

**DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY,  
LUCKNOW**



**Evaluation Scheme & Syllabus**

**MBA  
(Health Care and Hospital Management)**

**First Year (2<sup>nd</sup> Semester)**

**(Effective from the Session: 2022-23)**

## **Preamble**

### **About the Programme**

An MBA in Health Care and Hospital Management is a 2-year Master's Programme which is specialized in Healthcare & Hospital Services along with General Management in the healthcare field.

AKTU believes in developing & training manpower (young graduates) in the area of national interest and serving the society for its betterment & uplifting. With this vision, the curriculum of the programme is designed to provide both academic as well as practical insights to the students about management in the healthcare sector & hospital management and train them to discharge the role of senior managerial positions in the international healthcare environment.

Students with master degree in healthcare or hospital management can get an opportunity to work in nursing homes, clinics, public health offices, health insurance firms, public and private hospitals, international and national healthcare organizations, medical research facilities, pharmaceutical companies.

2 Years Program is divided into four semesters and students will have to undergo a 45 to 60 days compulsory practical training in any of the related business organization under the faculty mentorship.

### **Program Educational Objectives (PEOs)**

- **PEO1:** Attain professional skills & knowledge for employment in health care sector.
- **PEO2:** Train and develop innovative and entrepreneurial approach to take effective decisions and lead teams.
- **PEO3:** To become familiarise to a fast changing complex business environment and challenges in health care management.
- **PEO4:** To become a socially responsible citizens with values and committed to develop a sustainable health care system.
- **PEO5:** To develop behaviour and communication skills to operate in multi-cultural and international environment.

### **Program Outcomes**

- **PO 1:** Graduates will be able to acquire knowledge about the functioning of the local and global business environments.
- **PO 2:** This program will helps learners in identifying potential business opportunities and exploring the entrepreneurial opportunities.
- **PO 3:** `Studentswill be able to develop critical thinking abilities for Business Analysis, Problem Solving and providing Innovative Solutions.
- **PO 4:** Students will able to demonstrate a global outlook with the ability to identify aspects of the global business and Cross-Cultural Understanding.
- **PO 5.** Graduates will be able to identify the contemporary social problems, exploring the opportunities for social entrepreneurship.

# EVALUATION SCHEME

## MBA in Health Care and Hospital Management

### First Year (2<sup>nd</sup> Semester)

**Effective from Academic Session 2022-23**

S No		SUBJECT	PERIODS			INTERNAL EVALUATION SCHEME				END SEMESTER EVALUATION		TOTAL	CREDIT
			L	T	P	CT	TA	PS	TOTAL	TE	PE		
1	KMHC201	Healthcare Policies & Insurance	3	0	0	30	20	0	50	100	0	150	3
2	KMHC202	Human Resource Management	3	0	0	30	20	0	50	100	0	150	3
3	KMHC203	Research Methodology	3	0	0	30	20	0	50	100	0	150	3
4	KMHC204	Hospitals Operations Management	3	0	0	30	20	0	50	100	0	150	3
5	KMHC205	Operation Research for Hospital Management	3	0	0	30	20	0	50	100	0	150	3
6	KMHC206	Epidemiology and Public Health Systems	3	0	0	30	20	0	50	100		150	3
7	KMHC207	Cost and Management Accounting in Health Care	3	0	0	30	20	0	50	100	0	150	3
8	KMHC208	Digital Health Care and E - Commerce	2	0	0	30	20	0	50	50		100	2
<b>LAB / PRACTICALS</b>													
9	KMHC251	IT SKILLS LAB-2			2	0	0	25	25	0	25	50	1
10	KMHC252	Mini Project			4	0	0	25	25	0	50	75	2
<b>Total Credits</b>													<b>26</b>

L/T/P – Lecture/Tutorial/Practical, CT/TA/PS- Class Test/Teachers Assessment/Practical Session, TE/PE- Term End/ Practical End

# SYLLABUS

## MBA in Health Care and Hospital Management

### First Year - Semester II

#### HEALTHCARE POLICY AND INSURANCE

##### KMHC 201

**Course Credit: 3**

**Contact Hours: 40**

##### **Course Objectives**

1. To provide an understanding of the healthcare service market and risks management.
2. To help the students understand the healthcare insurance business and its importance.
3. To provide an understanding of the legal framework for healthcare policy and insurance.
4. To provide an understating of technical aspects of healthcare policy and claim management.
5. To provide an understanding of the role of actuarial science and challenges in healthcare insurance.

