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**B.Voc – Healthcare Management – DSC**  
**SEMESTER-III,IV,V & VI**

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**Bachelor of Vocation – Healthcare Management (Semester-3)  
Undergraduate Curriculum Framework 2022(UGCF)**

**DISCIPLINE SPECIFIC CORE COURSE – 7 Communication in Healthcare**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Communication in Healthcare	4	3	1	0	Class XII Pass	NA

**Learning Objectives**

By the end of the term students should be able to demonstrate the use of critical thinking, decisions making and problem-solving skills through effective written and oral business communication.

**Learning outcomes**

- Student will be able to get an understanding of principles & objectives of Communication.
- Student will be able to understand the importance of Communication in an organization.
- Student will be able to identify barriers of communication and the best methods to communicate effectively.
- Students will be able to effectively use different styles of communication

**SYLLABUS OF DSC-7**

**Unit 1-Communication – Origin, Meaning and Definition (6 Hours)**

- Principles of Communication
- Objectives of communication
- Styles of Human Communication

**Unit 2-Communication as a process (5 Hours)**

- Oral Communication
- Written Communication
- Filtering and distortion of Message
- Common causes that weaken Effective Communication

### **Unit 3-Interpersonal Communication (12 hours)**

- Perception in Interpersonal communication
- Transactional Analysis
- Structure of Transaction
- Principles to initiate communication
- Communication in Organization Setting
- Communication Skills in Interview Setting
- Essential of Effective Communication
- Models of Understanding Interpersonal Relationship

### **Unit 4-Barriers to Communication (11 hours)**

- Organizational Barriers
- Semantic Barriers
- Personal Barriers
- Barriers in Subordinates
- Psychological Barriers
- Other Barriers
- Overcoming Barriers in Communication

### **Unit 5-Flow of Communication in an Organization (11 hours)**

- Downward Communication
- Upward Communication
- Horizontal Communication
- Problems in Downward Communication
- Problems in Upward Communication
- Problems in Horizontal Communication

### **Practical component (if any) -**

**N/A**

### **Essential/recommended readings**

1. M. Jones, Phil (2017), Exactly what to Say, Box Of Tricks Publishing
2. Kumar, Sanjay; Lata, Pushp (2015), Communication Skills, Oxford University Press.
3. Schiavo, Renata (2013), Healthcare Communication-From Theory to Practice, Jossey-Bass.
4. Garg, Kumar, Dr.Manoj (2020),English Communication-Theory & Practice, Abcibook.
5. Tuhovsky, Ian (2017), The Science of Effective Communication, Rupa & Co.

## DISCIPLINE SPECIFIC CORE COURSE – 8: Medical Terminology-3

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Medical Terminology-3	4	3	1	0	Class XII pass	Medical Terminology-2

### Learning Objectives

Includes structure, recognition, analysis, definition, spelling, pronunciation, and combination of medical terms from prefixes, suffixes, roots, and combining forms.

### Learning outcomes

- Student will be able to get an understanding of Diseases and disorders of the system as mentioned in the medical terms.
- Student will be able to guide the patients about the treatment options and diagnostic procedures as advised by the physician.
- This subject will enhance the medical terminology vocabulary of different conditions and treatment methods of organ system which is required at Front office and radiology department to guide the patients.
- Students will get an understanding of general Terminology (procedures, diseases, treatment) related to different body system

### SYLLABUS OF DSC-8

#### Unit-1 (10 hours)

Nervous System-

- Basic Anatomy & Physiology of Nervous System
- Common Terms in Nervous System
- Common Diseases
- Diagnostic Tests and Procedures
- Treatment
- Basic Knowledge of Hospital Care / Infrastructure / Facilities/ Intensive Care / Neuro ICU / Stroke ICU/ and other specialized needs for patient
- Importance of Rehabilitation Services for Neuro patients
- Basic understanding of Stroke management

## **Unit-2 (10 hours)**

Musculoskeletal System- procedures, diseases, treatment

- Basic Anatomy & Physiology of Musculoskeletal System
- Common Terms
- Diagnostic Tests and Procedures
- Basic understanding of Pain Management
- Treatment

## **Unit-3 (10 hours)**

Oncology -Types of Cancers

- Diagnostics & Procedures
- Basic Understanding of Medical Oncology, Surgical Oncology, Chemotherapy, Immunotherapy & Radiotherapy
- Treatment
- Psychological aspects of cancer care
- Importance of Cancer Awareness Program

Transplant Medicine

- Introduction to transplantation of Human Organs & tissues
- Different types of transplants
- Care after Transplant

## **Unit-4 (5 hours)**

Cardiovascular System-

- Brief Introduction-Heart
- procedures, diseases, treatment
- Preventive Aspects.

## **Unit-5 (10 hours)**

ENT & Ophthalmology-

- Introduction –Ear, Nose, Throat & Eyes
- Understanding of ENT & Ophthalmology procedures
- Day care Procedures
- Common diseases
- Treatment

**Practical component (if any) –N/A**

**Essential/recommended readings-**

1. Stedman, (2005), STEDMAN'S Medical Dictionary, Wolters Kluwer.
2. A. Gylys, Barbara; Wedding, Mary Ellen (2017), Medical Terminology Systems, F.A. Davis Company.

## DISCIPLINE SPECIFIC CORE COURSE – 9: Medical Software Applications-2

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Medical Software Applications-2	4	3	1	0	Class XII pass	Medical Software Applications-1

#### Learning Objectives

- Basic Understanding of functioning of computers & its application in healthcare with a perspective on Hospital operations
- Create basic awareness on healthcare record systems and infrastructure.

#### Learning outcomes

- Student will get the basic understanding and awareness about the software being used in hospital.
- Awareness of modules being used in different departments will help the student to work efficiently on the Systems.

### SYLLABUS OF DSC-9

#### Unit-1(9 hours)

- Review of FO module
- Describe various modalities for Patient Registration in HIS
- Describe Important Information and Credentials to be captured in HIS
- Physician Schedules, Appointment entry and rescheduling appointment
- Describe Escalation Matrix in case of Non-Compliance
- Assess the working status of HIS as and when required
- Admission Module-IP Number Generation, Wrist band for tracking of patients, Bed allotment, Requisition of drugs and consumables from the pharmacy, Discharge Summary.

#### Unit-2-(13 hours)

- Management Information System – Business Intelligence, MIS as a tool to managerial control
- Core Functions of HIS – Patient Management, Clinical Management-Clinical Decision, Medical Forms, Doctors Notes; Revenue Management; Inventory Management –Procures stocks, Medicines and Consumables for day-to-day consumption of hospital needs. This module helps in maintaining the stocks, reordering, financial planning, Inventory Management & Stock
- Maintenance of patient’s Database in HIS

### **Unit-3-(10 hours)**

- Introduction to CRM tool
- Describe the Importance of Electronic Health Records / Medical Records/ Computerized patient record system.
  - Software for Pharmacy
  - Lab
  - Radiology
  - Allergy Tracking
  - Consults
  - Dietetics
  - Progress Notes

### **Unit 4(13 hours)**

Modules used in HIS

- Emergency Module –Sends alert to the corresponding departments, Consulting Details, Clinical Follow up, lab Test Reports, Service orders and bookings, Pharmacy/ Surgical Details, Statutory forms
- Basics of HR Module –Recruitment, Training & Development, Compensation Management, Employee Tracking , Work Flows and Benefits
- Basics of Store Module

**Practical component (if any) –**

**N/A**

**Essential/recommended readings-**

1. Kelkar, S.A. (2010), Hospital Informations Systems, PHI.

## GENERAL ELECTIVE – 3:Patient Behavior & Psychology

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Patient Behaviour & Psychology	4	3	1	0	Class XII pass	Organization & Planning of Hospital Departments

#### Learning Objectives

It is aimed at helping the students to acquire knowledge & understanding of patient behavior and acquire the skills in managing them effectively in hospital settings.

