of actual working days (90 days).

First Semester

Detailed Syllabus

1 Management Principles, Process

Credits (4 credits= 48 hours)

Introduction- Meaning & Nature of Management, overview of Management Process, roles and responsibilities of professional manager, managerial levels, managerial skills. Managerial functions: planning, organizing, directing, controlling

Evolution of Management Theory- History and growth of various management approaches, contribution of management thinkers: F.W.Taylor, Henry Fayol, Elton Mayo, traditional management vs. modern healthcare management, healthcare management as a profession, modern management concept and its implication in health sector. (10)

Organization Structure & process- organizational climate, culture and managerial ethos, organizational structure and design, centralization and decentralization, delegation and interdepartmental coordination, managerial communication

Decision Making- organizational decision context of decisions, decision making environments, decision making models, process, and techniques, MBO

Management Engineering & Productivity improvement

2 Organizational Behaviour (OB)

Credits (4 credits = 48 hours)

Introduction to OB- Definition, importance, scope of OB, Fundamental concepts of OB, models of OB

Behavioural Dynamics- Individual determinants of OB: perceptions, learning, personality, attitudes and values, motivation, job anxiety and stress

Interactive aspects of OB- analyzing inter-personal relations,

Group & team dynamics, management of conflicts, management of change, **leadership** styles and influence process.

Cases- topics in organizational behaviour should be covered with the help of case studies.

Books:

1. S. P. Robbins : Organizational Behaviour, Prentice Hall,
2. Fred Luthans : Organizational Behaviour, McGraw Hill
3. J. W. Newstrom & K. Davis : Organizational Behaviour, McGraw Hill.
4. Archana Tyagi : Organizational Behaviour, Excel Books.
5. Madhukar Shukla : Understanding Organizations – Organizational Theory & Practice in India, Prentice Hall
6. Borkowski- Organizational Behaviour in Health Care, 2005

3 Epidemiology & Biostatistics

Credits (4 credits= 48 hours)

Epidemiology: Concept of Health, Concept of Disease: - Natural History, Level of Prevention, Rehabilitation Concept of Epidemiology: -Definition & Concept, Types of uses, Incidence & Prevalence

Epidemiology of Communicable & Non communicable Diseases: Communicable Diseases: Influenza, Filariasis, TB, Plague, Tetanus, Diphtheria, Malaria Non-communicable Diseases: Diabetes, Stroke, CHD, Cancers

Epidemiological Studies: -Epidemic, Endemic, Pandemic, Sporadic-Investigation of an epidemic preventive measures for Disease outbreak: - Vaccination, Immunization, Surveillance, Monitoring

Monitoring Occupational Health & Diseases:, Concept of Community Health Evolution of the concept, history of public health and public health administration IEC community health, Health Care Delivery System, Health organization structure: center, state, and periphery Medical Sociology: Social and cultural factors relating to disease prevention, changing social condition and needs for health care facilities, Urbanization, change in life style, Management of Handicapped Persons: Special Children, Geriatric age group Health Services Research

Foundations : Variables, Hypothesis, Types of Data, Unit of analysis, Components of a study, Problem Formulation, Concept mapping, Literature Review. Methods of Data Collection

,Sampling : Terminology, Sampling methods, use, advantages and disadvantages, Sampling types and errors

Methods of Data collections and limitations: Questionnaire, Interviewing, Case study, Observation, Measurement, Survey research, Scaling, Data Analysis and Interpretation : Methods – Qualitative and Quantitative Data Presentation, Hypothesis Testing **Statistical Tools in Data Analysis :** Bivariate Data Analysis : Regression, ANOVA Multivariate Data Analysis

PCA, Factor Analysis : Purpose, concept, difference between component analysis and factor analysis, concept of rotation of factors, determining number of factors, naming a factor, factor scores and limitations of factor analysis techniques Cluster Analysis : Purpose, concept, application Classification and Discriminate Analysis Use of Statistical Software (SPSS/STATISTICA/AMOS/SYSTAT ETC.)

Report Writing : Contents and Coverage, Objectives (What to do), Methodology (How to do), Findings (data & interpretation), Rationale of the study and Application, Conclusion and Recommendation, Preparation of a Pilot Project based on assignment, Presentation of a

Report **Books:**

1. Saunderson, Research Methods for Business Students, Pearson Education
2. Zikmund, Business Research Methods, 7th Ed, Thomson Learning
3. C. R. Kothari : Research Methodology – Methods and Techniques, Wiley Eastern.
4. D. J. Luck & R. S. Rubin : Marketing Research, Prentice – Hall
5. McBurney, Research Methods, Thomson Learning
6. Principles and Concepts of Epidemiology, Springer Publications.
7. Text book of Community Medicine, Kulkarni A.P. and Baride J.P.
8. Park's Textbook of Preventive and Social Medicine, Park
9. Principles of Preventive and Social Medicine, K. Mahajan
10. Textbook of Community Medicine, B. Shridhar Rao.
11. Textbook of Biostatistics, B. K. Mahajan
12. Review in Community Medicine, V.R. Sheshu Babu.

4 Marketing Management & Consumer Behavior

Credits:4, Hours:48)

Introduction to Marketing: Meaning, Nature and Scope of Marketing; Marketing Philosophies; Marketing Management Process; Concept of Marketing Mix; Market Analysis: Understanding Marketing Environment, Market, Measurement; Market Segmentation, Targeting and Positioning. **Product and Pricing:** Product Concept; Types of Products; Major Product Decisions; Brand concept; importance and role, Product Life Cycle, New Product Development Process; Pricing Decisions; Determinants of Price; Pricing Process, Policies and Strategies

Promotion and Distribution decisions: marketing Communication Process; Promotion Tools Advertising, Personal Selling, Publicity and Sales Promotion; Distribution Channel Decisions- Types and Functions of Intermediaries, Selection and Management of Intermediaries contemporary channels. **Digital Marketing**, social media marketing.

Emerging Trends and Issues in Marketing Consumerism, Rural Marketing, Social Marketing; Direct and Online Marketing; Green Marketing.

Consumer Behavior & organizational buyer behaviour: concept, diversity of consumer behavior, role of consumer behaviour in marketing strategy, characteristics of Indian consumers **Individual Aspects of Consumer Behavior:** Perception, learning, & Information processing, motivation and involvement, attitudes and personality **External Influences:** Group behavior social class, Opinion leaders, Reference groups, culture and sub cultures, family **Consumer Decision Process:** problem recognition, search and evaluation of alternatives purchase process, post purchase behaviour

Organizational Buying: Concept & comparison with Consumer buying, Economic Influence; Political Influence; Legal Influence; Supplier's Influence; Technology Influence; Customer Influence; Government Influence; Labour Influence, Analyzing Buyers' strengths & Negotiation Capabilities

Books:

1. Conceptual Issues in Consumer Behaviour, Indian Context-S Ramesh Kumar, Pearson
2. Consumer Behavior a strategic approach – Hendry Assael- Biztantra.
3. Consumer Behavior in marketing strategy- Howard Prentice – Hall international
4. Phillip Kotler: Marketing Management: Prentice Hall/ Pearson Education
5. Rajan Saxena : Marketing Management : Tata McGraw Hill
6. V.S. Ramaswamy & S. Namakumari : Marketing Management : Macmillan
7. Zikmund, Marketing, 7th Ed, Thomson Learning
8. Berkowitz- Essentials of health care marketing
9. Zeithaml, Bitner, Gremler & Pzndit, -Service Marketing, TMGH 4th Ed. Ramapal & Gupta.-Essence of Service Marketing.