##### **UNIT 1 (8 Hr)**

**Framework of Healthcare System and Services:** Major player in healthcare services, Types of healthcare services, Role of public and private healthcare services providers, Characteristics of Indian healthcare service Industry and demand of healthcare services. **Risk and Insurance:** The concept of risk & Insurance, Classifications and burden of risks and types of health risks. **Risk management-** Concept of Risk Management in healthcare, Insurance as a tool in risk management. **Case Studies**

##### **UNIT 2 (8 Hr)**

**Healthcare and Medical Insurance (Mediclaim):** Types of medical insurance- Group, Family and Floater Mediclaim, Difference between mediclaim insurance and fixed benefit health insurance plans, Mediclaim premium and factors influencing premium for various policies. Types of covers in a health insurance policy, Exclusion from healthcare policy. **Managed Care:** The Key ingredients of Managed Care, Health insurance products. **Case Studies**

##### **UNIT 3 (8 Hr.)**

**Framework of Healthcare Insurance:** Legal and consumer framework. Healthcare Insurance Industry and Insurance players. **Insurance Regulatory Authority of India (IRDA):** Role, Function and Control. Insurance Ombudsman. **Third-Party Administration (TPA)-** Function, Importance & Challenges. TPA as Intermediary between health Service Provider & Patient, Process of Empanelment of Hospitals by TPA. Regulations and Conditions by IRDA, **Medical Tourism** – Benefits for Insurer and TPA. **Professional Indemnity Schemes for doctors:** Concept and applicability, Concept of Medico-Legal Case. **Case Studies**

##### **UNIT 4 (9 Hr)**

**Health Insurance Models and Operating Environment-** Various types of health insurance models operating in the world, International perspectives of Healthcare Insurance. **Buying Healthcare Insurance-** Procedure and Steps. **Making a Claim-** Procedure and Steps. **Underwriting in Health Insurance-** Types of underwriting, Underwriting clauses, Process of Underwriting, Methods of risk classification, Sources of information concerning health Insurance, Issues and challenges in underwriting

## UNIT 5 (7Hr)

**Public Health and Insurance:** Importance of Public Health and role of healthcare insurance. Government healthcare insurance schemes.**Actuarial Science in Health Insurance-** Introduction, Principles Underlying Actuarial Science, Actuary's Work, Opportunities for Actuaries in Health Care, Actuaries opportunities and challenges in health insurance.

### Suggested Readings

1. Brijesh C Purohit - Economics of Public and Private Healthcare and Health Insurance in India(Sage Publication)
2. Thomas K T & Sakthivel- R Health Insurance In India (Lambert)
3. Sonalini Khetrpal- Healthcare For India's Poor : The Health Insurance Way(Academic Foundation)
4. Gerard La Forgia & Somil Nagpal- Government Sponsored Health Insurance in India: Are You Covered?(World Bank Publication)
5. Harish & Gupta – Technicalities of Health Insurance (Global Vision Publication)
6. T. Mahendran- Health Insurance Sector in India (Abhijeet Publication)
7. C. Charles, Hospital And Health Insurance Plans (Anmol Publication)
8. Razdan D- Fundamentals of Health Insurance (Cyber Tech publication)

### COURSE OUTCOMES

Course Outcomes	Expected Bloom's Learning Level
CO 1: Details understanding of the healthcare service market & health risks management.	Understand (K2)
CO2: Analysis of healthcare business and the importance of healthcare insurance.	Analyze (K4)
CO3: Understanding of legal framework and role of IRDA.	Understand (K2)
CO4: Understanding of E-commerce framework and its applications in healthcare management.	Understand (K4)
CO5: Analysis of the role of actuarial science and challenges in healthcare insurance.	Analyse (K4)

# **HUMAN RESOURCE MANAGEMENT**

## **KMHC 202**

Course Credit: 3

Contact Hours: 40

**Course Objectives:** In this course the students will learn the basic concepts and frameworks of Human Resource Management (HRM) and understand the role that HRM has to play in effective business administration. It will provide an insight as to how to use Human Resource as a tool to implement strategies.

