

Datta Meghe Institute of Medical Sciences
(Deemed to be University), Wardha



NAAC Re-accredited Grade 'A+'

Syllabus for AIPHCET 2022 (MHA) under
DMIMS (DU)
(Theme based)

SCHOOL OF ALLIED HEALTH SCIENCES

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Updated Curriculum for AIPHCET 2022 (MHA) UNDER SCHOOL OF ALLIED HEALTH SCIENCES, DMIMS(DU)

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THEME 1: HEALTH:

1.1) HEALTHCARE DELIVERY SYSTEM IN INDIA:

Healthcare System in India: Evolution of Health systems, Committees for Health Planning, Concepts of Primary Healthcare, Principles of Healthcare

Agencies of Healthcare Delivery: Public Health Sector, Central Government Health Organisation & Functions, State Government Health Organisation & Functions, District Health Organizations And Panchayat Raj.

Basic Concepts of Public Health and Epidemiology: Introduction & Definitions, Concepts of Disease control, Definitions and Methods of Epidemiological studies, Screening Methods Integrated Healthcare in India, Health & Population National Policies

Health Programmes: National Health Programmes, National Vector borne Diseases control programme, RNTCP, RCH, NRHM, National Programme for NCD (Diabetes & Cancer), National AIDS Control Programme, National Leprosy control Programme, National Immunization Programme, National Programme for Blindness control.

International agencies And Health Insurance: International Health Agencies, Healthcare systems in Different Countries, Health Insurance, IRDA and Cashless Hospitals, Govt Insurance Schemes – CGHS & ESIS

1.2) INTRODUCTION TO MEDICINE:

Introduction to Human Anatomy: Introduction to Anatomy, Terminologies Planes of the body, relationship of structures, organ system, Organization of Human Body: Cell, Functions of cell membrane, Types of cells, Skeleton System: Bones and cartilage, types and examples, functions, Tissue: Various type of Tissues, Epithelium, connective tissue, bones and cartilage.

Cellular differentiation and arrangements in different tissues Joints- various types and function

Basic anatomy of ear, eyes and skins, Reproductive system: General anatomy of male/female reproductive system

General Physiology: Introduction to Physiology, Homeostasis

Systems of Human Body: Musculo systems, Muscles- various types and function, Circulatory System, Blood Vessels- Types, structure and functions and capillary circulation, Heart- Internal structure, properties of cardiac muscles, nerve supply, cardiac cycle, heart

sounds, heart rate, pulse, cardiac output, ECG, Blood Pressure- clinical application, normal range, systolic/diastolic pressure, Shock- Definition, types, stages of Shock. Respiratory systems

Respiratory passage, anatomy and functions, Mechanism of respiration, carriage and exchange of gases, Regulation of respiration, common respiratory diseases, Blood Composition and functions, Plasma components, cellular components and their functions, Haemostatic, Blood groups, Blood disorders and Blood Tests, Digestive System, Functional anatomy, general structure, Gastrointestinal Secretions, important constituents and their role in digestion, Digestion, absorption and elimination, Endocrine Systems, Functions and general regulation of secretions, Hypothalamus- pituitary relationship, Pituitary hormones, Functions, regulations, Adrenal Hormones, Functions, regulations, Parathyroid hormone, calcitonin-functions.

Medicine: Introduction to Medicine, DERMATOLOGY, INFECTIOUS DISEASES, CVS (Cardio Vascular System), Symptomatology, Examination, Investigations, IHD/MI, RHD, Valvular heart disease, Arrhythmias, Shocks, HT, Congenital heart disease, Disease of myocardium, RS (Respiratory System), Basics, Clinical approach, Examination, Disease of Upper Respiratory Tract, Bronchial Asthma, COPD, Pneumonia, Bronchiectasis, PTB, ILP, Occupational lung disease, Sarcoidosis, Pulmonary Embolism, Disease of Pleura, GIT (Gastro Intestinal Tract), Basics, Clinical approach, Endoscopies, Disease of Mouth, Salivary glands, Disease of Esophagus, Peptic ulcer, Disease of Stomach/Duodenum, GI bleeding, Diarrhea, Mal-absorption, Tropical, Abdominal TB, Inflammatory Bowel disorder.