#### Learning outcomes

1. Demonstrate an understanding of psychological theories and concepts relevant to patient behavior.
2. Analyze and interpret patient behavior in healthcare contexts using psychological frameworks.
3. Apply effective communication techniques to establish rapport and trust with patients.
4. Demonstrate cultural sensitivity in healthcare interactions and decision-making.
5. Develop strategies to address patient anxiety and improve coping mechanisms.
6. Devise patient-centered approaches to enhance treatment adherence and compliance.

#### SYLLABUS OF GE-3

##### Unit 1(10 hours)

Introduction:

- History and origin of science of psychology
- Definitions & Scope of Psychology
- Relevance to Healthcare Managers
- Methods of Psychology

##### Unit 2(10 hours)

Biology of behavior

- Body mind relationship modulation process in health and illness
- Genetics and behavior: Heredity and environment
- Brain and behavior: Nervous system, Neurons and synapse, Association Cortex, Rt and Lt Hemispheres
- Psychology of Sensations
- Muscular and glandular controls of behavior



- Nature of behavior of an organism/Integrated responses

### **Unit 3(15 hours)**

#### Motivation and Emotional Processes

- Motivation: Meaning, Concepts, Types, Theories, Motives and behavior, Conflict resolution
- Emotions & stress
- Emotion: Definition components, Changes in emotions, theories, emotional adjustments, emotions in health and illness
- Stress: stressors, cycle, effect, adaptation & coping

#### Communication and Patient-Provider Relationship

- Verbal and non-verbal communication skills
- Active listening and empathy
- Building trust and rapport with patients

### **Unit 4(10 hours)**

#### Developmental Psychology

- Psychology of people at different ages from infancy to old age
- Psychology of vulnerable individuals- challenged, women, sick, etc
- Psychology of groups

#### **Practical component (if any) –**

**N/A**

#### **Essential/recommended readings**

**N/A**

#### **Suggestive readings**

1. Introduction to Psychology by Clifford T.Norgan, Richard A.King
2. Psychology 5<sup>th</sup> Edition by Robert A.Baron/Girishwar Misra
3. Empathy: A History" by Susan Lanzoni
4. "The Compassionate Connection: The Healing Power of Empathy and Mindful Listening" by David Rakerl

## Discipline Specific Elective 1: Healthcare Organization Operations

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Healthcare Organization Operations	4	3	1	0	Class XII pass	NA

#### Learning Objectives

- To enable the students to understand the fundamental concepts of operations management
- To provide awareness on the roles and responsibilities of operations managers in different organizational contexts

#### Learning outcomes

1. Understand the key functions and roles within a healthcare organization.
2. Analyze the impact of healthcare policies and regulations on operations.
3. Identify strategies to improve operational efficiency and patient safety.
4. Evaluate the quality of healthcare services within an organization.
5. Apply management principles to healthcare operations.
6. Demonstrate an understanding of healthcare information systems and technology.
7. Discuss the importance of patient-centered care and its impact on organizational operations.

#### SYLLABUS OF DSE-1

##### Unit 1(10 hours)

###### Introduction to Healthcare Operations Management

- Overview of healthcare operations management
- Importance and challenges of managing healthcare operations
- Role of operations management in healthcare quality and patient safety
- Healthcare regulatory environment and compliance considerations

##### Unit 2(10 hours)

###### Healthcare Processes & Policies

- Hospital Policies
- Process mapping and flowcharting in healthcare
- Lean principles in healthcare operations

##### Unit 3(15 hours)

###### Healthcare Capacity Planning and Resource Management

- Managing healthcare capacity and demand
- Resource allocation and optimization in healthcare

- Scheduling and appointment systems
- Managing healthcare workforce and staffing challenges

#### **Unit 4(10 hours)**

##### Emerging Trends in Healthcare Operations

- Innovations in healthcare technology and management
- Telehealth and its impact on healthcare operations
- Population health management and preventive care
- Global healthcare operations and challenges

#### **Practical component (if any) –**

N/A

#### **Essential/recommended readings**

N/A

#### **Suggestive readings**

1. "Operations Management for Healthcare Organizations: Applying Lean Concepts to Improve Patient Safety and Outcomes" by Lisa M. Anderson and Lisa S. Anderson.
2. "Healthcare Operations Management" by Daniel B. McLaughlin, Julie M. Hays, and Eugene Schneller.
3. "Lean Hospitals: Improving Quality, Patient Safety, and Employee Engagement" by Mark Graban.

## Discipline Specific Elective 1: Healthcare Economics & Policy

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Healthcare Economics & Policy	4	3	1	0	Class XII pass	NA

### Learning Objectives

This course aims to provide students with an understanding of the key principles and concepts of healthcare economics and the role of policy in shaping healthcare systems. Students will examine the economic factors that influence healthcare decision-making, analyze healthcare policies and their impact on access, cost, and quality of care, and explore the challenges and opportunities in healthcare markets.

### Learning outcomes

Upon successful completion of the course, students will be able to:

1. Explain the key economic concepts relevant to healthcare, such as scarcity, opportunity cost, and efficiency.
2. Analyze the factors influencing the demand and supply of healthcare services and their implications on healthcare delivery.
3. Evaluate the effectiveness of different healthcare financing and reimbursement models.
4. Critically assess the impact of healthcare policies on vulnerable populations and healthcare disparities.

### SYLLABUS OF DSE-1

#### Unit 1(10 hours)

Introduction to Healthcare Economics

- Definition of Economics
- Circular flow of economic activity
- Relation between Economics and Health Economics
- Importance of Health Economics
- Theory of Utility
- Theory of Demand-Determinants of healthcare demand, Elasticity of healthcare demand

#### Unit 2(10 hours)

- Theory of Production: Concept, factors and its implications. Production function- short and long run. Laws of diminishing marginal returns and variable proportions.

- Theory of cost: short and long run cost function. Fixed and Variable costs- Opportunity Cost- Average and marginal cost
- Market- its concept in economics, Perfect competition- nature, short and long run equilibrium, concept of break even and shut down point

### **Unit 3(10 hours)**

#### Healthcare Financing

- Overview of healthcare financing models
- Health insurance systems in India
- Public vs. private healthcare financing in India
- Pricing strategies in healthcare
- Cost-benefit and cost-effectiveness analysis in healthcare

### **Unit 4(15 hours)**

#### Health Economics

- Indian scenario
- Effect of globalization and privatization
- Importance of PPP Model
- Problem faced by health industry
- Changing scenario of health industry
- Public initiative to eradicate difficulties
- Alternative Models of Hospital Behavior-Utility Maximizing Model, Physician Control Models, The Trend towards Multi Hospital Systems.

#### **Practical component (if any) –**

N/A

#### **Essential/recommended readings**

N/A

#### **Suggestive readings**

1. Indian Healthcare Economic & Policy by Rajeev Ahuja and Roger Jeffery
2. Healthcare Economics Made Easy by Satish Dinkar
3. Healthcare in India: A Comprehensive Analysis by Subrata Kumar Mitra and Vijay Govindarajan
4. Health Economics and Policy by James W. Henderson
5. Health Economics for Hospital Management- Shuvendu Bikash Dutta- Jaypee Brothers Publication

**Bachelor of Vocation – Healthcare Management (Semester-4)  
Undergraduate Curriculum Framework 2022(UGCF)**

**DISCIPLINE SPECIFIC CORE COURSE – 10: Quality in Healthcare-Service &  
Medical Quality**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Quality in Healthcare-Service & Medical Quality	4	3	1	0	Class XII pass	NA

**Learning Objectives**

Create basic awareness on quality in healthcare and its applicability

**Learning outcomes**

- Student will get the basic understanding and awareness about the quality and the quality standards applicable to different departments of the hospital.
- Students will also understand the importance of Accreditation and International Patient Safety Goals
- Awareness of Quality will enhance patient safety and satisfaction in the hospital and students will be able to effectively implement the organization policies.