### **UNIT I: (7 Hours)**

Essentials of HRM: Functions of HRM, HRM vs.HRD, Strategic HRM: Meaning and Roles in Strategy formulation and implementation, Barriers to strategic HRM, Linking HR strategy with business strategy, Roles of HR Manager, roles of HR in merger and acquisitions, Technology & HR and changing roles of HR due to technology, HRM linkage with TQM & productivity. Case Studies

### **UNIT II: (8 Hours)**

Human Resource Planning and Employee Hiring : Meaning of job Analysis, job design, Human Resource Planning, methods demand forecasting for manpower planning, factors influencing HRP, Employee hiring- methods of Recruitment, Employee selection, process of employee selection, recent trends in recruitment. Case Studies

### **UNIT III: (8 Hours)**

Employee Training & Development: Meaning importance of Training, types and methods and types of training, career planning, promotion, transfer, demotion and separation, Performance Appraisal: Meaning and types of appraisal, Job Evaluation: Meaning and methods of job evaluation. Case Studies

### **UNIT IV: (9 Hours)**

Compensation Management and Employee Relations: Introduction to compensation management, Components and structure of employee compensation, Factors affecting employee compensation, Employee incentive schemes, and recent trends in compensations management, Meaning of employee relation and industrial relations. Case Studies

### **UNIT V: (8 Hours)**

Employee Safety/ Health and International Human Resource Management: Needs and legal provision of employee health, measures to promote employee health , purpose of employee safety, accidents: causes & prevention, effective safety management ,& legal provisios. basic principles governing International Human Resource Case Studies

## COURSE OUTCOME

S. No.	Course Outcome	Bloom's Taxonomy
1	CO1. Synthesize the role of human resources management as it supports the success of the organization including the effective development of human capital as an agent for organizational change.	K6 Synthesizing
2	CO2. Demonstrate knowledge of laws that impact behavior in relationships between employers and employees that ultimately impact the goals and strategies of the organization.	K2 Knowledge
3	CO3. Understand the role of employee benefits and compensation as a critical component of employee performance, productivity and organizational effectiveness.	K3 Comprehending
4	CO4. Show evidence of the ability to analyze, manage and problem solve to deal with the challenges and complexities of the practice of collective bargaining.	K5 Analysing
5	CO5. Demonstrate knowledge of practical application of training and employee development as it impacts organizational strategy and competitive advantage.	K2 Knowledge K4 Applying

### Suggested Readings

1. V.S.P. Rao, Human Resource Management (Text and Cases) Himalaya Publications, Thirteenth Edition.
2. Durai Praveen, Human Resource Management Pearson Publication, 2nd Edition.
3. Gary Dessler and Biju Varkkey Human Resource Management, Person Publication, 2013, 14th Edition.
4. Seema Sanghi, Human Resource Management, Vikas Publications, 2014, 5th Edition.
5. K. Aswathappa, Human Resource Management, McGraw Hill Education, 2013, 7th Edition.

# RESEARCH METHODS AND HEALTH CARE ANALYTICS

## KMHC 203

Course Credit: 3

Hours: 40

### OBJECTIVES

1. To classify business research as exploratory research, descriptive research or causal research and to identify and briefly discuss the various decision alternatives available to the researcher during each stage of the research process. The objective is also to formulate a solid research hypothesis.
2. The objective is to study the internal and external validity with experimental research design and to understand the measurement scale in research studies.
3. The objective is to learn various methods of data Collection and to prepare a proper questionnaire design. Also to understand how to choose an appropriate sample design and the nature and logic of hypothesis testing.
4. The objective is to study the various Multivariate Statistical Techniques, like Factor Analysis, Cluster Analysis, Discriminant analysis, multiple regression and correlation, canonical correlation and application of SPSS Package.