5 Basics of Computer and Health Information System

(Credits: 4, Hours :48)

Understanding Information Technology Infrastructure: Hardware & Software understanding, Managing Data resources, Telecommunications & Networks, Internet & the New IT Infrastructure, electronic Business & electronic Commerce, M-com

Major commands for windows operating system

Word processing (MS Word) Spread Sheet (MS Excel) Presentation Tool (MS- Power Point)

DBMS (MS-Access)

Organizational foundations of IS: managing the digital firm, Information Systems in the enterprise, information systems- organizations, management and strategy, ethical and social issues in the digital firm

Building IS: contemporary approaches, designing the organization with IS, alternative systems building methods, ensuring quality with IS, systems success & failure implementation(6)

Organizational support systems: information & knowledge work systems, enhancing management decision making, and artificial intelligence

Managing contemporary IS, controlling IS, managing international IS
Hospital Management Is & health Management IS.

Books:

1. V. Rajaraman : Fundamentals of Computers, Prentice-Hall.
2. S. K. Basandra :Computers Today, Galgotia Books.
3. J. Shelly & R. Hunt : Computer Studies, Wheeler Publishing.
4. Peter Norton : An Introduction to Computers, Tata McGraw- Hill.
5. C. Xavier : Introduction to Computers, New Age Publishers.
6. Gordon B Davis & Margrethe H Olson : Management Information Systems – Conceptual Foundations, Structure and Development , Tata Mcgraw-Hill
7. Kelkar, Management Information System, PHI
8. Arora & Bhatia, Management Information System, Excel Books
9. Stair, Principles of Information System, 6th ed, Thomson Learning
10. K. C. Loudon & J. P. Loudon : Management Information Systems, Prentice Hall/ Pearson
11. Education
12. OZ, Management Information System,Vikas
13. Murphy, Electronic Commerce, Jaico
14. Jeffrey A Hopper, Mary B Prescott & Fred R Mcfadden : Modern Database Management, Pearson Education
15. Silberschalz, Korth & Sudarshan : Database System Concepts, McGraw Hill.
16. Kalkota & Winston : frontiers of Electronic Commerce, Addison – Werley.
17. C J Date : An Introduction to Database System : Pearson Education
18. Healthcare Information Management Systems: Cases, Strategies, and Solutions, 3rd Edition
Marion J. Ball, Charlotte Weaver, Joan Kiel ,ISBN 1441923500,978-1441923509,Springer-Verlag NY / Health Informatics,February 2010

6 Health Service Delivery :

(Credits: 4, Hours :48)

Public Health Management : Introduction, Brief outline of health situation in India. Health sector in development planning in India after Independence, Organization network for health and family welfare services at the centre, state, district and block level directorates and administrative ministries — their authority and functions

Health Policy in India Health policies in India, National Health Policy, Population Policy, Drug Policy, Medical Education Policy

Primary Health Care philosophy and approach, selective primary health care, experience of voluntary sector organizations in the implementation of primary health care.

Health programmes in India Programme, Leprosy Eradication National Malaria Eradication Programme, Filaria Control Programme, T.B. Control Programme, Guinea worm Eradication Programme, Iodine Deficiency Disorder Control Programme, Diarrhoeal Diseases Control Programme, Blindness Control Programme, STD Control Programme, AIDS Control, Programme, Cancer Control Programme, Diabetes Control Programme, Family Planning Programme, Universal Immunization Programme, Child Survival and Safe Motherhood Programme, Nutrition Programmes, Integrated Child Development Scheme, Water Supply and Sanitation Programme, Minimum Needs Programme. **Health systems service delivery:** National health policies, strategies and plans Management for health service delivery, Blood transfusion safety, Universal health coverage WHO, Health systems of Developed and developing countries

Non-Governmental Organisation NGO Issues in NGO management Environment Problem Social Marketing identification Information, Education and Communication Monitoring & Evaluation Proposal Development Fund Raising Health Situational Analysis Networking and Advocacy Community Mobilization Public Private Partnership in Health Sector

Books:

1. Text book of Community Medicine, Kulkarni A.P. and Baride J.P.
2. Park's Textbook of Preventive and Social Medicine, Park
3. Principles of Preventive and Social Medicine, K. Mahajan
4. Textbook of Community Medicine, B. Shridhar Rao.
5. Essentials of Community Medicine, Suresh Chandra.
6. Review in Community Medicine, V.R. Sheshu Babu.
7. Dever – Managerial Epidemiology Practice, Methods & Concept, 2004
8. Hodges – Assessment and Planning in Health Programs, 2005

SECOND SEMESTER

7 Healthcare Planning

(CREDITS: 4, HOURS: 48)

Medical Centers government, private, corporate, Ambulatory Care + Outpatient, Children's Hospitals, Community Hospitals, Health District Planning, Healthcare Interior Design, Healthcare Planning + Strategies, Senior Living + Hospice

Operational Planning; Operational planning services assist clients with achieving their performance goals by improving efficiency, experience, and quality. Our team of registered nurses, industrial engineers, architects, and lean black belts specializes in analyzing and identifying options for improving your operations and achieving results. **Medical Equipment/Technology Planning** for health organizations, **Facility Planning:** broad health district planning exercises, understanding of the physical implications, cost, and time required to implement a project, Master Planning, Space Programming, Community health problems, identifying unmet needs and surveying resources

,establishing priority goals, realistic and projecting administrative action

Hospital Organization: Operative Planning-Characteristics, Objective goal, strategic and long term planning Hospital Utilization & its evaluation Managerial style, Importance of strategic leadership and organizational environment in Health Care , function, responsibility and role of Governing body, Chief Executive (Administrator) and Medical Staff and relationship among them ,Medical staff organization Co-ordination, Communication, and Decision making in Health Care .Organizational productivity- input and evaluation of productivity System policy, Procedure Use of modern tools and techniques for improvement of operational efficiency. Emerging Trend in Health Care ,Organizational Performance, Assessment of strengths and weakness, strategic thinking and preparation of long term plan. Analysis of organization structure, role analysis, role clarity, system of accountability, Organizational dynamics Operational and management control in health care, Management By Objective, Continuous quality improvement, defining standards, use of advanced quality management techniques

Review and Evaluation – continuous review of system, policy, procedure, process of updating, working out indexes and indexes for evaluation of various services

Productivity study, development of productivity standards, work standards, utilization standards and indices, Managed Care / Health Maintenance Organization (H.M.O)

Hospital Planning :To understand all aspects of planning and commissioning of different types of hospital including specialty hospitals and project management ,Changing health care concept in planning / designing, Site surveys for planning a hospital (Techno-Commercial) Planning of

30,100,250 bedded hospital(general/specialty) anning of 500, 750 and above bedded hospital(teaching/super-specialty/non-teaching specialty hospitals) Project cost and total budget : Feasibility and viability study of Hospital

Project conceptualization, functional requirements. Implementation, Electrical system; water supply and sanitary system; air-conditioning and fresh air systems (HVAC); fire protection systems; centralised medical gas system; telecommunication system; transportation system; illumination, Environmental Control and Safety: General environmental control; infection control

Equipment Management: Hospital equipment control system; selection and maintenance of equipment; instrumentation evaluation; instrument control; preventive maintenance

Books:

- 1.Principles of Hospital Administration. Owen J.K.
- 2.Modern Concept of Hospital Administration. Rowland, H.S. & Rowland B.L.
- 3.Hospitals & Nursing names planning, oraganisations & Mangt.Tabish,2003
- 4.The Architecture of Hospitals Abram de Swaan, Charles Jencks, Stephen Verderber, Aaron

Betsky, Cor Wagenaar, Softbound, Turtleback,



Maharashtra University of Health Sciences, Nashik

5.The Architecture of Medical Imaging: Designing Healthcare Facilities for Advanced Radiological Diagnostic and Therapeutic Techniques Bill Rostenberg, AIA ,ISBN 0471716618,9780471716617,John Wiley & Sons,June 2006

8 Materials Management & Inventory Control of health care

(Credits:4,Hours:48)

Introduction to Material Management: Introduction, importance, objectives, principles of material management. Special features of materials management applied to hospitals.