**SYLLABUS OF DSC-10**

**Unit-1(12 hours)**

**Quality – An Overview**

- Dimensions of Quality-
- Scope and Importance in Healthcare
- Quality Concept, Quality Assurance,
- Total Quality Management, Quality Circle,
- Medical Quality
- NABH, JACHO, ISO

**Unit-2(12 hours)**

- Medical Documentation Audits
- Introduction
- Definition of Medical Audit
- Need and Purpose of Medical Audit
- Types of Medical Audit
- Medical Audit Committee
- Medical Documentation Audits
  - Physician Documents
  - Nursing Documents

#### Organization Policies

- Emergency Codes
- Hospital Waste Management
- Hospital Infection Control

#### **Unit 3(12 hours)**

##### Quality Standards applicable to the Front Office

- Customer Service Excellence and Patient Satisfaction
- Patient Satisfaction Metrics- Quantitative Measures and Qualitative Measures
- Call Centre Experience –Service Enquiry, Appointment Fixing, Complaints
- OPD Services - Establishing Eye Contact, Greetings, End conversation with a standard closing statement as per the Hospital protocol
- In-Patient Experience
- Measure Patient Satisfaction
- Importance of Feedback & Closure

#### **Unit 4(9 hours)**

- What Defines Quality in Healthcare
- Quality Initiatives in ensuring Patient Safety-International Patient Safety Goals
- Quality Indicators in Healthcare
- Concept of Lean & Six Sigma
- 1. Introduction
- 2. Objectives
- 3. Importance of Lean & Six Sigma in Health Care Management
- Importance of Quality Improvement Projects

#### **Practical component (if any) –**

**N/A**

#### **Essential/recommended readings-**

1. Joshi, S.K. (2013), Quality Management in Hospitals, Jaypee Brothers Medical Publishers

## DISCIPLINE SPECIFIC CORE COURSE – 11: Insurance Management (TPA Operations)

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Insurance Management (TPA Operations)	4	3	1	0	Class XII pass	NA

#### Learning Objectives

After completion of this module student should be able to describe the concept of health Insurance and Insurance management process in healthcare

#### Learning outcomes

- Student will get the basic understanding and awareness about the health insurance and different types of policies available to the insurer.
- Students will also understand the TPA's and the role of the same as a mediator between Health Insurance Organizations and Insurers.
- Awareness of TPA & Insurance policies will help students to effectively manage & handle the payment queries of the patients visiting the hospital

#### SYLLABUS OF DSC-11

##### Unit-1(12 hours)

Introduction to Health Insurance

- Concept of Health Insurance
- Definition, History & Scope of Health Insurance
- Types of Health Insurance
- Health Insurance in Private Health Sector (CGHS, ECHS, TPA, ESI.)
- Health Insurance in developing and developed countries
- Underwriting of Health Insurance

##### Unit 2(12 hours)

- Different Health Insurance Policies
- Analysis and Management



- GOI & State Govt. Policy in implementation of Health insurance
- Government Medical Services and Health Insurance Schemes
- IRDA Guidelines
- Hospital Empanelment: Criteria & Procedure
- Various Definitions under Mediclaim – Health Insurance Policies
- Standard Exclusions

### **Unit-3(9 hours)**

- Concept of combined Life Insurance and Health Insurance
- Portability of Health Insurance
- Pre-Existing Diseases

### **Unit 4(12 hours)**

- Hospitals / TPA / Insurance Company / Relationship and Problems.
- Cashless Mediclaim Processing & TPA
- Planned Hospitalization
- Emergency Hospitalization
- Claim Processing of Health Insurance

### **Practical component (if any) –**

**N/A**

### **Essential/recommended readings-**

1. Gupta, Dr. L.P., (2014), Health Insurance for Rich & Poor in India, Dr. L.P.GUPTA
2. Patukale, Prof.Kshitij, Mediclaim and Health Insurance, Prabhat Prakashan.
3. Dayal, Dr. Hargovind (2017), Fundamentals of Insurance, Notion Press.
4. Alexander, Sally, Risk and Insurance Management Manual for Libraries, Updated (ALCTS Monograph), ALA Editions.
5. IRDA Guidelines on Health Insurance - Govt. of India- <https://www.financialservices.gov.in>

## DISCIPLINE SPECIFIC CORE COURSE – 12: Hospital Policies

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Hospital Policies	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>Class XII pass</b>	<b>NA</b>

#### Learning Objectives

On completion of this module the students should be familiar with the various hospital policies of relevance

#### Learning outcomes

- Student will get the basic understanding and awareness about the different Hospital Policies with respect to NABH Accreditation standards.
- Students will also understand the importance & methodology of Incidence Reporting Systems and different incidents which needs to be documented
- Awareness of Patient & Staff Policies will give the students confidence of making hospitals safe place for patients/visitors/staff.

#### SYLLABUS OF DSC-12

##### **Unit-1(10 hours)**

Introduction to Hospital Policies

- Definition and Importance of SOP's, Policies, Manuals & Procedures.
- **AAC** – Registration Policy, Admission Policy, Bed Management Policy, Discharge Policy, Transport Policy, Admission to ICU Policy, Initial assessment Policy, Reassessment Policy, LAMA Policy.

##### **Unit-2(10 hours)**

- **COP** – Emergency Services, Ambulance Services, unique needs of End-of-Life Care, Care of Pediatric Patients, High Risk Obstetrical Pts., Rehabilitative Services, Patient Restraint Policy,
- **PRE** – Patient & Family Rights & Responsibilities, Patient and Family Education, Patient Confidentiality and Privacy, Patient Feedback (How to voice Complaint), Service Recovery, Policy on Informed Consent, Complaint Management process.

##### **Unit-3(15 hours)**

Patient & Staff Safety Policies

- Policy on Emergency Codes
- Hospital disaster Management

- Adverse Events
- Patient Identification
- Other Safety Codes
- Safety – Clinical Storage Guidelines, Electrical Equipment, Hazardous Material Spill, Handling of Cytotoxic Drugs
- Possession of Weapons by Patient and Visitors
- House Keeping Services Safety.

#### **Unit 4(10 hours)**

##### **Incidence Reporting**

- Incidence Investigation and Analysis
- Incidence Review
- Incident Report Form
- Benefits of doing Investigation
- How to Conduct an Investigative Interview
- Who should conduct the Investigation
- Root Cause Analysis
- Corrective & Preventive Actions
- Safety Orientation & Training

##### **Practical component (if any) –**

N/A

##### **Essential/recommended readings-**

1. Agarwal, Dr. Arun K. (2019), Standard Operating Procedures (SOP) for Hospitals in India, Notion Press.
2. NABH Accreditation Standards For Hospital- <https://www.nabh.co>standard>
3. References- Measures of Patient Safety Based on Hospitals- <https://www.ncbi.nlm.gov>
4. Accreditation Standards for Hospitals- <https://www.babh.co>

## GENERAL ELECTIVE – 4:Patient Safety & Benchmarking in Healthcare

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Patient Safety & Benchmarking in Healthcare	4	3	1	0	Class XII pass	Patient Behavior & Psychology

### Learning Objectives

By the end of this course, students should be able to:

- Explain the significance of patient safety in healthcare and its impact on patient outcomes.
- Identify potential risks, errors, and adverse events in healthcare processes.
- Apply patient safety principles and best practices to enhance the quality of care.
- Understand the concept of benchmarking in healthcare and its role in improving performance.
- Analyze healthcare data and implement benchmarking techniques to evaluate and compare healthcare outcomes.
- Develop strategies for continuous improvement and patient safety culture in healthcare organizations.

