

MBA353: Information Technology In Pharma and Healthcare

Teaching Scheme	Examination Scheme
Lectures: 4 hrs./Week Tutorials: 1 hrs./Week Credits: 4	Class Test -12Marks Teachers Assessment - 6Marks Attendance – 12 Marks End Semester Exam – 70 marks

Course Objectives:

- To effectively identify, understand, and utilize areas of computer and IT Applications in Hospitals and Healthcare Program
- Understand Hospital / Health Information System – HIS
- Perform System Study from analysis phase to implementation phase of software development
- Get an overview of the software for hospitals and practice basic skills of using computers in Health Care


Hours: 40

Unit-I (10 Hrs): I Basics of Computers and Management Information System

Computers and its Parts IT : Appropriateness and as focus of Organizational Change Software and Hardware Selection : Factors to be Considered, Methods of Selecting and Optimize the Selection Procedures Networking : Importance, Types, Methods of Networking, Network Planning and Management LAN Security : Protecting Health Care Information, Internal Vs External Threats. Data Processing (DP): Importance, Data Flow; DP Requirements and File Concepts: How to Process Data, Suitable Methods of Processing, Meaning of Files, Types and Importance of Files; Database Design, Interface Design, Reports Design and Advance Topics in Data Management. MIS : How to Process Information, Information and Records, Importance of Planning; Training and Educating Staff, Testing MIS - Role of IT in Office Automation -Communication Technology for Automation; Retrieval and Storage System; Integrated Office Automation; Portable Office; Future Edge of Information Technology.

Unit-II (10 Hrs): Systems Management, Software Applications and Developmental Process

System – SSAD Approach : Meaning, System Analysis, Design, Development, Testing, Implementation, Maintenance; Computer Systems Control and Auditing; Approaches to Conversion of a New System Managing System Personnel – Difference in Managing System Personnel; Types; Users, Data Operators, Programmers / Software Engineers, Hardware Engineers, Maintenance Team, In-charge / Department Head, External Consultants; Orientation, Training, Retaining Need Analysis System Analysis Feasibility Test : Economic, Technical,


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Political & Socio-cultural Factors Tender Procedure : Bid Documentation Preparation, Tender, Technical Document Analysis, Financial Document Analysis and Contract

Software Development Procedure : Detail System Analysis, System Design, Database Design, Software Development, Testing and Implementation. After Development Procedure: Maintenance, Updates, Modules Addition Features of Software in Hospitals and Health Care

Unit-III (10 Hrs): Hospital Information System – HIS

Objectives, Introduction to hospital information systems, Characteristics, Elements, Categories - HIS for Various Levels of Management (Top / Middle / Operational) Integrated HIS (IHIS), Comprehensive Single Hospital MIS (CSHIS), Comprehensive Multi-hospitals MIS (CMHS), Business Office Multi-hospital MIS (BMHS) and Special Purpose Single Hospital MIS (SSHIS)

Unit-IV(10 Hrs): Application of Computers in Hospitals and Health Programs


Need and Importance of IT in Health Care Centralized Vs Decentralized Integrated Online HIS, Computerizing Medical Records, OPD, Ward, Admission and Discharge, OT, Clinical Laboratory, Blood Bank, Eye Bank, Clinical Quality Assurance, Pharmacy Community Outreach, Reception / Front Office, Materials Management, Financial Accounting, HRM, Training and Development, Medical Research, Library and Literature Search, Housekeeping Implementing wireless computerized patient records Complexity in computerizing Hospitals Computerizing Health Programs / Projects and widely used latest Statistical and Evaluation Software

Suggested Readings:

1. Karen a. Wager, Francis W. Lee, John P. Glaser, 'Health care Information System-A practical approach for Health Care Management, 4th edition, Wiley, 2017
2. Mary Jo Browie and Michelle A. Green, 'Essentials of Health Information Management: Principles and Practices, Paperback, 2015.
3. Informatics and Telematics in Health – Present and Potential Use (WHO, Geneva) Marlene Maheu, Pamela Whitten & Ace Allen, E-Health,
4. Managing Computers in Health Care – A Guide for Professionals (Health Administration Press Perspectives, Michigan) WHO
5. Telehealth and Telemedicine: A Guide to Startup and Success (Jossey-Bass) ISBN 0787944203

Course Outcomes:

- *Understand the Role and Importance of HIS: Students will demonstrate an understanding of the role and significance of Hospital Information Systems in healthcare organizations, including the impact on patient care, operational efficiency, and data management.*
- *Analyze Data and Generate Reports: Students will gain skills in analyzing healthcare data using HIS tools, generating reports, and presenting information in a meaningful*


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manner. They will be able to use data analytics to support decision-making, monitor key performance indicators, and evaluate hospital operations.

- **Analyze Workflow and Process Improvement:** Students will be able to analyze hospital workflows and identify opportunities for process improvement using HIS. They will apply principles of operations management and quality improvement to optimize processes and enhance efficiency.
- **Apply Health Data Management Principles:** Students will demonstrate knowledge of health data management principles, including data collection, storage, retrieval, privacy, and security. They will understand regulatory requirements and compliance standards related to health data.

Employable Skills	Measuring Tools
Ability to identify and apply the knowledge of subject practically in real life situations	Exercise Workshop Quiz Classroom Discussions


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