**The objective is to know the contents, types, lengths and technical specifications of research reports and to understand the importance of the research follow-**

### Unit-I

**Research Methodology:** An introduction - meaning of research-objectives of research- types of research-research process.

### Unit-II

**Theory of Sampling:** concept of sampling-probability and non-probability sampling techniques-size of the sample- sampling distribution- sampling error- criteria for selecting-sampling procedure-census and sample.

### Unit-III

**Measurement and Scaling:** nature- types of measurement scales- nominal, ordinal, interval and ratio- validity and reliability in scaling- MDS & ranking and rating scale- Likert's Summated scale-Thurstone's Equal Appearing intervals-outline of MDS-Q sort.

### Unit-IV

**Data collection and Presentation:** primary and secondary data- methods of data collection-questionnaire- designing questionnaire, pre testing questionnaire- **Data Presentation:** editing of primary data, classification of data, guidelines for class selection- objectives and types of classification, frequency distribution- charting of the data-bar chart, histograms and two dimensional graphs, mean, median, S.D, Regression analysis correlations-chi-square

### Unit-V

**Healthcare Analytics and Report Writing:** introduction of healthcare analytics-data-utilization of basic data-sources of health statistics - problems in collection of sickness data-measurement of sickness-vital statistics-Report Writing.



S. No.	Course Outcome	Bloom's Taxonomy
1	CO1..The Students will be able to understand the importance of business research as management decision-making tool and plan a proper Research design of all the stages in the Research Process, variables & Hypothesis. .	K1 Remember, Understand K2
2	CO2. Students will be able to discuss how to control extraneous variables in experimental Situations and can take critical decisions involved in selecting an appropriate measurement scale by rating, ranking and sorting and other preference scales in the research	K2 Understand,
3	Students will be able to explain the differences between Primary data and Secondary data and they will be able to plan and design a questionnaire layout. Also they can analyse the factors that influence the selection of an appropriate test of statistical significance. .	K3 Understand, K4 Applying
4	CO4. Students will be able to discuss how to control extraneous variables in experimental Situations and can take critical decisions involved in selecting an appropriate measurement scale by rating, ranking and sorting and other preference scales in the research. .	K5Analysing
5	CO5. Students will be able to understand and explain how the research report is the crucial means for communicating the whole research project and how it is useful to study further research with recommendations/suggestions.	K2 Knowledge K4 Applying

### Reference Books

1. Luck. J. David. Ranald S. Rubin, Market Research, Prentice Hall of India, New Delhi, 1999.
2. G. C. Beri, Marketing Research, Tata Mac Grawhill, New Delhi, 1996.
3. Green. E. Paul. Danald S. Tull, Gerald Albaum, Research for Marketing Decisions, Prentice Hall, New Delhi, New Delhi, 1996.
4. Adrian Payne, The Essence of Services Marketing, Prentice Hall, New Delhi, 1996
5. Luck .J. David, Hugh G. Wales, Donalda Taylor, Ronald S. Rubin, Marketing Research, Prentice Hall, 1982.

# HOSPITAL OPERATION MANAGEMENT

## KMHC204

**Course Credit: 3**

**Hours: 40**

### Objectives

- To identify the important functions and its management in Hospitals
- To familiarise with the supporting services and procurement management of Hospitals

### UNIT I

Front Office - Admission – Billing – Medical Records – Ambulatory Care- Death in Hospital – Brought-in Dead - Maintenance and Repairs Bio Medical Equipment

### UNIT II

Clinical Services - Clinical Departments – Out patient department (OPD) – Introduction – Location – Types of patients in OPD – Facilities – Flow pattern of patients – Training and Co-ordination; Radiology – Location – Layout – X-Ray rooms – Types of X-Ray machines – Staff - USG – CT – MRI – ECG.