### Learning outcomes

Upon successful completion of this course, students will:

- Demonstrate a comprehensive understanding of patient safety concepts and their importance in healthcare.
- Recognize and assess potential risks and errors in various healthcare scenarios.
- Apply patient safety strategies effectively to reduce adverse events and improve patient outcomes.
- Demonstrate proficiency in benchmarking methodologies and their application to healthcare performance analysis.
- Evaluate and interpret healthcare data to identify areas for improvement and measure progress.
- Formulate actionable plans to enhance patient safety and quality of care in healthcare organizations.

### SYLLABUS OF GE-4

#### Unit 1(5 hours)

##### Introduction to Patient Safety

- Importance of patient safety in healthcare
- Patient safety culture and its impact
- Common patient safety challenges and errors

## **Unit 2(10 hours)**

### Understanding Adverse Events

- Types of adverse events and their causes
- Root cause analysis and error investigation
- Strategies to prevent adverse events
- Sentinel events and near miss events
- Incident Reporting System

## **Unit 3(10 hours)**

### Patient Safety Best Practices

- International Patient Safety Goals
- Medication safety and medication reconciliation
- Infection control measures
- Surgical safety and surgical checklist implementation

## **Unit 4(10 hours)**

### Benchmarking in Healthcare

- Definition and objectives of benchmarking
- Types of benchmarking in healthcare
- Data sources and metrics for benchmarking
- Developing improvement plans based on benchmarking results

## **Unit 5(10 hours)**

### Patient Safety Culture

- Creating a culture of safety in healthcare organizations
- Teamwork and communication in patient safety
- Human factors and their impact on patient safety
- Performance indicators for patient safety
- Continual monitoring and improvement strategies
- Patient engagement and its role in sustaining safety efforts

## **Practical component (if any) –**

**N/A**

## **Essential/recommended readings**

- Reason, J. (2000). Human error: Models and management. BMJ Books.
- Institute of Medicine (US) Committee on Quality of Health Care in America. (2001). Crossing the quality chasm: A new health system for the 21st century. National Academies Press.

## **Suggestive readings**

- Leape, L. L. (2014). Patient safety: A human factors approach. CRC Press.
- Vincent, C. (Ed.). (2016). Patient safety. John Wiley & Sons.

## Discipline Specific Elective 2 :HRM in Healthcare

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
HRM in Healthcare	4	3	1	0	Class XII pass	NA

### Learning Objectives

By the end of this course, students should be able to:

- Understand the unique challenges and dynamics of Human Resource Management (HRM) in the healthcare industry.
- Explore the role of HRM in promoting a positive organizational culture and employee engagement within healthcare settings.
- Develop skills in talent acquisition, recruitment, and retention strategies specific to healthcare professionals.
- Analyze the importance of training and development programs for healthcare staff to enhance their skills and knowledge.
- Gain insights into effective performance management and evaluation methods in healthcare organizations.
- Examine the legal and ethical considerations related to HRM in the healthcare sector.
- Learn about effective communication and conflict resolution techniques in healthcare teams.
- Understand the impact of healthcare policies and regulations on HRM practices.

### Learning outcomes

Upon successful completion of this course, students will:

- Explain the key HRM challenges faced by healthcare organizations and propose strategies to address them effectively.
- Assess the role of HRM in fostering a positive and inclusive work environment in healthcare settings.
- Formulate talent acquisition and retention plans tailored to the specific needs of the healthcare industry.
- Design and implement training programs that enhance the skills and knowledge of healthcare professionals.
- Apply performance management techniques to evaluate healthcare staff and promote continuous improvement.
- Demonstrate an understanding of the legal and ethical considerations in HRM practices within healthcare organizations.
- Employ effective communication and conflict resolution skills to resolve HR-related issues in healthcare teams.

- Analyze the impact of healthcare policies and regulations on HRM decisions and compliance.

## **SYLLABUS OF DSE-2**

### **Unit 1(5 hours)**

#### Introduction to HRM in Healthcare

- Overview of HRM and its significance in the healthcare sector.
- Key challenges and opportunities in HRM specific to healthcare organizations.
- Understanding the healthcare industry's unique workforce requirements.

### **Unit 2(10 hours)**

#### Organizational Culture and Talent Acquisition

- The role of HRM in shaping the organizational culture within healthcare settings.
- Strategies to promote employee engagement and job satisfaction in healthcare teams.
- Employee motivation and its impact on patient care.
- Recruitment strategies for attracting and selecting skilled healthcare professionals.
- Effective interviewing techniques and assessment methods for healthcare candidates.
- Diversity and inclusion in healthcare hiring.

### **Unit 3(5 hours)**

#### Training and Development in Healthcare

- Identifying training needs and designing relevant programs for healthcare staff.
- Implementing continuous learning initiatives to enhance healthcare professionals' skills.
- Evaluating the effectiveness of training programs in healthcare settings.

### **Unit 4(5 hours)**

#### Performance Management in Healthcare

- Establishing performance management systems for healthcare employees.
- Performance appraisal methods and feedback mechanisms in healthcare organizations.
- Addressing performance issues and fostering improvement.

### **Unit 5(10 hours)**

#### Legal and Ethical Considerations in HRM

- Understanding healthcare-related employment laws and regulations.
- Ethics in HRM decisions, especially concerning patient privacy and confidentiality.
- Managing conflicts between ethical principles and organizational objectives.

### **Unit 6(10 hours)**

#### Communication and Conflict Resolution in Healthcare Teams

- Effective communication strategies in healthcare settings.
- Handling conflicts and promoting teamwork among healthcare professionals.
- Building effective working relationships in a diverse healthcare workforce.

### **Practical component (if any) –**

**N/A**

### **Essential/recommended readings**

1. Human Resource Management in Healthcare: Principles and Practice, Author: Diane Huber

2. Strategic Human Resources Management in Health Services Organizations, Author: S. Robert Hernandez
3. Healthcare Human Resource Management, Author: Walter J. Flynn, Robert L. Mathis, John H. Jackson
4. The Healthcare Quality Book: Vision, Strategy, and Tools, Third Edition, Author: Maulik Joshi, Elizabeth R. Ransom, David B. Nash, Scott B. Ransom



## Discipline Specific Elective 2 :Financial Management in Healthcare

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Financial Management in Healthcare	4	3	1	0	Class XII pass	NA

### Learning Objectives

By the end of this course, students will be able to:

1. Understand the unique financial challenges faced by healthcare organizations.
2. Apply financial management techniques to improve the financial performance of healthcare institutions.
3. Analyze and interpret financial statements of healthcare organizations.
4. Develop effective budgeting and cost control strategies for healthcare settings.
5. Evaluate the financial implications of healthcare policies and regulations.
6. Make informed financial decisions to address healthcare industry-specific challenges.

### Learning outcomes

Upon successful completion of this course, students will be able to:

1. Analyze the financial structure of healthcare organizations and propose improvements for enhanced financial performance.
2. Develop and implement budgeting and cost control strategies to optimize resource allocation.
3. Identify the financial impact of different healthcare policies and regulations on organizations.
4. Formulate financial plans and recommendations for healthcare organizations' sustainable growth.
5. Apply financial analysis techniques to assess investment opportunities and risk management in the healthcare sector.