Determination and Description of material quality, Materials planning in push and pull system, MRP and JIT

Material Logistics – Inventory fundamentals, Physical inventory and warehouse Management, Physical distribution, Just in time inventory, Total Quality Management.(4)

Material requirements planning: Advantages over conventional planning (Order

Point Method) – Input and output of MRP system - Forecasting – Overview of quantitative and qualitative methods of forecasting - Master Production Schedule - Bill of Materials – BOM Explosion

- Material flow in MRP. MRP II. Concept of ERP

.(Numericals expected on BOM Explosion, estimating Net requirements), Material procurement, External services management

Production Planning System –Capacity Management, Production activity control, Master scheduling, **Purchasing:** Material master creation, maintenance of different views, Vendor master creation Purchase info record creation, Source list, creation and maintenance, Quota arrangement maintenance and its importance, Purchase requisition creation, RFQ/Quotation creation, Purchase order creation and maintenance through different method. External service management (creation & maintenance of PR/PC) Outline agreement -contract, scheduling agreement, creation of special master

Inventory Management: Overview and significance of inventory management, Selective Inventory control, Creation of GR with and without P.O., Good; issue with different methods, Transfer posting & Stock transfer Reservations, Consignment stock, Pipeline

material -creation, handing, GI etc. Returnable transport packaging (RTP), Maintenance of different type of stocks like Quality, blocked etc

Maintenance of batch management concept

Invoice Verification: Entering invoice & credit memo, Releasing invoice, Canceling

Invoice and credit memo, Invoices in the taxes, cash discount, Logistic invoice. Verification, Setting pipeline and consignment liabilities, Subsequent debit/credit. **Warehouse Management**

Consumption Based Planning: MRP and lot sizing procedure, Forecasting parameter and result, planned order planning file **Vendor evaluation**

Enterprise structure creation-Organization structure for Material Management and Integration with other Module like PP, SD and FI.

Basics of material valuations: Basic of material valuation, Split valuation.

Books :

1. P.Gopalakrishnan & M. Sundaresan : Materials Management - An Integrated Approach,
2. A.K. Dutta : Materials Management, Prentice Hall of India.
3. G.W. Plossl : Material Requirements Planning, McGraw Hill.
4. N.K.Nair : Purchase & Materials Management, Vikas
5. A.K. Dutta, Materials Management, Jaico B.K. Roy Chowdhury : Management of Materials, Sultan Chand.
6. L.C. Jhumb, Modernization of Materials Management, EPH
7. N.K.Nair : Materials Management, Asia Publishing.

9 Research Methodology & Clinical research management : (Credits:4,Hours:48)

Study designs, Sampling –Data Analysis and Interpretation methods- Quantitative and Qualitative, Data presentation, Hypothesis testing, Statistical tools Report writing ,Presentation of a report

Types of data presentation Descriptive Statistics- Basics of Probability Tests for comparison, Analysis of categorical data, Correlation and regression

The Food and Drug Administration Past and Present :The Establishment of the Food and Drug Administration ,The History of the Legislation and Regulations, which Govern the Clinical Research Process;The History of the Legislation and Regulations, which Protect the Rights, Safety, and Well-Being of Human Subjects.

Overview of Medicinal Product Research and Development Drug Discovery and Pre-Clinical Research; The Clinical Research and New Drug Application Approval Process; The Biologics Research, Development, and Licensing Process; Medical Device Research, Development, and Marketing

Good Clinical Practice (GCP) Investigational New Drug Application 21 CFR 312: Sponsor's Obligations; Investigational New Drug Application 21 CFR 312: Investigator's Obligations; Institutional Review Boards 21 CFR 56; Protection of Human Subjects 21 CFR 50; Financial Disclosure 21 CFR 54.

International Conference of Harmonization The History of the International Conference of Harmonization; The ICH Good Clinical Practice Consolidated Guideline (E6); The ICH Clinical Safety Data Guideline (E2).

Clinical Trial Development Protocol Design and Development; Case Report Form Design and Development ,Principals of Data Management and the Query Resolution Process
The Study Types Providing Expanded Access to Investigational Products

Investigator Site Perspective: Coordinating a Clinical Trial at the Site Essentials of Source Documentation; Maintaining and Managing Essential Documents; Recording and Reporting Non-Serious and Serious Adverse Events

Sponsor's Perspective: Managing a Clinical Trial Selecting Investigators and Monitors; Maintaining and Managing Essential Documents (e.g. FDA Form 1572); Case Report Form Data Transmission and Generation of the Clinical Study Report; Reviewing and Reporting of Serious Unexpected Adverse Drug Experiences; Implementing Monitoring Plan and Performing Quality Control
Monitoring Obligations and Methods Monitoring Role and Responsibilities According to the FDA Guideline; Monitoring Role and Responsibilities According to ICH Good Clinical Practice Consolidated Guideline (E6); Monitoring Responsibilities: Type of Monitoring Visits, Monitoring Activities Pre-Visit, On-Site, and Post Visit; Monitoring Method: Implementing a Systematic Monitoring Approach to Effectively Monitor a Multi-Center Trial; Problem Solving and Trouble Shooting GCP / ICH Issues; Writing Strategic Monitoring Reports and Follow-Up Visit Letters

Books:

- 2 Clinical Research Quality System Manual,Nancy J. Stark, 2009.
- 3 Clinical Trials: A Practical Guide to Design, Analysis, and Reporting, Duolao Wang and Ameet Bakhai, editors, 2006.

- 4 Clinical Trials Audit Preparation: A Guide for Good Clinical Practice (GCP) Inspections”, Vera Mihajlovic-Madzarevic, 2010.
- 5 Clinical Trials Handbook, Shayne Cox Gad, 2009.
- 6 A Clinical Trials Manual from the Duke Clinical Research Institute:, Lessons from a Horse Named Jim, 2nd Edition
- 7 Conducting Clinical Research: A Practical Guide for Physicians, Nurses, Study Coordinators, and Investigators, 2nd edition, Judy Stone, 2010.
- 8 Data Monitoring Committees in Clinical Trials: A Practical Perspective, Susan S. Ellenberg, Thomas R. Fleming, and David L. DeMets, 2003
- 9 Designing Clinical Research, 3rd Edition, Stephen B. Hulley, Steven R. Cummings, Warren S. Browner, Deborah G. Grady, and Thomas B. Newman, 2007.
- 10 Economic Evaluation in Clinical Trials, Henry A. Glick, Jalpa A. Doshi, Seema S. Sonnard and Daniel Polsky, 2007.
- 11 Evaluating Clinical Research: All That Glitters Is Not Gold, 2nd Edition, Bengt D. Furberg and Curt D. Furberg, 2007.
- 12 Management of Data in Clinical Trials, Second Edition, Eleanor McFadden, 2007.



10 Human Resource Management :

(Credits:4,Hours:48)

Overview of HR practices: Introduction, Importance, Evolution, difference between Personnel Management and HRM, difference between HRM & HRD, Strategic HRM, role of a HR Manager, functions of HRM, international HRM.