Medicine Terminology: HEPATOLOGY, Metabolism, Clinical approach, Imaging, Hepatitis ABCDE, Acute liver failure, Cirrhosis of Liver, Complications, Encephalopathy, Disease of Gall Bladder, Acute Pancreatitis, NEPHROLOGY, Introduction, Clinical approach, GFR, Tubular Filtration, Acid Base Balance, ARF, CRF, Nephrotic Syndrome, Renal calculi disease, NEUROLOGY, Basic, Clinical approach, Headache, ICT, Disorders of Consciousness, Dementia/Aphasia, Seizures/Sleep disorders, CVA, Neuro TB, Other infections of CNS, Demyelinating diseases, Extra pyramidal diseases, Cerebellar diseases, Diseases of Spinal Cord, Trauma Spinal Cord, MNP, Diseases of ANS, HEMATOLOGY
Anaemia, Approach to patient, Anemia's- Megaloblastic, Hemolytic, Leukemia's- ALL, CLL, AML, CML, Disorders of coagulation, Blood Grouping and Rh Typing, DISEASES OF ENDOCRINE GLANDS, Basics, Clinical approach, Diseases of Hypothalamus, Pituitary, Thyroid, Adrenal, Parathyroid, Gonads, Diabetology, Addison's disease, RHEUMATOLOGY

Basics, Clinical approach, RA, SLE, Gout, Vacuities, Dermatomastitis, DISORDERS OF BONE, Bone & Mineral Metabolism, Osteoporosis

1.3) HOSPITAL SUPPORT SERVICE:

Introduction to support services: Principles & methods of organizing support services for hospitals, High quality patient care, Effective community orientation, Economic viability, Sound architectural plans.

Front office of hospitals & Administrative services: Enquiry & Admissions, Executive suite, CEO's office, Professional service unit, Financial management unit, Nursing administrative unit, HR department, Public relation department.

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THEME 2: HEALTH MANAGEMENT

2.1) HOSPITAL PLANNING:

History of Hospitals & its role in Healthcare: The Hospitals – Past, Present & Future, The Art & Science of Medicine Hospital Organization & structure, Growth of Hospitals, Concept of Healthcare services, Changing scenario and concept in Health Facility Planning, Planning of Hospitals, Regional Planning, Renovation, Emerging Approaches towards Healthcare, Patient Centered Approach, Patient Focused Hospital, Emerging Approaches in Hospital Design, Modular Building concept, Hospital Modernization, Design parameters ,Need assessment, Feasibility Report, Design Brief, Expression of Interest, Request of Proposal, Master plan, Space Programming, Detailed Project Report, Approximation of Costs, Approximate Land Area Requirement.

Out Patient Department, Day care Services, Administrative Care Unit, Lighting in Hospital: Introduction, Importance & Function, Key Planning & Design Parameters, Physical Facilities, Public Areas, Clinical Rooms, Consulting Rooms, Special Examination Rooms, Administrative areas, Circulation Areas, Ancillary & Auxiliary Areas
Lighting Considerations for Various areas of Hospital.

Accident & Emergency Department, Radiology & Imaging Services: Introduction, Importance, Definition & Functions, Key Planning & Design Parameters, Components of Department, Other Important Areas, Types of Designs, Different types of services.

Wards/ Inpatient Services, Operation Theaters, Intensive Care Units /ICU: Introduction & Functions, Types of Nursing Units, Key Planning & Design Parameters, Design of Wards layout, Other Considerations & Specific Requirements for WardsTypes of ICU's, Zoning of OT, Supply Air, Ultra Clean Air (UCA) Systems, Integrated Operating Room.