### SYLLABUS OF DSE-2

#### Unit 1(5 hours)

Introduction to Financial Management in Healthcare

- Overview of financial management concepts- Nature, scope, functions, goals, sources of finance
- Unique financial challenges in the healthcare industry
- Role of financial management in healthcare decision-making

#### Unit 2(15 hours)

Budgeting and Cost Control in Healthcare

- Budgeting process and techniques
- Cost behavior analysis in healthcare organizations
- Cost control strategies and cost reduction measures

- Capital Budgeting – Nature of Investment Decisions – Investment Evaluation criteria – Net Present Value (NPV), Internal Rate of Return (IRR), Profitability Index (PI), Payback Period, Accounting Rate of Return (ARR)

Working Capital Management including cash Management, Receivables Management, Inventory Management, Types & Determinants of working capital, credit management

### **Unit 3(10 hours)**

Healthcare Reimbursement Systems

- Fee-for-service vs. value-based reimbursement
- Government and private payer systems
- Impact of reimbursement systems on financial management

Financial Planning and Decision-Making in Healthcare

- Capital budgeting and investment decisions
- Funding sources for healthcare projects
- Financial risk assessment and management

### **Unit 4(10 hours)**

Healthcare Policy and Financial Implications

- Regulatory environment in healthcare
- Health insurance policies and their financial impact
- Healthcare reform and its financial consequences
- Concept of business plan, project plan
- Merger & Acquisition

Healthcare Revenue Cycle Management

- Patient billing and collections
- Revenue cycle optimization
- Managing accounts receivable and bad debts

**Practical component (if any) –**

**N/A**

### **Essential/recommended readings**

1. Financial Management in Health Services by Finkler, S.A., Ward, D.M., & Calabrese, T.D.
2. Healthcare Finance: An Introduction to Accounting and Financial Management by Louis C. Gapenski
3. Financial Management of Health Care Organizations: An Introduction to Fundamental Tools, Concepts, and Applications by William N. Zelman, Michael J. McCue, and Noah D. Glick
4. Financial Management, P. Chandra-TMH Publications

**Bachelor of Vocation – Healthcare Management (Semester-5)  
Undergraduate Curriculum Framework 2022(UGCF)**

**DISCIPLINE SPECIFIC CORE COURSE – 13: Bio Medical Waste  
Management & Radiation Safety**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Bio Medical Waste Management & Radiation Safety	4	3	1	0	Class XII pass	NA

**Learning Objectives**

- To understand the significance of nosocomial infections, biomedical waste and its proper disposal
- To understand the harmful effects of Radiation and measures taken to ensure radiation safety

**Learning outcomes**

- Student will get the basic understanding and awareness about the different types of biomedical waste generated in the hospital
- Students will also understand the importance of segregation of BMW and different methods to treat different wastes.
- Awareness of Radiation Hazards in hospital will give students the methods of monitoring & reporting hazards.

**SYLLABUS OF DSC-13**

**Unit 1- (12hours)**

Introduction to Biomedical Waste

- Definition
- Classification of Bio- Medical waste
- Sources of Bio-Medical Waste
- Effects- Air, Water & Land Pollution
- Process of BMW Management – Segregation, collection, transportation, disposal

## **Unit -2(9 hours)**

### Types of BMW

- Liquid BMW, Radioactive waste, Metals / Chemicals /Drug waste
- Importance
- BMW Management & methods of disinfection

## **Unit 3(12 hours)**

- Modern technology for handling BMW
- Monitoring & controlling of cross infection (Protective devices),
- Potential Health Risk -Needle Stick Injury, Exposure to Cytotoxic drugs, Chemical burns, Air Pollution,

## **Unit-4(12 hours)**

- Radiation Hazards in a hospital,
- Safe use of Radioactive Drugs,
- Radioactive Waste Safe Disposal Guidelines
- Monitoring & Reporting
- Radiation safety -Training

## **Practical component (if any) –**

N/A

## **Essential/recommended readings-**

1. Gupta, Suharshi (2021), Biomedical Waste Management, LAP Lambert Academic Publishing.
2. Bio-Medical Waste Act & Rules Govt. of India- <https://health.delhigovt.nic.in>
3. Guidelines for Management of Healthcare waste as per Biomedical Waste Management Rules, 2016- <https://cpcb.nic.in>
4. Challenges in Biomedical Waste Management in Cities- <https://www.hilarispublisher.com>open-acess>

## DISCIPLINE SPECIFIC CORE COURSE – 14: General Safety Codes, Fire Safety & Disaster Management in Hospitals

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
General Safety Codes, Fire Safety & Disaster Management in Hospitals	4	3	1	0	Class XII pass	NA

#### Learning Objectives

On completion of this module the students should be familiar with the General Safety Codes, Fire Safety & Disaster Management in Hospitals

#### Learning outcomes

- Students will get the basic understanding and awareness about the General Safety codes being followed in hospital for different kinds of emergencies.
- Students will be able to identify different risks and hazards in the hospital
- Students will be able to identify difference between emergency, accident and disasters and how to be prepared for different types of disasters.
- As the hospital work and surge of admissions increase during disasters, students will be able to work on proper planning and implementation of successfully managing the situation in various disasters.

#### SYLLABUS OF DSC-14

##### Unit 1(12 hours)

General Safety Codes in a hospital – Bomb Threat, Violent Patient, Cardiac arrest, Child abduction, Fire, Disaster, Clinical Storage Guidelines, Compressed gas Safety Precautions  
Hazardous Material Spill, Handling of Cytotoxic Drugs, Laser maintenance

##### Unit 2(12 hours)

Assessment of Risks and Hazards in Hospital-

- Disruption of Services – Electric, Failure of Elevators, Failure of Operating Theatre Air Conditioning System, Disruption of Services-Water
- Management – Accident Investigation and Analysis
- Safety Orientation Training
- Annual Evaluation of The Effectiveness of Safety Management Program

### **Unit 3(9 hours)**

#### Fire Safety

- Minor Fire
- Major Fire (without Evacuation)
- Major fire (With Partial/full evacuation)
- Composition of firefighting team
- Duties of staff involved in fire
- Mock Drill
- Emergency Exit Plan

### **Unit 4(12 hours)**

#### Hospital Disaster Management

- Basics of disaster management and Mass casualties
- Components of disaster plan : pre-hospital and hospital
- Disaster alertness in Hospital
- Disaster management planning and implementation
- Severity of illness amongst disaster victims and risk assessment
- Mock exercise on disaster management in Hospital

### **Practical component (if any) – N/A**

#### **Essential/recommended readings**

1. National Disaster Management Guidelines- <https://ndma.gov.in>
2. Hospital Disaster Management Guidelines- <https://nidm.gov.in>
3. Muller, Robert J., (2017), Hospital Emergency Management: A Bible for Hospital Emergency Managers, CreateSpace Independent Publishing Platform.

## DISCIPLINE SPECIFIC CORE COURSE – 15: Hospital Infection Control

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Hospital Infection Control	4	3	1	0	Class XII pass	NA

#### Learning Objectives

On completion of this module the students should be familiar with the hazards of Infections and Infection control practices in Hospitals

#### Learning outcomes

- Students will understand different types of hospital acquired infections and the ways infections are transmitted
- Students will understand the infection control and prevention measures to be implemented in the hospital to make it a safe place.
- Knowledge of Disinfection & Sterilization policies to be followed in the hospital will make students equipped about the practices to be followed in patient care areas.

#### SYLLABUS OF DSC-15

##### **Unit 1(12 hours)**

Epidemiology of communicable diseases, disease transmission

- Host defence immunizing agents, cold chain, immunization, disease monitoring and surveillance.
- Screening and surveys
- Notifiable diseases

##### **Unit 2(12 hours)**

Infection Control & Prevention-

- Hazards of infection
- Hospital Acquired Infection(HAI)
- Types of HAI
- Surveillance of HAI
- Risk Factors,
- Hospital Infection Control Measures- Universal Precautions, Hand Hygiene Protocols
- Investigation of an epidemic and role of hospital in its control.
- Hospital Infection Control committee

**Unit 3(12 hours)**

General Cleaning Disinfection and Sterilization-

- Cleaning and Disinfecting of Environmental Surfaces in Patient-Care Areas
- Antiseptics and disinfectants
- Methods of sterilization and disinfection

**Unit 4(9 hours)**

Spill Management-

- Types of Spillages
- Policy on Spill Management
- General Precautions

**Practical component (if any) –**

**N/A**

**Essential/recommended readings**

- S. Sastry, Apurba; R., Deepashree (2019), Essentials of Hospital Infection Control, Jaypee Brothers Medical Publishers.
- Singh, Sanjeev; Gupta, Shakti Kumar; Kant, Sunil (2012), Hospital Infection Control Guidelines, Jaypee Brothers Medical Publishers.