Human Resource Planning: meaning, objectives, ERP process, methods of forecasting, defining organizational units, jobs, positions and tasks

Recruitment and selection: creating vacancies, creating advertisements, data maintenance of applicants, monitoring status of applicants, working out requirement profiles, profile matching, selection of employees, transfer of applicant data to employee data

Personnel administration: creating master data, data maintenance of employees in info types, creating actions, creating info groups, executing actions

Time management: creating public holiday calendars, work break schedules, daily work schedules, periodic work schedules, work schedule rule, defining expectations, configuring leave, absences, attendance, defining substitutions, availability, time types, processing types, time recording, processing(line data), time evaluation.

Payroll administration: defining payroll area, pay scale area, pay scale types, pay scale structures, setting up pay scales and levels, wage types, configuring basic pay, recurring pay allowances and allowances, additional payments, running payroll Benefits: creating benefit areas and configuring benefit plans, eligibility, costs and credits, maintaining benefit info types
Human Resource Development: performance management, career planning and development, organizational development

Training and development: concept of training & development models & succession models, creating & marketing training, seminar and convention management, creating business event groups, business event types, creating resources, cost elements

HRIS: creating master data, personnel events, wiring, relocation, maintaining info types reports, optical archiving.

Books:

W.B. Werther & Keith Devis : Human Resource Management, McGraw Hill

2. V.S.P. Rao : Human Resource Management, Excel Books

3. Pattanayek, Human Resource Management, PHI

4. E.A. Ramaswamy : Managing Human Resources, OUP

5. Bohlander, Managing Human Resources, 13th ed, Thomson Learning

6. Mathis, Human Resource Management, 10th ed, Thomson Learning

7. S. Venkataratnam & B.K. Srivastava : Personnel Management and Human Resources, Tata McGraw Hill

8. Dessler, Human Resource Management, Pearson Education/PHI

9. Ghosh, Human Resource Development & Management, Vikas

10. K.K. Chaudhuri : Personnel Management for Executives, Himalaya Publishing

11. Dr. Anjali Ghanekar, Human Resource Management,EPH

12. M.S Saiyadain : Human Resource Management : Tata McGraw Hill

13. P.C Tripathy : Human Resource Development : Sultan Chand

14. D.K Bhattacharyya, Human Resource Management, Excel Books

15. Goyal, R.C. Hospital Administration And Human Resource Management, Prentice Hall of India, 2005

11 Project Management and Strategic Management

(Credits:4,Hours:48)

Project Management Concepts: concepts of project management, characteristics of project. Importance of project management, types of project, role of consultants in project management, Project Asset – issues & problems, legal aspects of project management, Project planning, scheduling techniques, use and limitation of PERT/CPM, Resource monitoring & control

Contract Management : principles of Project Contracts, compilation of Project Contracts, practical aspects of Contract, legal aspects of Project Management, global tender, negotiations for Projects, insurance for Projects

Investment Feasibility Studies: managing Project Resources Flow, Project Feasibility studies, Project Cost – Capital & Operating, Forecasting Income, Estimation of Investment & ROI, Project Evaluation, Financial Sources, Appraisal Process.

Issues in Project Management: Project Audit, Project Monitoring & MIS, Cost Control, Real Time Planning, Intangibles

STRATEGIC MANAGEMENT:

Strategic Management: objectives, policies, tools, strategic management process. **Environmental Scanning :** External Environment analysis, **Internal analysis**, Organizational Environment analysis,

Strategic Planning: corporate goal setting, functional goal setting, managerial goal setting, positioning organization

Formulating Strategies : Corporate level, administrative / executive level & operating level, developing functional strategies - production / operations, finance, marketing, HR, materials, R & D, BCG Matrix, GE business screen, Portfolio Analysis.

Implementation of Strategies: Role of managers, Leadership, strategic control system & measurement. **Strategic Actions:** Mergers, Acquisitions, Diversification

Books:

1. P Chandra : Projects : Planning Analysis : Selection Implementation & Review
2. P Gopalkrishnan & V E Ramamoorthy : Text Book of Project Management, McMillan .
3. N Singh : Project Management & Control, Himalaya
4. B M Patel : Project Management, Vikas.
5. Suhani, Computer Aided Project Mgmt, OUP
6. Michael E. Porter : Competitive Strategy, The Free Press
7. A Kazmi : Business Policy & Strategic Management, Tata McGraw Hill.
8. V S P Rao & V. Hari Krishna : Strategic Management , Excel Books.
9. Lomash, Business Policy & Strategic Mgmt, Vikas
10. Macmillan, Strategic Management, OUP
11. Bani P Banerjee : Corporate Strategies, OUP
12. Ranjan Das : Crafting the Strategy, Tata McGraw Hill.
13. P.K.Gupta, Corporate Strategic Management, EPH.
14. Pitts, Strategic Mgmt., Vikas
15. Marcinko-Financial Planning Handbook for Physicians and Advisors, 2006
16. Heldman. Project Management –S.Choudhary.

12 Medical Record & Health Care Statistics (Credits: 2 , Hours:24)

Introduction and Importance of medical records HIPAA, the Patient Chart and the Release of Patient Information Health Insurance Carriers and Claims Electronic Medical Record Systems Time Management Guide ,The Health Information Management Department

Filing Methods and Medical Record Processing

The Assembly and Contents of the Medical Record, Medical Record Analysis and the Physician Incomplete Area, Protecting Patient Confidentiality and Other Functions of the personnel

Database Management: Basic Concepts : Database & Database Users, Database Concepts & Architecture , Data Modeling Using the Entity- Relationship Approach , Record Storage & Primary File Organizations , Index Structures for Files

The Relational Model, Language & Systems : The Relational Data Model & Relational Algebra.- Oracle 8 or above. Conventional Data Models & Systems : The Network Data Model & the IDMS System, The Hierarchical Data Model & the IMS System

Database Design : Functional Dependencies & Normalization for Relational Databases
System Implementation Techniques : Query Processing & Optimization, Transaction Processing Concepts

Concurrency Control & Techniques , Recovery Techniques, Database Security & Authorization.
Advanced Data Models & Emerging Trends : Advanced Data Modeling Concepts, Object Oriented Databases ,Distributed Databases & Client Server Architecture, XML

Books:

1. Elmasri, Navathe : Fundamentals of Database System, Pearson Education.
2. Silberschatz, Korth, Sudarshan : Database System Concepts, McGraw Hill International.
3. Pratt, concept of data base management, Vikas
4. Date : An Introduction to Database System, Pearson Education.
5. Leon & Leon, Data Base Management System, Vikas
6. Hopper, Prescott, Mc fadden : Modern Database Management, Pearson Education.
7. Molina, Ullman, Widom : Database System , Pearson Education.
8. Schaum's Outline Series : Fundamentals of Relational Databases, Tata McGraw Hill.
9. Medical Records Manual: A Guide for Developing Countries, WHO Library Cataloguing in Publication Data, Revised and updated 2006, ISBN 92 9061 005 0
10. Electronic medical records: a guide for clinicians and administrators, Jerome H. Carter, American College of Physicians--American Society of Internal Medicine, ACP Press,
11. Electronic health records: a practical guide for professionals and organizations, Margaret K. Amatayakul, American Health Information Management Association,

13 Basics of Accounts and Economics

(Credits:4,Hours:48)

Elements of cost, break-even analysis, types of budget and flexible budget vs. fixed budget, operating and financial budgets

Concept of finance: long term, short term finance, term loans, other sources of finance, working capital management, Inventory management and account receivables management, cash management

Capital and Profit Management: structure, cost, measurement, investment analysis

Understand various concepts: time value of money, money market, currency market
corporate restructuring

Introduction about the fundamentals of economics in Healthcare

DALY- QALY- Externalities- Concept of Micro Economics- Concept of Macro

Introduction Economics- Equilibrium-Population Coverage

Health- Economics- Health Economics- Role of Economics in Healthcare- Key Terms in Healthcare Economics