### UNIT III

Supporting Services – House Keeping – Linen and Laundry, - Food Services - Central Sterile Supply Department (CSSD)

### UNIT IV

Facility Location and Layout importance of location, factors, general steps in location selection - Types of lay outs – product, process, service facility layout-Work standards, techniques of work measurement-Work sampling, calibration of hospital equipments. Productivity measures, value addition, capacity utilization, productivity – capital operations, HR incentives calculation, applications in hospital.

### UNIT V

Purchasing strategy process – organizing the purchasing function – financial aspects of purchasing – tactical and operational applications in purchasing, Inventory Management: valuation and accounting for inventory – physical location and control of inventory – planning and replenishment concepts – protecting inventory; Value Management, Value engineering, value analysis.

### REFERENCES

1. **Madhuri Sharma**, Essentials For Hospital Support Services And Physical Infrastructure,
2. **Sakharkar Bm**, Principles Of Hospitals Administration And Planning, *Jaypee*
3. **Francis Cm, Mario C De Souza**, Hospital Administration, *New Delhi, 2000*
4. **Prabhu Km, Sood Sk**, Hospital Laboratory Services Organization and Management, *Journal Of Academy Of Hospital Administration, 2(1) 1990*

# OPERATION RESEARCH

## KMHC 205

Course Credit: 3

Hours: 40

**Course Objectives:** This module aims to introduce students to use quantitative methods and techniques for effective decisions-making; model formulation and applications that are used in solving business decision problems.

### UNIT – I

Definition of operations research, models of operations research, scientific methodology of operations research, scope of operations research, importance of operations research in decision making, role of operations management, limitations of OR.

### UNIT – II

Linear Programming: Introduction – Mathematical formulation of a problem – Graphical solutions, standard forms the simplex method for maximization and minimization problems. Method, application to management decisions, Transportation problem – Introduction – Initial basic feasible solution - NWC method – Least cost method – Vogel's method – MODI – moving towards optimality – solution procedure without degeneracy

### UNIT – III

Assignment problem – Algorithm – Hungarian method – simple problems, Queuing theory -basic structure of queuing systems, roles of the Poisson and exponential distributions

### UNIT – IV

Sequencing and replacement model: Sequencing problem – processing through 2 machines, 3 machine – s jobs and k machines and traveling salesman problem. Replacement of items that deteriorate gradually – with time, without time, that fails completely – individual replacement – group replacement.

### UNIT – V

Network models and simulation. Network models for project analysis CPM; Network construction and time analysis; cost time trade off, PERT – problems.

### Course Outcomes (COs):

At the end of this course students will be able to...

1. Formulate and obtain the optimal solution for Linear Programming problems.
2. Determine the optimal solution for Transportation problems.
3. Determine the optimal solution for Assignment problems.
4. Determine the best strategy and value of the given game model.
5. Plan, Schedule and Control the given project.
6. Decide an optimal replacement period/policy for a given item/equipment/machine.
7. Understand the need of inventory management
8. Choose the appropriate queuing model for a given practical application.

### References •

1. Taha.H.A Operation Research : An Introduction, McMilan publishing Co., 1982. 7 th ed. • Ravindran A, Philips D.T & Solbery. J. J,

2. Operations Research: Principles and practice, John Wiley & Sons, New York, 1987. • Frank S. Budnick, Dennis Mcleavey and Richard Mojena,
3. Principles of Operations Research for Management. All India Traveler Book seller, Delhi. • Gillet. B.E., Introduction to Operations Research –
4. A Computer oriented algorithmic approach, McGraw Hill, 1987. • Joseph.G.Ecker & Michael Kupper Schmid,
5. Introduction to operations Research, John Wiley & Sons, 1988. • Hillier.F.S & Liberman. G.J,
6. operation Research, Second Edition, Holden Day Inc, 1974. • KantiSwarup, Gupta. P.K. & Man Mohan, operations Research, S.Chand & Sons.