Hospital's Departments: Laboratory Services , Blood Transfusion Services, Medical Gases, Medical Records Department, House Keeping & Waste Management, Mortuary Services,

Central Sterile supply Department, Laundry Department, Dietary / Food & Beverages, Hospital Stores, Fire Safety in Hospitals, Heating Ventilation & Air-conditioning(HVAC), Facilities for Aged & Disabled Introduction, Functions & Objectives, Key Planning & Design Parameters, Location & Physical Layout, Space Requirements Categories of Fire, Fire Extinguishing System, Types of Fire Extinguishers, Need for HVAC, Components of HVAC, Air Changes in Different Areas of Hospitals

2.2) MARKETING IN HEALTHCARE:

Introduction to Service Marketing: Introduction, classification of services, differences in goods versus services, reasons for growth in services sector, case from hospital industry.

Consumer Behaviour: Customers interact with service operations, Reference Group influence, purchase process, customers' needs and expectations, difficulty in evaluation of services, service, customer loyalty, understanding CRM.

Service product and revenue management: Planning and creating services, identifying and classifying supplementary services, branding service products, new service development, objectives and foundations for setting prices, methods of service pricing, revenue management

Market Analysis and Selection, Service delivery and service quality: Marketing environment – macro and micro components and their impact on marketing decisions; Market segmentation and positioning Designing Hospital Services, the customer as co-producer, Demand Fluctuations, integrating service quality and productivity strategies, measuring and improving service quality.

Communication, Advertising & Distribution: objectives for marketing communications, Challenges and opportunities in Service Communication, Media of communications, Media selection; Advertising effectiveness, Distribution in a service context, options for service delivery, decisions about place and time, service delivery.

THEME3: ETHICS IN HEALTHCARE

3.1) ETHICS:

Ethics in research: Importance of ethics in research ,Principles of ethics ,International Declarations ,Nuremberg code, Helsinki declaration, ICMR guidelines, accepted ethical principles concerning research on human subjects, confidentiality, obtaining communal consent for field trials ,Informed consent, Verbal Consent , Written consent , Assent ,Institutional review board / ethics committee – approval, Animal ethics committee – approval, Good clinical practice (GCP) ,Research ethics, Plagiarism, Guidelines for the plagiarism check.

3.1.1) HOSPITAL INSURANCE AND MEDICAL TOURISM:

Hospital Insurance: Healthcare - Systems, Services, Industry: Health systems - Health care as a service - Public and Private healthcare services - players in healthcare delivery - Indian healthcare systems and health care industry - laws - regulation - pricing and practices - accreditation - patient safety and rights,

General Insurance Specific Practices: Underwriting of retail and group health - proposal form - essential information and data - Medical & generic underwriting - underwriting of high risks - special categories - pre-underwritten products - waivers and pre-existing conditions - Health Insurance reinsurance options & impact – portfolio monitoring and controls

Health Insurance - Models and Operating Environment: Various types of health insurance models operating in the world - managed care – health insurance in India - regulations, legal and consumer framework - market ecosystem – healthcare industry - insurance players - TPAs - service providers – Portability

Health Insurance Underwriting Principles: Principles of health insurance underwriting - underwriting process - Morbidity tables – risk classification - rating methods and analysis - fundamentals of health insurance pricing – pricing models - actuarial techniques - standard conditions and definitions - moral hazard – adverse selection - market determinants

Health Insurance Products: Products sold by General Insurers: Product design - Types of Products - individual -family - group - indemnity - medical expenses - fixed benefit - major illness - top up -catastrophe covers- accidental and disability benefits - overseas health insurance - tailor -made covers - key features - coverage - exclusions - pricing and premium setting, -differentvariants in market - cost sharing mechanisms - value added services

Products sold by Life Insurers: Products of life insurers - critical care - fixed benefit - accidental and disability benefit - long term - special features - coverage - life & savings components - Health Maintenance Organizations (HMO) - Medical Management,Medical Savings - Disability income insurance - pricing and actuarial considerations -different variants in the market - Specialties of Health Insurance products sold by lifeinsurers and general insurers - Aided living