Demand Side Considerations in Healthcare Law of Demand- Demand for Health- Demand for Medical Care- Determinants of Demand **Supply side considerations in Healthcare**

Law of Supply- Determinants of Supply- Managed Care- Production Function and Cost Minimization- Competitive Behavior- Market Performance- Production of Health Care- Pricing of Health Care, Theory & Pricing of a Firm

Concept of Cost

Concept of Cost analysis- Price elasticity- Determinants of cost and utilization- Policies to contain cost- Cost of health care- Process of costing in healthcare- Types of cost in healthcare- Cost benefit analysis- Costing for decision making- Cost effective analysis **Role of Government**

Government Intervention in health care- Market imperfections- Market Failure Redistribution used in kind subsidies The market for health insurance- Health insurance in India- Health insurance worldwide- Public Insurance-Private Insurance- Social Insurance- Community health care insurance in India- Life insurance **Technology in Healthcare and Its Economics** The economics of Technology Change- The levels of technology change- Role of insurance in diffusion of technology- Brief outline about the pharmaceutical industry

Books:

1. The Business of Healthcare Kenneth H. Cohn, MD, Douglas E. Hough, Three Volumes, Hardbound, 36 pages, ISBN 0275992357, 978-0275992354, Greenwood Publishing, January 2008
2. Kiley-Medical information on the internet
2. Brigham, Financial Mgmt, 10th Ed, Thomson Learning
3. Ramachandran, Accounting & Financial Mgmt for MCA & MBA Students, Scitech
4. Prasanna Chandra : Financial Management - Theory & Practice, Tata McGraw Hill.
5. Finkler – Accounting Fundamentals for Health Care Management, 2006
6. Jacobs – The Economics of Health and Medical Care
7. Van Horne and Wachowicz : Fundamentals of Financial Management, Prentice Hall/ Pearson Education. Brealey and Myers : Principles of Corporate Finance, Tata McGraw Hill
8. I.M. Pandey : Financial Management, Vikas.
9. .A.P Rao, Cases & problems on Financial Management, EPH 10. A Damodaran :

14 Operations Management of health care organization (Credits:4, Hours: 48)

Hospital Support Services CSSD Nosocomial infection and hospital acquired infection control committee Nursing Services Department of transfusion medicine Technology management Security Services Laundry services Transportation Services Mortuary Kitchen services & food safety House Keeping ,contracts Administration-Model contract for different services i.e. Laundry, Dietary Dispensary, Security and Ambulance Services Logistics Management in Healthcare Units and Storage & Distribution

Organisation of Clinical Services: Role of clinical services in the hospital services system. Approaches to organising clinical services for hospitals of different sizes, scope and ownership. Composition and role of clinical committees — Infection Control Committee, Ethics Committee, Death Review Committee, Committee on Re-use of Consumables, Clinical Performance Committee Contracting of clinical services.

Planning and Management of Clinical Service Departments: Day care, Out patient department, Accident & Emergency department, Diagnostic Services: Clinical laboratories. Blood bank. ,Diagnostic radiology ,Radiation therapy ,Nuclear medicine ,Diagnostic endoscopy ,Neuro Lab, Therapeutic Services: Surgical facilities — Operation Theatre , Labour and delivery suites , Non-invasive cardiology ,Cardiac catheterisation laboratory ,DSA ,Endoscopy , Pulmonary medicine. General speciality services — obstetrics and gynaecology, paediatrics , orthopaedics ,Dental services ,Psychiatry services.ICU, NICU, PICU Nursing Services: General and special nursing units ,Ward management ,Isolation facilities ,Intensive care units ,Nurseries ,Rehabilitative Services: Physical medicine and rehabilitation ,Physical therapy ,long term care Occupational therapy ,Speech and hearing therapy ,Recreational therapy.

Professional Staff Management Selection of consultants, Delineation of clinical privileges, Management of junior doctors, Management of paramedical staff, Nursing service administration, Evaluation of clinical performance — peer group reviews.

Super Speciality Services Management Classification of super-speciality services and sub-speciality services; special requirements of super-speciality departments; general factors to be considered in planning super-speciality services; organisation and management of various super-speciality departments within a multispeciality hospital.

Planning of Super- Speciality Facilities: Planning and management of the following categories of super-speciality hospitals/medical centres — Cardiac, Neurology and Neurosurgery, Orthopaedics, Oncology, Rehabilitation, Teaching hospitals

Books:

1. Goel- Hospital Core Services
2. Goel- Hospital Preventive & Promotive Services,2004
3. Barnson, J.C and Lennox. M. Hostel and Hospital Housekeeping .Gerig Thomas
4. .Risk management in health care institutions.Kavaler,2003

15 Emergency Preparedness & Disaster Management (Credits:2,Hours:24)

Introduction – Emergency Preparedness Common causes of natural and man-made disasters and an introduction to the current national Disaster Relief situation, C.B.R.N disasters Defining the roles and responsibilities of emergency rescue team medical personnel An introduction to disaster site safety knowledge and recognition of potential hazards in the disaster environment

Rescue worker safety and an introduction to Personal Protective Equipment (PPE) Fundamental procedures of Disaster site Search and Rescue

Emergency Rescue Team Disaster Site Work–Search and Rescue Study of commonly used search techniques and disaster site simulation zone skills practice (Overcoming a hazardous environment; Rope skills; Climbing skills; Stretchers; Casualty transportation; etc.) Information management, fundamental navigation and map reading skills Treatment of multiple casualties – the START triage system

Emergency Rescue Team Disaster Site Work – Medical Skills Establishing Patient Priority Principles Basic Life Support skills Advanced Life Support skills Treatment of shock Treatment of burns and frostbite Treatment of multiple types of trauma (Head, chest and abdominal trauma, spinal injury management, fractures, soft tissue injuries, etc.) The medical transportation process

Disaster Site Public Health Management Hydration and Nutritional requirements

Encampment site set-up Water purification, medical and non-medical waste disposal Management of the dead, Psychological support for survivors

Disaster Site Field Exercises and Assessment Rapid deployment training Night-time search exercise, Multiple disaster site daytime field scenarios, Assessment and feedback

Books:

1. Novick-Public Health issues in Disaster Preparedness, 2003
2. Disaster management and preparedness, Thomas D. Schneid, Larry Collins, Lewis Publishers, 2001
3. Enhancing Disaster and Emergency Preparedness, Response, and Recovery Through Evaluation, edited by Liesel Ashley Ritchie, Wayne MacDonald, American Evaluation Association, 2010
4. Principles of Disaster Mitigation in Health Facilities, Pan American Health Organization Regional Office of the World Health Organization, 2000
5. Guide on disaster preparedness and response, 2001, W B Voluntary Health Association, 2001

16 Health Insurance Management & TPA

(Credits:2, Hours:24)

Basic principles of general insurance: History and development of health insurance, Current scenario- International, Indian.