# EPIDEMIOLOGY AND PUBLIC HEALTH SYSTEMS

## KMHC 206

**Course Credit: 3**

**Hours: 40**

### OBJECTIVES

1. To understand the basic concepts of health and diseases.
2. To expand the understanding of epidemiology and its principles, methods and designs
3. To provide a broad understanding of the core subject areas of infection prevention and control.
4. To introduce to proper determination and management of hazardous waste
5. To understand the practical epidemiology and evaluation of health intervention

### UNIT I: CONCEPTS OF HEALTH AND DISEASES

Concepts of Health, Definition and Dimensions of Health, Spectrum of Health, Determinants of Health, Indicators of Health, Concept of disease, Concept of disease causation, Natural history of disease, Concept of disease control, Levels of prevention, Modes of disease intervention, Internal Classification of disease

### UNIT II: PRINCIPLES OF EPIDEMIOLOGY AND EPIDEMIOLOGICAL METHODS 12

Definition and basic concepts of Epidemiology including epidemiological triad, Basic measurement in Epidemiology including measures of mortality and morbidity, Methods in Epidemiology, Infectious disease epidemiology, Investigation of an epidemic outbreak-Sources of epidemiological data, Cause & effect relationship: how to investigate an epidemic and role of hospital in its control, Screening & survey, Common disease in India & its prevention, Investigation of an epidemic, Epidemiology and public health policy.

### UNIT III: HOSPITAL INFECTION CONTROL

Definitions, Hospital infections- importance, determinants, sources, routes of transmission, Principles of control of hospital infections. Infection control teams, committees, policies and objectives of infection control department.

### UNIT IV: ENVIRONMENTAL HEALTH AND HOSPITAL WASTE MANAGEMENT 9

Environment and health, Pollution - Nature, Sources, health effects and management, concept of disinfection and decontamination, Hospital Waste management, control measures in wards, operation theaters, laundry, kitchen, etc.

### UNIT V: PRACTICAL EPIDEMIOLOGY

Tools for monitoring & evaluation of Health programmes, Practical epidemiological consideration in development of management of information. Concept of Health indicators: Disability adjusted life years (Daly's), Quality adjusted life years (Qaly's), Disability adjusted Life expectancy (Dale's), Physical Quality of Life index (Pqli), Evaluation of health interventions

### OUTCOME

1. Students will be able to define and distinguish the concepts of health, quality of life, impairment, activity limitation, and participation restriction. They will also be able to describe the contribution of epidemiology to the scientific study of health and disease.

2. Students will be able to understand various experimental designs and methods and also able to differentiate among experimental, quasi-experimental, correlation, and observational study designs and methods.
3. Students will be able to understand the essential practice areas of infection prevention and control with an emphasis on practical application for daily practice in a wide variety of healthcare settings
4. Students will be able to understand the basic steps and a simple and practical approach for the preparation of a healthcare waste management plan in small, medium, and large health care establishments. It is hoped this will assist managers of healthcare establishments in developing plans to optimize and sustain the operation of Healthcare waste management systems in their healthcare institutions.
5. Students will be able to familiarize with the concept of health indicators.

## REFERENCES

- 1) Text Book of Preventive and Social Medicines, K. Park, M/s Banarasidas Bhanot
- 2) Hospital Administration, OUP-Tabish, Jaypee
- 3) Preventive and Social Medicine- Prabhakar Rao
- 4) Text book of Social & Preventive Medicine-Mahajan Epidemiology in Health Services Management, (1984)-G.E. Alan Dever, As per publication. In Gaithersburg, Maryland
- 5) Control of hospitals infection- A practical handbook, (1997), 3<sup>rd</sup> edition-G.A.J. Ayliffe, E. J. L. Lawbury, A.N.Geddes, J.D. Willians, Chapman & Hall Medical Chennai.
- 6) Oxford Textbook of Public Health, Vol.3
- 7) Text book of Preventive & social Medicine,(1997) 15<sup>th</sup> edition-J.E.Park

# **COST AND MANAGEMENT ACCOUNTING**

## **KMHC 207**

Course Credit: 3

Hours: 40

### **Course Objectives:**

- To have a basic understanding of various types of costs and their relevance in Health Care Management System.
- To have an understanding of Marginal Costing Technique and its application in Health Care Management System in decision making.
- To gain an insight into the concept of breakeven point and its applications.
- To understand the concept of Variance and calculate various types of variances applicable in Health Care Management System.
- To apply the technique of budgeting in preparation of various types of budgets.
- To enable students acquainted with the neo Concepts viz. Responsibility Accounting, Transfer Pricing, Activity Based Costing and Target Costing and Life Cycle Costing