## GENERAL ELECTIVE – 5:E-Skills & Software used in healthcare

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
E-Skills & Software used in healthcare	4	3	1	0	Class XII pass	Patient Safety & Benchmarking in Healthcare

### Learning Objectives

This course provides an introduction to the essential E-Skills and Software used in the healthcare industry. Students will explore various technologies and software applications that play a crucial role in modern healthcare settings, including electronic health records, telemedicine, healthcare analytics, and patient management systems. Through hands-on exercises and case studies, students will gain practical knowledge to leverage technology effectively in healthcare delivery.

### Learning outcomes

Upon successful completion of this course, students will be able to:

1. Understand the significance of E-Skills and Software in healthcare and its impact on patient care and overall healthcare efficiency.
2. Identify and use various healthcare software applications for tasks like patient record management, medical billing, and telemedicine consultations.
3. Analyze healthcare data using software tools and techniques to derive meaningful insights and improve decision-making processes.
4. Demonstrate competence in navigating electronic health records and other health information systems.
5. Evaluate the potential benefits and risks of using E-Skills and Software in healthcare contexts.

### SYLLABUS OF GE-5

#### Unit 1(5 hours)

Introduction to E-Skills in Healthcare

- Overview of E-Skills in the context of healthcare
- Importance of technology in improving patient care and outcomes
- Ethical and legal considerations related to technology use in healthcare

#### Unit 2(10 hours)

Introduction to Healthcare Information System

- Definition, Meaning, Scope, Importance & Challenges of HIS
- Introduction to E-Prescription, CPRS, Electronic Health Records
- Important Modules of Hospital Management System

### **Unit 3(15 hours)**

#### Application of HIS in Hospitals

- Back office & Front Office
- IPD & OPD
- Patient Registration & Appointment Scheduling
- Admission Discharge Transfer (ADT)
- Computerized Physician Order Entry (CPOE)
- Roster Management
- Laboratory Information System
- Radiology Information System
- CSSD
- Pharmacy
- Operation Theatre
- Inventory Management

### **Unit 4(10 hours)**

- Knowledge Management System
- Management Information System
- Clinical Decision Support System
- Executive Support System
- Introduction to Marketing Information System
- Telemedicine & its application
- Overview of mHealth apps and their diverse uses

### **Unit 5(5 hours)**

#### Emerging Technologies in Healthcare

- Exploring AI, IoT, and other cutting-edge technologies in healthcare
- Potential applications and challenges of emerging technologies
- Discussing the future of technology in healthcare

### **Practical component (if any) –**

**N/A**

### **Essential/recommended readings**

1. Healthcare Information Technology Exam Guideby Kathleen McCormick
2. Healthcare Analytics for Quality and Performance Improvementby Trevor L. Strome
3. Telemedicine Technologies: Information Technologies in Medicine and Telehealth by Bernard Fong, et al.
4. Mobile Health: A Technology Road Mapby Robert Istepanian, et al.
5. Artificial Intelligence in Healthcareedited by Adam Bohr and Rick Lawrence
6. Hospital Information Systems by S.A Kelkar, PHI
7. Management Information System by Ashok Arora & Akshaya Bhatia, Excel Book.

## Discipline Specific Elective 3 :Material Management in Healthcare

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Material Management in Healthcare	4	3	1	0	Class XII pass	NA

### Learning Objectives

This course provides an overview of material management principles and practices in the healthcare industry. It focuses on the effective management of medical supplies, equipment, and other materials to ensure their timely availability, cost-effectiveness, and quality in healthcare settings. Students will explore various aspects of material procurement, inventory control, distribution, and vendor management specific to healthcare organizations.

### Learning outcomes

Upon successful completion of this course, students will be able to:

1. Understand the importance of material management in healthcare and its impact on patient care, safety, and operational efficiency.
2. Identify and apply various material management techniques and best practices in healthcare settings.
3. Analyze and optimize the inventory management process to reduce costs while maintaining adequate stock levels.
4. Evaluate the selection criteria for healthcare suppliers and establish effective vendor relationships.
5. Utilize technology and software tools to enhance material management processes in healthcare organizations.

### SYLLABUS OF DSE-3

#### Unit 1(5 hours)

Introduction to Material Management in Healthcare

- Definition, scope and importance of materials management
- Aims, objectives & principles of materials management;
- Material Cycle
- Importance of material management in healthcare
- Material management challenges in healthcare settings
- Integrated Approach to Material planning & control

## **Unit 2(10 hours)**

### Inventory Control

- Definition & objectives of inventory control
- Types of inventory cost
- Pareto' law
- ABC/VED/SDE analysis
- Basic inventory management techniques
- Economic Order Quantity (EOQ) and Reorder Point (ROP) analysis
- Stock rotation and expiry management in healthcare

## **Unit 3(10 hours)**

### Material Procurement in Healthcare

- Purchasing process -Meaning of purchasing, Objectives of purchasing, 5 R's of purchasing, Centralized & Decentralized purchasing, General principles of procurement of medicine
- Identifying healthcare material needs and requirements
- Request for Proposal (RFP) and Request for Quotation (RFQ) processes
- Supplier selection and evaluation criteria
- Vendor Management

## **Unit 4(5 hours)**

### Stores Management

- Responsibilities and functioning of stores
- Types of Medical Stores, planning of hospital stores
- Location, lay-out planning and design of hospital stores
- Preservation of stores, documentation & evaluation of stores

## **Unit 5(10 hours)**

### Equipment Management

- Classification of Hospital equipment
- Planning and selection of equipment
- Factors affecting utilization of equipment
- Equipment failure, documentation, equipment maintenance and its types and Equipment audit.

## **Unit 6(5 hours)**

### Future Trends/Sustainability in Material Management

- Emerging technologies and innovations in healthcare material management
- Predictive analytics and artificial intelligence applications in material management
- Green procurement and eco-friendly materials
- Waste management and disposal considerations in healthcare
- Sustainable practices in material management

## **Practical component (if any) –**

**N/A**

## **Essential/recommended readings**

1. Production (Operation) Management, L.C Jhamp-Everest
2. Production and materials management, K. Sridhara Bhatt-Himalaya
3. Hospital stores management an integral approach, Shakti Gupta-JAYPEE

4. Hospital Stores Management, Shakti Gupta, Sunilkanth – Jaypee Brothers
5. Materials Management, Gopalakrishna, P., Prentice Hall, New Delhi, 1997.
6. Hospital Stores Management- An Integrated Approach, by Dr. Gupta Shakti, JaypeeBrothers.
7. Material Management by Dr. PawanArora, Global India Publication Pvt Ltd
8. Procurement and Materials management for Hospitals, Rex H Gregor, Harold C. Mickey
9. Institute of Supply Chain Management. (Website: <https://www.iscm.co.in/>)

## Discipline Specific Elective 3 :Trends & Innovations in Healthcare

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Trends & Innovations in Healthcare	4	3	1	0	Class XII pass	NA

### Learning Objectives

By the end of this course, students should be able to:

1. To understand the latest trends and innovations in the healthcare industry.
2. To explore the impact of technology on healthcare delivery and patient outcomes.
3. To analyze the challenges and opportunities presented by healthcare innovations.
4. To evaluate the ethical and regulatory considerations related to healthcare advancements.
5. To develop critical thinking skills for assessing the potential of emerging healthcare trends.