Insurance Act, 1939, Insurance Regulatory and Development Authority (IRDA), Consumer Protection Act, 1986

Insurance Ombudsman, Intermediaries in health insurance, Evolution of TPA industry in India, Working and role of TPA, Managed health care, Regulations relating to the intermediaries, Other intermediaries

Health insurance frauds: Introduction, Measures to control insurance fraud and abuse, Case studies, IT and control of health insurance frauds and abuse

Health insurance products: International, Indian health insurance products, Interpretation of terms and conditions, Specific ailment based products- HIV and Diabetes Community based health insurance, Social Health Insurance- ESIS and CGHS

Operational aspects: Claims and utilisation management, International Classification of Diseases (ICD), Provider management, Medical underwriting

TPA

Books:

1. Life and Health Insurance, 13th Edition [Paperback] Kenneth Black Jr. (Author), Harold D. Skipper Jr. (Author), ISBN-10: 0138912505
2. Health insurance for the poor in developing countries By Johannes Jütting, Ashgate Publishing, Ltd.
3. Insurance in India: changing policies and emerging opportunities, P. S. Palande, R. S. Shah, M. L. Lunawat, SAGE publications

17 Healthcare Industry relation & Labour laws

(Credits:4, Hours:48)

Healthcare Industrial Relations : Concept, Approaches to IR, Parties to IR, System Model of IR

Industrial Worker in India : Rise of Industrial Workers, Profile of Industrial Workers in India, Problems of Industrial Workers (absenteeism, commitment, Work Ethics)

Trade Unionism in India: Origin, Growth, Structure and Management of Trade Unions, Recognitions, Leadership, Trade Unionism, Employers' Organisations in India, Managerial Associations

Industrial Relations in India: Labour Policy in Five Year Plans, Tripartism, Role of Government and State, Role of Management, Role of Trade Unions,

Industrial Disputes: Causes, Types, Trends and Settlement of Disputes (Internal Options, Third Party Machinery Collective Bargaining: Theories, Prerequisites, Process, **Negotiating Skills and Strategies**, Agreement –content, Validity, Implementation, Productivity Bargaining, Growth of Collective Bargaining in India

Workers' Participation in Management : Concept, Purpose and Practices in other countries; Workers' Participation Schemes in India – Works Committee, Joint Management Council, Worker – Director, Shop Council and Joint Council, WPM, EPM; Problems and **Prospects in India**;

Quality Circles – Concept and Practices in India.

Labour Welfare and Industrial Relations: Statutory and Non-Statutory Provisions, ILO Conventions and its application in India, Workers' Education Programmes in India Employee Discipline: Meaning Types, Misconduct, Disciplinary Action, Domestic Enquiry, Case Studies - Wage Negotiation, Disciplinary Action, Industrial Disputes

Legal Framework & Evolution of Labour Laws in India.

Laws Regulating Establishment: Factories Act, 1948, Mines Act, 1952, Plantations Labour Act, 1951. Laws Relating to Remuneration: Payment of Wages Act, 1936, Minimum Wages Act, 1948, Payment of Bonus Act, 1965, Equal Remuneration Act, 1976

Laws Relating to Industrial Relations: Industrial Disputes Act, 1947, Industrial Employment (Standing Orders) Act, 1946, Trade Unions Act, 1926. Laws Relating to Social Security: Workmen's Compensation Act, 1923, Employees' State Insurance Act, 1948, Employees' Provident Funds & Misc. Provisions Act, 1952, Maternity Benefit Act, 1961, Payment of Gratuity Act, 1972

Book:

1. Dynamics of Industrial Relations - [C.B.Mamoria](#), [Satish Mamoria](#),
2. Industrial Relations – *Arun Monappa*, Tata Mc Graw Hill
3. Industrial & Labour Law – *S.P Jain*, Dhanpat Rai and Sons, New Delhi
4. Labour Law for Managers – *B D. Singh*, Excel Books
5. Bare Acts

18 Financial management & Business analytics

(Credits:4, Hours:48)

Introduction to Management Accounting- meaning definition of accounting, parties, users interested in accounting, branches of accounting, meaning and definition of management accounting, understanding basic accounting terminologies, rules of accounting.

Meaning of journal, writing journal entries, posting ledger, trial balance, preparation of trading and profit and loss account and Balance Sheet.

Elements of cost, break-even analysis, types of budget and flexible budget vs. fixed budget, operating and financial budgets

Concept of finance: long term, short term finance, term loans, other sources of finance, working capital management, Inventory management and account receivables management, cash management

Capital and Profit Management: structure, cost, measurement, dividend policy, capital market, investment analysis

Understand various concepts: time value of money, money market, currency market, corporate restructuring. **Business analytics:**

Books : -

Van Horne and Wachowicz Fundamentals of Financial Management, Prentice Hall/Pearson Education.

Brigham, Financial Mgmt, 10th Ed, Thomson Learning

Ramachandran, Accounting & Financial Mgmt for MCA & MBA Students, Scitech Prasanna Chandra : Financial Management - Theory & Practice, Tata McGraw Hill.

Lasher, Practical Financial Mgmt., 4th Ed, Thomson Learning

A.P Rao, Cases & problems on Financial Management, EPH A

Damodaran : Corporate Finance , Wiley. Finkler – Accounting

Fundamentals for Health Care Management, 2

19 Pharmaceutical Management

(Credits: 2, Hours: 24)

Pharma Sales & Marketing Management

Pharma Sales and Distribution Management

Pharmaceutical Marketing Management

Pharma Product Management Brand Management Rural Marketing OTC Marketing

Pharma Production Management

The Ayurvedic and Herbal Market: Overview of global Ayurvedic and Herbal industry, Ayurvedic and Herbal domestic and global industry in India, Prescription vs. OTC market, Major stakeholders in market, Major Ayurvedic Brands, Regulatory environment in Ayurvedic industry

Books:

1. Pharmaceutical Management By Sachin Itkar ISBN 978-81-85790-39-8, Nirali Publication

Pharmacy Management: Essentials for All Practice Settings,
Second Edition August

The student will work independently on a project in one of the areas of Health Care Administration in the final three months of II year of their M.B.A. program. They will work under a Faculty Advisor for the entire year and publish a Project Report.

20. Summer Training Project

FOURTH SEMESTER

21 Hospital Infection Control & Biomedical Waste Management (Credits: 2, Hours: 24)

To understand the significance of nosocomial infections, biomedical waste and its proper disposal.
BMW – Segregation, collection, transportation, disposal Liquid BMW, Radioactive waste, Metals / Chemicals / Drug waste

Microbiology and host defense mechanisms Transmission and prevention of infection
Standard precautions and blood borne viruses Antibiotic resistance

Surveillance and quality systems Wound management• Storage and handling of sterile stock
Sourcing information for infection control• Food handling and hygiene Environmental cleaning Disinfectant

BMW Management & methods of disinfection Modern technology for handling BMW
Monitoring & controlling of cross infection (Protective devices) BMW from Administrative point

(Budget, Health check-up, Insurance)

Books:

1. Prevention of hospital acquired infection. WHO, 2003
2. Ayliff- Control of hospital infection, 2004
3. Friedman- Infection Control in Ambulatory Care, 2004
4. Charney - Handbook of Modern Hospitals Safety
5. Stewart – Weapons of Mass Casualties and Terrorism Response Handbook, 2005
6. Novick- Public Health issues in Disaster Preparedness, 2003
7. Muralidhar- Hospital Acquired Infections , 2006

22 Health Care Services Marketing & Medical Tourism: (Credits: 4, Hours: 48)

Introduction to Service Marketing: Introduction, Nature , and Characteristics of Services,

Introduction to 7Ps of Services Marketing. Difference between services and tangible and non-tangible products, Conceptual Framework of Service marketing. Classification of services; Consumer versus Industrial Services ,Service as a product - Product Vs Service. Service triangle & AP Analysis. Service Process - Service blueprint. People - Employees role & responsibility. Sources of conflicts in delivering a service. Service quality & customer satisfaction. GAP Model assignment. Physical evidence – Services cape Tangible & Virtual. Managing demand & Capacity. Pricing. Service Vs Goods. Perception, Strategies. Promotion- Service promotion.