### **UNIT I (8 Hrs)**

Introduction: Nature and scope of cost Accounting and Management Accounting, Cost Accounting vs. Management Accounting vs. Financial Accounting and their interrelationships, Advantages and limitations of cost accounting, types of cost, Elements of cost- Materials, Labour and overheads, Role of Cost in decision making preparation of cost sheet, Reconciliation of Cost and Financial Accounting.

### **UNIT II (8 Hrs)**

Marginal Costing: Concept of Marginal cost, Product and period costs, Marginal costing, Absorption Costing, Marginal Costing versus Absorption Costing, Income statement under Absorption and Marginal Costing, Applications of Marginal Costing.

Cost-Volume-Profit Analysis: Concept of contribution and P/V Ratio, CVP Analysis, Break even analysis, Methods of Break Even Analysis, Graphic presentation of Break Even Analysis, Margin of safety, Multi product situations.

### **UNIT III (10 Hrs)**

Budgetary Control: Concept of Budget, Budgeting and Budgetary Control, Objectives, Advantages and limitations of budgetary control, essentials of effective budgeting , Types of Budget, Static and Flexible Budgeting, Preparation of Cash Budget, Sales Budget, Production Budget, Materials Budget, Capital Expenditure Budget and Master Budget, Zero Base Budgeting

### **UNIT IV (10 Hrs)**

Standard Costing and Variance Analysis: Concept of standard costs, establishing various cost standards, Concept of standard costing, Advantages and limitations of standard costing, Standard costing vs. budgetary control, Variance Analysis: calculation of Material Variance, Labour Variance and Overhead Variance, and its applications and implications.

## UNIT V (4 Hrs)

Neo Concepts: Responsibility Accounting: Concept and various approaches to Responsibility Accounting, Types of responsibility centres, Measuring divisional performance, Transfer Pricing: concept & importance, Method of transfer pricing, Activity Based Costing, Target Costing & Life Cycle Costing.

### Course outcome:

After successful completion of this course students will be able to:

Sl. No.	Course Outcome	Bloom's Taxonomy
1.	Comprehensive understanding on objectives and scope of cost accounting in Health & Hospital Industry business within which Management Accounting is used for planning and control purposes.	Knowledge (K2)/ Comprehending (K3)
2.	Explore cost control and the impact on management information through various material controlling techniques and costing systems in Health Care System.	Remembering (K1)
3.	Prepare cost sheet with computation of normal and abnormal profits/loss.	Applying (K4) Evaluating (K7)
4.	Examine overhead cost through overhead functional analysis.	Knowledge (K2)/ Analysing (K5)
5.	Understand the use of various neo costing systems and techniques in Health sector.	Knowledge (K2) Synthesizing (K6)
6.	Evaluate the remuneration systems and incentives schemes to deal with labour cost with reference to the health care sector.	Analysing (K5) Evaluating (K7)

### Suggested Readings

- Management Accounting: Text Problems and Cases, Khan and Jain, McGraw-Hill Education Latest Edition
- Lal, Jawahar and Srivastava, Seema, (Latest Edition), Cost Accounting, MC Graw Hill Education.
- Modern Cost And Management Accounting, HANIF, McGraw-Hill Education, Latest Edition
- Cost and Management Accounting, M.N. Arora, Himalaya publishing house
- Management Accounting, Pandey I M, Vikas Publication, 3rd edition
- Introduction to Management Accounting, Horngren et al, Prentice Hall
- Managerial Accounting, Paresh Shah, Oxford, Latest Edition.



# DIGITAL HEALTHCARE AND ELECTRONIC COMMERCE

## KMHC 208

**Course Credit: 3**

**Hours: 40**

### **Course Objectives**

1. To provide a basic understanding of digital transformation in healthcare.
2. To help the students understand the technologies of digital healthcare.
3. To understand and analyze the uses of digital marketing in healthcare services.
4. To familiarize the students with E-commerce and healthcare management.
5. To help the students understand the security and ethical issues with digitalization.