Medical Tourism: Introduction to medical tourism, definition of medical tourist, components of medical tourism, motivation and reasons for medical tourism worldwide. Medical tour operator or medical facilitator, Global present scenario of medical tourism, Human resource for medical tourism, Accreditations bodies for hospitals like JCI, NABH , SWOT analysis of Indian medical tourism industry, Nationaland International organization for medical tourism, medical VISA, Govt policy for medical tourism, Wellness tourism: – Tools for wellness: Factors influencing need for health and wellness tourism. Forms of healthtourism- medical tourism, spa tourism, Ayurveda tourism, Yoga & Meditation tourism, holistic tourism, spiritual tourism, Ashram tourism. - Health, wellbeing and environment– Pleasing weather and climate – winter, summer andHealth resorts.

THEME 4: CORE MANAGEMENT

4.1) PRINCIPLE OF MANAGEMENT:

Definition, Functions, Process, Scope and Significance of Management. Nature of Management, Managerial Roles, Managerial Skills and Activities, Difference between Management and Administration. Significance of Values and Ethics in Management. Evolution of Management Thought, Approaches of Management Thought, Functions of Management. Planning and Organizing Nature, Scope, Objective and Significance of Planning, Elements and Steps of Planning, Decision Making Organizing Principles, Span of Control, Line and Staff Relationship, Authority, Delegation and Decentralization. Effective Organizing, Organizational Structures, Formal and Informal Organizations, Staffing. Directing Effective Directing, Supervision, Motivation, Different Theories of Motivation Maslow, Herzberg, Mc Clelland, Vroom, Porter and Lawler, Job Satisfaction. Concept of Leadership- Theories and Styles. Communication Process, Channels and Barriers, Effective Communication. Controlling and Coordinating- Elements of Managerial Control, Control Systems, Management Control Techniques, Effective Control Systems. Coordination Concept, Importance, Principles and Techniques of Coordination, Concept of Managerial Effectiveness.

4.2) QUALITY MANAGEMENT:

WHO strategy for global blood safety, Introduction to Quality Management. History of Quality. Basic QM principles. Implementing QM in Oil and Gas industry., The overview of Quality Gurus and their concepts: Joseph Juran, Kaoru Ishikawa, Philip Crosby, W. Edwards Deming. Introduction to Deming's 14 Points of Quality. Seven Deadly Diseases. Red Bead Experiment.,

Introduction – Evolution of quality, Definition, Concept and Features of TQM, Eight building blocks of TQM. TQM thinkers and Thought – Juran Trilogy, PDCA cycle, 5S, Kaizen,

Crosby's theory on Quality Management, Quality Performance Excellence Award- Deming Application Award, European Quality Award, Malcolm Baldrige National Quality Award.

TQM tools- Benchmarking: Definition, concepts, benefits, elements, reasons for benchmarking, process of benchmarking, FMEA, Quality Function Deployment (QFD) – House of Quality, QFD Process, Benefits, Taguchi Quality Loss Function, Total Productive Maintenance (TPM) – Concept and need.

4.3) BRANDING AND CUSTOMER RELATIONSHIP MANAGEMENT:

Introduction to CRM: Definition and concepts of CRM, Components of CRM, Understanding the goal of CRM and Customer Touch Points. CRM PROCESS: Introduction and Objectives of a CRM Process; an Insight into CRM and e-CRM/online CRM, The CRM cycle i.e. Assessment Phase; Planning Phase; The Executive Phase; Modules in CRM, 4C's (Elements) of CRM Process, CRM Process for Marketing Organization, CRM Affiliation in Retailing Sector. Developing CRM Strategy: Role of CRM in business strategy, Understanding Service Quality: Technical, Functional, and dimensions of service quality, Managing Customer communications. CRM IMPLEMENTATION: Choosing the right CRM Solution; Framework for Implementing CRM: a Step-by-Step Process: Five Phases of CRM Projects: Development Customizations; Beta Test and Data Import; Train and Retain; Roll out and System Hand-off; Support. SALES FORCE AUTOMATION - Sales Process, Activity, Contact, Lead and Knowledge Management. Field Force Automation. CRM LINKS IN E-BUSINESS: E-Commerce and Customer Relationships on the Internet.