International Marketing

Introduction: Concept, scope & Objectives. Challenges and opportunities in International Marketing, Underlying forces of International Marketing

Global marketing environment – Economic Environment, Socio-cultural Environment
Legal and Statutory Framework. Global Marketing Information System and Research(4)

Export Marketing: Recent Import Export Policy and Procedures, General Various Export Promotion schemes, export documentation

Trade Theories and Economic Development, Trade Distortion and Market Barriers, World Consumer Behaviour in the International Context & Business Customs



Maharashtra University of Health Sciences, Nashik

International Context: Market Analysis and Foreign Market Entry Strategies, Product Strategies:

Global Marketing Decisions: Basic, Product Planning, Branding & Packaging Decisions, Distribution Strategies & Documentation, Promotion Strategies: Personal Selling, Publicity, Sales

Promotion & Advertising, Pricing Strategies, Sources Of Financing and International Money Market, Currencies And Foreign Exchange

Medical Tourism Introduction to Medical Tourism History of Medical Tourism Medical Tourism Destinations Travel Retailing and Logistics Marketing Concepts and Strategies Hospitality and Hotel Industry Spa and Wellness Tourism Alternative Medicine and Medical Tourism Impact of Medical Tourism on Public Health Medical Tourism-Ethical, Legal and Social Concerns Medical Tourism- Issues & Challenges Quality Standards in Medical Tourism Medical Tourism-The Future of Health Services

Books:

1. Berkowitz- Essentials of health care marketing, 2004
2. International Marketing – Analysis and Strategy, Sak Onkvisik and John J. Shaw (P.H.I.)
3. Savage- Advances Health Care Management 3 volumes, 2006
4. Medical tourism, , Wallingford, Oxfordshire ; Cambridge, MA : CABI, ©2011
5. Medical Tourism: Medical Tourism, International Healthcare Accreditation, Commercial Surrogacy in India, Dental Tourism, General Books LLC, 2010
6. Handbook of Medical Tourism Development, Maria Todd, , 2011



23 Ethics & Legal Aspects of Health Care

(Credits: 4, Hours: 48)

Legal Aspects of Healthcare : Introduction to law

Sources of law – Contract and antitrust – Purpose of contract – Types of contracts – Legality of object – Conditions – Remedies – Contracts of Adhesion – Employment contracts – Restraint of trade – Civil procedure and trial practice – Discovery and examination before trial – Memorandum of law – Evidence – Jury deliberation and determination – Damages – Appeals – Execution of judgments – Corporate liability – Authority of health care corporation – Duties of health care corporations – Laws in Healthcare

Personnel - Medical staff – Organization – Privileges – Bylaws – Reappointments – Physician-patient relationship – Nursing and law – Practice of nursing – Nurse licensure – Nurse practice roles – Liability by departments and health care professionals – Ambulatory care centers – Emergency departments – Certification of Health care professionals – Licensing Health care professionals. **Information-Management-**

Introduction – Managing information – Patient consent – Consent definition – Patient self-

determination act – Proof of consent – Refusal of treatment – Statutory consent – Consent and judicial intervention – Defence and failure to inform – Legal reporting requirements – Child abuse – Communicable diseases – Births and deaths – Risk management and incident reporting.

Protection-Issues of Procreation – Circuit and district court decisions – Wrongful birth, life, and conception – Patient rights and responsibilities – Patient rights – Admission – Discharge Transfer – Patient bill of rights – Patient responsibilities – Patient Advocacy – Acquired immune deficiency syndrome – AIDS and health care workers – AIDS and the right to know – The right to treatment – News media and confidentiality – Negligence – Occupational safety and health act.

Ethics- Health care ethics : Ethics committee – End of life issues – Organ donations Malpractice insurance - Insurance policy – Liability of professional – Medical Liability Insurance – Self insurance – Medical staff insurance coverage – Labour relations – Unions and health care organization – Labour rights – Patients rights during labour disputes – Employment discipline and discharge – Public policy issues – Interference with employment activities – Fairness

Book:

1. MORRISON/ETHICS IN HEALTH ADMINISTRATION 2006
2. Ethical Challenges in the Management of Health Information, 2nd Edition Laurinda Harman, RHIA, 2nd Edition, ISBN 0763747327, 9780763747329, Jones & Bartlett, 2006
3. Law of Contract – Avtar Singh
4. Company Law – Avtar Singh
5. Special Contracts – Avtar Singh
6. Negotiable Instruments Act – Avtar Singh
7. Business Law – K.R. Bulchandani
8. Partnership Act – Avtar Singh.
9. Law of Consumer - Universal Publications
10. Law and Medical Profession - Eastern Law Book Co.
11. Related Acts - Kamal Law Book House

24 Health service Quality

(Credits: 4, Hours: 48)

Introduction to Quality Management, its Philosophies and TQM : The history and Importance of Quality, Defining Quality, Quality as a Management Framework, Quality and Competitive Advantage, Three Levels of Quality, The Deming Philosophy, The Juran Philosophy, The Crosby Philosophy, Comparisons of Quality Philosophies, Other quality Philosophers, Quality Management Awards and Frameworks, Acceptance Sampling Techniques, Seven basic tools of quality, ISO 9000:2000, Six Sigma, Total quality management, introduction to total quality management, the evolution of total quality, risk management, re engineering

Principles and Design for Six Sigma

Kaizen, Total Productive Maintenance (TPM), Meaning, Seven Magnificent Quality Tools,

Application, Poka Yoke, Six Sigma, The Statistical basis of Six Sigma, Project Selection for Six Sigma, Six Sigma Problem Solving, Six Sigma in Services and Small Organizations, Tools for Concept Development, Tools for Design Development Tools for Design Optimization, Tools for Design Verification

Statistical Process Control : Statistical Process Control, Specification & Limits, Charts for variables & attributes, Process Control (X, R & P chart), Summary of Control Chart Construction, Designing Control Charts Product control, acceptance sampling and OC curve, Process Improvement Methodologies, Basic Tools for Process Improvement, Other Tools for Process Improvement, Engaging the Workforce in Process Improvement

Quality Systems : ISO Systems, ISO Certification Schemes, Preparing an Organization for ISO Certification, Baldrige, Deming, Service Quality Management, Product & services, Classification, Service Quality, Total Productive Maintenance, Function Deployment, House of Quality, Offline Design of Parameters and Specifications Hospital Environment, Occupational Health & Safety Management - ISO 14001:2004 & OHSAS 18001:2007

NABH, NABL, JCI

Books :

- 1) Evan J.R., Total Quality Management, Excel Book.
- 2) K.Maitra & S K Ghosh : Total Quality Management, OPH
- 3) B.L. Hansan & P.M. Ghare : Quality Control & Application, Prentice Hall of India.
- 4) Hagan, Mgmt. of Quality, OUP
- 5) Dutta, Cost Accounting, Pearson
- 6) Mohanty & Lakhe, Hand Book of TQM, Jaico
- 7) J M Juran & Frank M Gryna , Quality Planning & Analysing ,TMH
- 8) A.V Feigenbaum : Total Quality Control, McGraw Hill
- 9) N L Enrick : Quality, Reliability & Process Improvement, Industrial Press Inc.
- 10) Bhatt, TQM, Himalaya
- 11) Robert Lloyd – Quality health care, 1999

McLaughlin – Continuous Quality Improvement in Health Care, 2006

Accreditation Process Guide for Hospitals Joint Commission on the Accreditation of Healthcare Organizations ,2010 Edition ,ISBN 1599403609, 978-1599403601, The Joint Commission / Joint Commission Resources

25 National Health policy & Programmes

(Credits: 4, Hours: 48)

Introduction - National health policies- What is it, Importance, State nutrition policy & national nutrition policy, the Policy process, formulation, intersectoral coordination and stakeholder convergence in policy formulation, Social determinants of health and influences on public policy, Legal aspect of public health policy **Agenda setting-** policy analysis paradigm to summarize factors underlying policy formulation (influences and decision making), Policy outcomes (implementation level- quantifying results **Health and nutrition programs of India** ,Successful policy initiative across the world **Program planning-** an overview, Theory, Concept, Frameworks, Steps in program planning, Estimating and securing financial resources, Planning for program monitoring and evaluation, Planning for program ending or termination

Monitoring and evaluation of public health programmes- Monitoring, Evaluation of programmes, Designing the evaluation, Programme efficiency analysis, Quantitative and qualitative techniques used in evaluation, decision making and moving forward

District and village planning – a decentralized implementation approach in public health in India- **National Rural Health Mission (NRHM)** and District Health Action Plans, District Planning Development Cycle, Development of district plan – capacity building and situation analysis, Village planning, Village plan to district level plan

Introduction – Health Economics, Role of Economics in Healthcare, Key terms in Health care economics, Technology in Health Economics

Public Health Management Introduction Brief outline of health situation in India. Health sector in development planning in India after Independence Organisation network for health and family welfare services at the centre, state, district and block level directorates and administrative ministries — their authority and functions.