### Learning outcomes

Upon successful completion of this course, students will:

1. Identify and discuss the major trends and innovations in healthcare.
2. Explain the role of technology in healthcare and its impact on patient care.
3. Assess the advantages and disadvantages of various healthcare innovations.
4. Analyze the ethical implications and regulatory aspects of implementing new healthcare technologies.
5. Critically evaluate the potential of emerging trends in improving healthcare outcomes.

### SYLLABUS OF DSE-3

#### Unit 1(5 hours)

Introduction to Healthcare Trends and Innovations

- Overview of healthcare industry advancements
- Importance of staying updated with the latest trends
- Impact of innovations on patient care and outcomes

#### Unit 2(15 hours)

Technology in Healthcare

- Telemedicine and remote patient monitoring
- Electronic health records (EHR) and interoperability
- Artificial intelligence and machine learning applications in healthcare

Precision Medicine

- Personalized treatment approaches
- Genomics and genetic testing in healthcare

- Challenges and opportunities in precision medicine

### **Unit 3(20 hours)**

#### Internet of Medical Things (IoMT)

- Connected medical devices and wearables
- Data security and privacy concerns in IoMT
- Enhancing patient engagement through IoMT

#### Virtual Reality (VR) and Augmented Reality (AR) in healthcare

- Applications of VR/AR in medical training and education
- VR/AR in pain management and therapeutic interventions
- Future possibilities and limitations of VR/AR in healthcare

#### Robotics and Automation in Healthcare

- Surgical robots and robotic-assisted procedures
- Automation in pharmaceutical manufacturing and drug delivery
- Ethical considerations in the use of healthcare robots

### **Unit 4(5 hours)**

#### Future of Healthcare Innovations

- Predicting upcoming trends in the healthcare industry
- Potential disruptions and transformative innovations
- Preparing for a career in the evolving healthcare landscape

#### **Practical component (if any) –**

**N/A**

#### **Essential/recommended readings**

1. Article: "The Impact of Technology on Healthcare Delivery" - Journal of Healthcare Management
2. Report: "Trends and Innovations in Precision Medicine" - World Health Organization
3. Whitepaper: "Internet of Medical Things: Transforming Healthcare" - Deloitte
4. Book: "Healthcare Robotics: Technologies and Applications" - Richard G. Marklin
5. Article: "Blockchain in Healthcare: Opportunities and Challenges" - Health Information Science and Systems Journal
6. Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again - Eric Topol
7. The Creative Destruction of Medicine: How the Digital Revolution Will Create Better Healthcare- Eric Topol
8. The Fourth Industrial Revolution - Klaus Schwab

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**DISCIPLINE SPECIFIC CORE COURSE – 16: Health Services Legal & Ethical Issues**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Health Services Legal & Ethical Issues	4	3	1	0	Class XII pass	NA

**Learning Objectives**

After completion of the module student should be able to describe the important Legal & Ethical Issues associated with Healthcare

**Learning outcomes**

- Students will understand different laws, acts, rules and regulations which the hospital have to comply to.
- Students will understand the acts pertaining to different departments in the hospital and their importance for the smooth functioning of hospital as per the legislature of the country
- Knowledge of Medical Negligence, Consent and contracts will help the students in understanding the importance of legalities with respect to the health of the patients.

**SYLLABUS OF DSC-16**

**Unit 1(12 hours)**

Introduction to Act, Law, Rules and Regulations  
Medical Ethics

- Medical Ethics as per MCI-Duties of Doctors
- Ethical Dilemmas in Healthcare Industry

**Unit 2(12 hours)**

Laws applicable to Hospital

- Law of Contracts, Specific Performance
- Medical jurisprudence and functioning of hospitals
- Consent & its Importance



**Unit 3(12 hours)**

## Important Acts

- Consumer Protection Act and Hospitals
- I.D. Act, W.C. Act
- West Bengal Clinical Establishment Act and Rules
- ESI Act, Trade Union Act
- Organ transplantation Act
- Pc PNDT Act
- MTP Act
- ART & Surrogacy Act

**Unit 4(9 hours)**

- Medico-Legal Cases
- Medico- Legal Problems in relation to health administration
- Medical Negligence and Types

**Practical component (if any) –**

N/A

**Essential/recommended readings**

1. Bhat, Sandeep (2023), Reflection on Medical Law and Ethics in India, Eastern Law House.

## DISCIPLINE SPECIFIC CORE COURSE – 17: Management of Non-Clinical Departments - Support and Utility Services

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Management of Non- Clinical Departments - Support and Utility Services	4	3	1	0	Class XII pass	NA

#### Learning Objectives

On completion of this module the students should be familiar with the various aspects of planning, operating and evaluation of different support and utility services in hospitals

#### Learning outcomes

- Students will understand planning, organization, structure, location, functions, policies and quality parameters of different departments of support & utility services.
- Knowledge of functioning of all these departments will help the students to implement and manage the operations of these departments.

#### SYLLABUS OF DSC-17

##### **Unit 1(9 hours)**

Introduction- Support Services Departments; Planning, Organization Structure, Location and Function of support service departments.

##### **Unit 2(14 hours)**

Policies and Quality Parameters

- Methods of Sterilization CSSD- Methods of Sterilization
- Pharmacy Department
- Radiology Department
- Nuclear Medicine
- Laboratory Services
- Medical Record Department

##### **Unit 3(9 hours)**

Introduction to Utility Services Departments-Planning, Organization Structure, Location, Functions, Policies and Quality Parameters

**Unit 4(13 hours)**

Understanding of different utility service departments-

- Laundry services
- Security Services
- Transportation Services (External & Internal)-Ambulance Services
- Hospital Stores
- Mortuary (Preservation, transportation & religious formalities)
- Kitchen services
- House Keeping Department
- Engineering & Maintenance Department

**Practical component (if any) –**

**N/A**

**Essential/recommended readings-**

1. Das, Joydeep (2015), Hospital Administration and Management, Jaypee Brothers Medical Publisher.
2. Goel, Dr. Sonu (2013), Hospital Administration, Elsevier India.

## DISCIPLINE SPECIFIC CORE COURSE – 18: Hospital Engineering & Bio-Medical Engineering

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Hospital Engineering & Bio-Medical Engineering	4	3	1	0	Class XII pass	NA

#### Learning Objectives

On completion of this module the students should be familiar with the equipment management process and its various components and their roles in hospital system

#### Learning outcomes

- Students will understand the different medical equipment used in hospital, they will understand in detail the requirement, procurement and functioning of all the equipment.
- Students will also get an understanding of different types of maintenance contracts required for all the biomedical equipment

#### SYLLABUS OF DSC-18

##### **Unit 1(10 hours)**

Introduction

List of common Medical Equipment used in Hospital

- General Requirements
- Local, National and International availability of Medical Equipment

##### **Unit 2-(15 hours)**

Purchase / Installation / Commissioning of Medical Equipment

- Equipment selection guideline, Estimation of cost and Q.C. Planning
- Justification of purchase proposal, Hospital Need Assessment
- Equipment selection guideline, Estimation of cost and Q.C. Planning

##### **Unit -3(10 hours)**

Budgeting of Biomedical Equipment

- Replacement of old equipment and Buyback Policy

- Estimation of Breakeven point and Profit – Projection in hospital budget

**Unit 4(10 hours)**

Medical Equipment Maintenance

- In-house, AMC and CMC
- Preventive Maintenance
- Calibration of Equipment

**Practical component (if any) –  
N/A**

**Essential/recommended readings-**

1. Willson, Keith; Ison, Keith; Tabakov, Slavik (2013), Medical Equipment Management, CRC Press.

## GENERAL ELECTIVE – 6: Legal System of Healthcare Industry

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Legal System of Healthcare Industry	4	3	1	0	Class XII pass	E-Skills & Software used in healthcare

### Learning Objectives

This course provides an in-depth understanding of the laws and regulations that govern the healthcare industry in India. Students will explore various legal aspects related to healthcare, including licensing, medical practice, patient rights, medical malpractice, and more. The course aims to equip learners with the knowledge and skills to navigate legal challenges and ensure compliance in the healthcare sector.