THEME5: HEALTHCARE INFORMATION SYSTEM

5.1 HEALTHCARE INFORMATION SYSTEM

Introduction to Health Care Information, Health Care Data Quality, Health Care Information Regulations, Laws and Standards, Overview of the Health Care IT Industry, Health Information Technology: Benefits and Problems, History and Evolution of Health Care Information Systems, Clinical Information Systems, System Acquisition, Federal Efforts to Enhance Quality of Patient Care through the Use of Health Information Technology, Is the industry ready for personal health records? Patient Portals: Express Lane on the Health Information Highway, Systems Implementation and Support, Technologies That Support Health Care Information Systems, Health Care Information System Standards, EHR Implementation with Minimal Practice Disruption, Organizing Information Technology Services, IT Alignment and Strategic Planning, Strategy Considerations.

RECOMMENDED BOOKS FOR REFERENCE:

Health:

1. Health Care Information Systems: A Practical Approach for Health Care Management, Third Edition, Karen S. Wager, Frances W. Lee and John P. Glaser, Jossey-Bass, August 2013. (ISBN-10: 1118173538)
2. Human Anatomy & Physiology, Book by Eldra Pearl Solomon and Percival Davis

Health Management

1. B.M. Sakharkar, Principles of Hospital Administration & Planning, 1st Edition, Jaypee Brothers
2. DC Joshi, Hospital Administration, Jaypee Brothers
3. Davis, R. Llewelyn 2014, Hospital Planning & Administration, Jaypee Brothers, New Delhi
4. SL. Goel, R. kumar, hospital support services
5. Perrault.W.D, Cannon, J.P.& McCarthy, EJ (2010). Basic marketing, New Delhi
6. Berkowiz.E.N (2010). Esentials of healthcare marketing (3rd edition). Jones & Bartlett Learning

Ethics In Healthcare

1. Textbook of Research Ethics, Theory and Practice Sana Loue, Springer, Boston, MA
2. Ma S, Sood N. A Comparison of the Health Systems in China and India. Rand Corporation: CA, USA, 2008. [Google Scholar]
3. Peters DH, Rao KS, Fryatt R. Lumping and splitting: the health policy agenda in India. Health Policy Plan 2003; 18(3): 249–260. [PubMed] [Google Scholar]
4. MOHFW National Health Policy. New Delhi Ministry of Health and Family Welfare, Govt. of India 1983. Available at: http://www.nhp.gov.in/sites/default/files/pdf/nhp_1983.pdf (accessed on 2 April 2016).

5. MOHFW National Health Policy. New Delhi Ministry of Health and Family Welfare, Govt. of India 2002. Available at: http://www.nhp.gov.in/sites/default/files/pdf/National_Health_Policy.pdf (accessed on 2 April 2016).

Core Management

1. Management - Koontz & O' Donnell
2. Principles of Management - P.C.Tripathi& P.N. Reddy
3. Principles and Practice of Management - L.M. Prasad
4. TOTAL QUALITY MANAGEMENT by Mr. Chandrashekhar B
5. Customer Relationship Management: Concepts and Technologies January 2015, Edition: 3 Publisher: Routledge ISBN: 978-1-138-78983-8

Healthcare Information System

1. Patient Safety: Achieving a New Standard for Care. Institute of Medicine (US) Committee on Data Standards for Patient Safety; Aspden P, Corrigan JM, Wolcott J, et al., editors. Washington (DC): National Academies Press (US); 2004
2. The impact of health information technology on patient safety Yasser K. Alotaibi, SBFM, ABFM and Frank Federico, RPh
3. Institute of Medicine. Health IT and patient safety: building safer systems for better care . Washington, DC: The National Academies Press; 2012
4. Classen D, Bates DW, Denham CR. Meaningful use of computerized prescriber order entry. J Patient Saf 2010;6:15–23.
5. Brokel JM, Harrison MI. Redesigning care processes using an electronic health record: a system's experience. Jt Comm J Qual and Patient Saf 2009;35:82–92.