Health Policy in India Health policies in India — National Health Policy, Population Policy, Drug Policy, Medical Education Policy. **Primary Health Care** Primary Health Care — philosophy and approach, selective primary health care, experience of voluntary sector organisations in the implementation of PHC. **Health programmes in India:** National Malaria Eradication Programme, Filaria Control Programme, T.B. Control Programme, Leprosy Eradication Programme, Guinea worm Eradication Programme, Iodine Deficiency Disorder Control Programme, Diarrhoeal Diseases Control Programme, Blindness Control Programme, STD Control Programme, AIDS Control Programme, Cancer Control Programme, Diabetes Control Programme, Family Planning Programme, Universal Immunisation Programme, Child Survival and Safe Motherhood Programme, Nutrition Programmes, Integrated Child Development Scheme, Water Supply and Sanitation Programme, Minimum Needs Programme.

Books:

1. Text book of Community Medicine, Kulkarni A.P. and Baride J.. Park's Textbook of Preventive and Social Medicine, Park
4. Textbook of Community Medicine, B. Shridhar Rao.
5. Essentials of Community Medicine, Suresh Chandra.
6. Dever – Managerial Epidemiology Practice, Methods & Concept, 2004
8. Hodges – Assessment and Planning in Health Programs, 2005

26 Health Informatics

(Credits: 2, Hours: 24)

Introduction and overview Net searching tips Databases and Knowledge management Standards for health informatics Electronic Health Records, HL7 and XML Integrated HIS including Clinical Decision Support Systems Imaging, including PACS and DICOM Requirements management Artificial intelligence

Telemedicine & e-Health : Introduction Concept ,Definitions ,History, Organs and Forms, Evolution, Impact, Issues, Type of digital information of telemedicine Telemedicine as a system ,Critical sub-systems of telemedicine ,Regulatory sub-systems Optional sub-systems of telemedicine ,Mobile applications of telemedicine **Clinical And Technical Aspects Of Telemedicine** Applications of telemedicine ,Perspectives of clinicians ,Telemedicine and diagnostic imaging ,Telemedicine and monitoring of physiological parameters ,Telemedicine and surgery

Data And Information Standards In Telemedicine:

Role of standards in Healthcare ,Health Level Seven (HL7),Digital Imaging and Communication in Medicine (DICOM),Logical Observation Identifiers Names and Codes (LOINC); Systematized Nomenclature of Medicine-Clinical Terms (SNOMED),Adoption of Information Systems Standards in Healthcare ,Ethical and legal aspects of telemedicine: confidentiality, and the law, patient rights and consent, access to medical Records, reimbursements ,Values to the Patient, Clinician, and Health Care Organization training, cost, administration, Challenges to Successful Implementation **Telemedicine Implementation:**

Telemedicine networks in developed countries ,Telemedicine networks in developing countries ,Mobile telemedicine (mHealth) applications ,Integration of Telemedicine with other IT applications in healthcare ,Challenges to successful implementations Telemedicine case study to identify the healthcare professional roles and understanding of the implications of training, cost and administration involvement.

Ethical And Legal Aspects Of Telemedicine: Confidentiality of medical data , clinicians and paramedical personnel ,Ethical and legal aspects of telemedicine Challenges being faced by telemedicine ,Roles of Implications of trainings and cost

Adoption of Telemedicine : Concepts: Innovation, Adoption, Diffusion, Integration ,Factors influencing Adoption of Telemedicine ,Diffusion of IT Innovations in Healthcare ,Adoption & Diffusion of Telemedicine in resourceful and resource limited settings

Books:

1. "Telehealth in the Developing World" , edited by Richard Wootton, Nivritti G. Patil, Richard E. Scott, and Kendall Ho, Royal Society of Medicine Press/IDRC, 2009, ISBN: 978-1-85315-784-4; e-ISBN 978-1-55250-396-6,
2. Handbook of Research on Advances in Health Informatics and Electronic healthcare applications : global adoption and impact of information communication technologies, Khalil Khoubati, Yogesh Kumar Dwivedi, Aradhana Srivastava, Idea Group Inc (IGI),2010
3. Medical Informatics: An Exploration,Simita Mishrakailash Chandra Mishra, Simita Mishra, Kailash Chandra Mishra,

Electives:

1. NABH Accreditation
2. HL7 – Health Level 7
3. ICD
4. Patient Safety

University Exam Pattern:

- For 4 credit subjects -

University Theory Exam (60 marks)		Internal assessment (40 marks)		
SAQ Any 4 out of 6 (20 marks)	LAQ Any 4 out of 6 (40 marks)	Test (20 marks)	Attendance (10 marks)	Presentation & Assignment (10 marks)

- For 2 credit subjects –

University Theory Exam (30 marks)		Internal assessment (20 marks)		
SAQ Any 4 out of 6 (20 marks)	LAQ Any 1 out of 2 (10 marks)	Test (10 marks)	Attendance (5 marks)	Presentation & Assignment (5 marks)

- Project viva –voce (For 3rd Semester)

Internal assessment (40 marks)			University Viva Voce (60 marks)		
Timely reporting (10 marks)	Presentation (15 marks)	Report/Final copy (15 marks)	Presentation Communication skills (20 marks)	Subject knowledge (30 marks)	Project Methodology (10 marks)

- Elective subjects (2 credits) –

Internal assessment (50 marks)			
Test (20 marks)	Attendance (10 marks)	Presentation (10marks)	Assignment (10 marks)

Grade points and Grade calculation

Table for Subject Wise Grade and Grade Point illustration

Marks obtained	Grade	Grade Point
80-100	O: Outstanding	10
75-79	A+: Excellent	09
70-74	A: Very Good	08
60-69	B: Good	07
55-59	C: Average	06
50-54	P	05
00-49	F	00

Table for Final Grade point illustration (SGPA & CGPA)

Grade Points	Final Grade
09.00-10.00	O
08.50-08.99	A+
07.50-08.49	A
06.50-07.49	B
05.50-06.49	C
05.00-05.49	P
00.00-04.99	F

Computation of SGPA and CGPA –

$$1. \text{ SGPA } (t_i) = \frac{\sum(C_i \times G_i)}{\sum C_i}$$

$$\text{SGPA} = \frac{\sum (\text{number of credits of the particular subject/course} \times \text{grade points scored in that subject/course})}{\text{Total Credits for the semester}}$$

$$2. \text{ CGPA} = \frac{\sum(C_i \times t_i)}{\sum C_i}$$

$$\text{CGPA} = \frac{\sum (\text{number of total credits of the particular semester} \times \text{SGPA for that Semester})}{\text{Total Credits of whole course}}$$

-----xxxxxx-----