### **UNIT 1 Digital Transformation of Healthcare (9 Lectures)**

Concept of Digital transformation, Technologies for Digital Transformation, Evolution of Digital Transformation for Healthcare Management, **Electronics Health Record System**- Processes, Management, Implementation and Ethics. **Delivering e-healthcare**- Opportunities and Challenges, **Case Studies**.

### **UNIT 2: Digital Healthcare Technologies (7 Lectures)**

**Telehealth System**- Technologies, Prospects, Applications and Issues, **e-Health** and Telenursing, **e-medicine System**- Evolution and Challenges, **m-Health& e-Emergency System**, Overview of Wearable Healthcare Devices. **Case Studies**.

### **UNIT 3: Digital Marketing for Healthcare (8 Lectures)**

**Digital Marketing** – Concepts and its applications in healthcare, Search Engine Marketing(SEM), Search Engine Optimisation (SEO), Social Media Marketing, E-mail marketing. Introduction of Online Reputation Management (ORM) and its importance.**Case Studies**.

### **UNIT 4: E-Commerce and Healthcare (8 Lectures)**

**Framework of E-Commerce** – Societal, Technical and Legal. **Models of E-Commerce**- B2B, B2C, C2C, Factors for the growth of E-Commerce, Advantages of E-Commerce, Online Payment Systems – Payment Gateway, Payment Wallet, EFT.**Case Studies**.

### **UNIT 5: Security Issues & Ethical Issues (8 lectures)**

**Data and Information Security issues**- Privacy, Identity Theft, Authentication, Theft, Denial of Services Attack (DoS), Phishing, Computer Viruses, Policy for data protection. **Ethical Issues** – Copyright Infringements, ethics in e-healthcare services, ethics with digital marketing.,**Digital Signature**- Characteristics and uses. **Case Studies**

### **Suggested Readings**

1. Halit Eren John G. Webster - Telehealth and Mobile Health (CRC Press)
2. Homero Rivas & Katarzyna Wac- Digital Health - Scaling Healthcare to the World (Springer)

3. Charlotte A. Weaver, Marion J. Ball George R. Kim & Joan M. Kiel- Healthcare Information Management Systems (Springer).
4. Douglas E. Goldstein (Aspen Publisher)- E-healthcare: Harness the Power of Internet E-commerce & E-care(Aspen Publisher)
5. Gaur Sunder, Prashant Bendale, Pradeep K. Sinha, Manisha Mantri, Atreya Dande- Electronic Health Record: Standards, Coding Systems, Frameworks, and Infrastructures(Wiley)
6. S. J.P. T. Josef - E-Commerce- An Indian Perspective(PHI)
7. Punit Bhatia - Fundamentals of Digital Marketing (Pearson)
8. Ravi Kalakota - Frontiers of E-Commerce (Pearson)

### **COURSE OUTCOMES**

<b>Course Outcomes</b>	<b>Expected Bloom's Learning Level</b>
CO 1: Details understanding of digital transformation in healthcare.	Understand(K2)
CO2: Understanding of the uses of technologies of digital healthcare.	Understand (K2)
CO3: Analysis of the uses of digital marketing in healthcare services	Analyze (K4)
CO4: Understanding of E-commerce framework and its applications in healthcare management.	Understand (K4)
CO5: Analysis of the security and ethical issues with digitalization	Analyze (K4)

## **MINI PROJECT**

### **KMHC 252**

Under this mini project, students have to go to any good hospital (which should have at least 100 beds) and study & prepare a detailed report on suggestive topics like Inventory Management / Solid-Waste Management/ Critical Areas of Hospital / Use and Applicability of AI or E-Commerce / Patient Care Management System/ Balance Sheet Analysis, etc.

The assessment of this mini project is based on the Preparation & Presentation of the report through continuous internal assessment by a faculty guide and before an external examiner preferably a qualified MBBS Doctor.