### Learning outcomes

Upon successful completion of this course, students will be able to:

1. Explain the key laws and regulations governing the Indian healthcare industry and their implications.
2. Apply legal principles to real-world scenarios in the healthcare sector.
3. Evaluate the legal risks and compliance requirements for healthcare organizations.
4. Analyze the legal and ethical aspects of patient care and decision-making.
5. Demonstrate proficiency in identifying and addressing legal issues in healthcare practices.

### SYLLABUS OF GE-6

#### Unit 1(5 hours)

Introduction to Indian Healthcare Laws

- Laws pertaining to establishment of hospitals
- Legal requirements under Medical Council Acts
- West Bengal Clinical Establishment Act and rules

#### Unit 2(15 hours)

Acts pertaining to Hospitals

- Legal aspects relating to Organ transplantation
- MTP Act 1971
- Basics of Drugs and Cosmetic Acts
- Euthanasia
- ESI Act
- PNDT Act

- Human experimentation, Clinical trials
- Industrial dispute Act
- Central Births & Death Registration Act
- Consumer Protection Act

**Unit 3(10 hours)**

Legal liability of hospitals

- Criminal, civil and tortuous
- Liability for negligence
- Absolute liability and vicarious liability
- Legal remedies available to patients

**Unit 4(15 hours)**

Medical ethics

- Ethical Principles & rules
- Core concepts of medical ethics
- Law & ethics-a comparison
- Elements of medical malpractice
- Medical negligence and liability
- Confidentiality
- Autonomy & Informed Consent

**Practical component (if any) –**

**N/A**

**Essential/recommended readings**

1. Healthcare Laws in India by Shailaja Chandra
2. Law and the Practice of Medicine in India by Anant Bhan and Amar Jesani
3. Medical Law and Ethics by Amitava Sengupta
4. Indian Medical Law: A Treatise on Crimes against Medical Profession by Sandeep Joshi
5. Medical negligence and legal remedies, 3rd edition, universal law Publisher, Anoop Kaushal K, New Delhi, 2004.
6. Medico-legal Aspects of Patient Care, 3rd Edition, R. C. Sharma, Peepee Publishers & Distributers 2008

## Discipline Specific Elective 4 : Healthcare Marketing

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Healthcare Marketing	4	3	1	0	Class XII pass	NA

### Learning Objectives

By the end of this course, students should be able to:

1. Understand the unique challenges and opportunities in the healthcare industry regarding marketing and promotion.
2. Analyze the target audience and consumer behavior in healthcare settings.
3. Develop effective marketing strategies to promote healthcare products and services.
4. Explore ethical considerations and regulatory frameworks in healthcare marketing.
5. Utilize digital marketing techniques and technologies to enhance healthcare campaigns.
6. Measure and evaluate the success of healthcare marketing initiatives.

### Learning outcomes

Upon successful completion of this course, students will:

1. Describe the key concepts and principles of healthcare marketing.
2. Conduct market research to identify healthcare consumer needs and preferences.
3. Design and implement healthcare marketing strategies that align with industry best practices.
4. Evaluate the ethical implications of various marketing tactics in the healthcare sector.
5. Apply digital marketing tools and platforms to create targeted healthcare campaigns.
6. Measure the effectiveness of healthcare marketing efforts using relevant metrics.

### SYLLABUS OF DSE-4

#### Unit 1(10 hours)

Introduction to Healthcare Marketing

- Meaning and importance of marketing
- Role of marketing in modern organizations
- Basic concepts of marketing
- Evolution of marketing
- Scanning the marketing environment
- Marketing Mix



- Understanding Consumer Behavior-Analyzing patient decision-making processes, Factors influencing healthcare consumer choices

### **Unit 2(15 hours)**

#### Marketing Research & Strategies

- Techniques for gathering healthcare market data
- Analyzing market trends and opportunities
- Competitive analysis in the healthcare sector
- Product and service positioning in healthcare
- Creating value propositions for healthcare offerings
- Developing a healthcare marketing mix

### **Unit 3(10 hours)**

#### Promotion of Business in Hospitals

- Service Marketing – Patient care and communication
- Advertisement and Branding
- Marketing promotional activities
- Corporate marketing
- Marketing and medical ethics
- Ethical guidelines for healthcare marketers
- Building a strong healthcare brand identity

### **Unit 4(10 hours)**

#### Digital Marketing in Healthcare

- Leveraging social media for healthcare marketing
- Search engine optimization (SEO) for healthcare websites
- Email marketing and online advertising in the healthcare industry

#### **Practical component (if any) –**

**N/A**

#### **Essential/recommended readings**

1. Marketing for Healthcare Organizations, Kotler, P., & Bucher, T. (2020). Pearson.
2. Stevens, R. (2018). Healthcare Marketing: A Case Study Approach, Stevens, R. (2018). CRC Press.
3. Healthcare Marketing: A Comprehensive Guide for Medical Practice, Hollander, S. C., & Pulos, E. (2015). Jones & Bartlett Learning
4. Essentials of Health Care Marketing, Berkowitz, E. N. (2017). Jones & Bartlett Learning
5. Marketing Management by Philip Kotler, Pearson publishers, 2003
6. Marketing Management by Rajan Saxena, TMH, 2005.
7. Marketing-the best practices by K.Douglar, Hoffman&Czinkota, Thomson, 2004
8. Basic Marketing by William D. Rerreult&Mc Carthy, TMH,2005
9. Marketing Management by V.S.Ramaswamy, Namakumari, Macmillan, 2006

## Discipline Specific Elective 4: Developing Strategy in Healthcare

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Developing Strategy in Healthcare	4	3	1	0	Class XII pass	NA

### Learning Objectives

1. Understand the fundamental concepts and theories of strategic management to devise short & long-term goals for healthcare
2. Analyze the external and internal factors influencing an organization's strategic decisions.
3. Develop skills in formulating and implementing effective business strategies.
4. Evaluate the role of innovation, sustainability, and ethics in strategic decision-making.
5. Assess the impact of globalization on strategic management practices.
6. Apply strategic management frameworks to real-world healthcare business scenarios.

### Learning outcomes

By the end of this course, students will be able to:

1. Identify and explain the key principles and theories of strategic management.
2. Conduct a comprehensive strategic analysis of a given organization.
3. Formulate actionable business strategies that align with the organization's goals.
4. Evaluate and recommend strategic alternatives for healthcare growth and sustainability.
5. Demonstrate an understanding of the ethical and social implications of strategic decisions.
6. Communicate strategic recommendations effectively to stakeholders.

### SYLLABUS OF DSE-4

#### Unit 1(5 hours)

Introduction to Strategic management

- Importance of Strategic management
- Strategic management process: strategy and tactics
- Strategic vision and mission, strategists in Strategic Management
- Levels of strategy: Corporate, business, and functional
- Porter's value chain: concept and applications

#### Unit 2(15 hours)

Strategic analysis in Healthcare Organizations

- Introduction & need for strategic analysis
- Internal Analysis and External Environmental Analysis

- SWOT Analysis
- PESTEL Analysis
- Competitor Analysis
- Value chain analysis
- Core competencies and capabilities

### **Unit 3(10 hours)**

#### Level of strategy

- Corporate Level Strategy: Grand Strategy
- Portfolio analysis: BCG Matrix
- Business level Strategy: Generic Business Strategy
- Functional strategy analysis: Plans and policies: Financial, Marketing, Operational, Personnel
- Globalization and its impact on business strategy
- Multinational and global strategies

### **Unit 4(15 hours)**

#### Corporate Governance and Ethics

- Corporate governance principles and practices
- Role of the board of directors
- Ethical considerations in strategic decision-making
- Corporate social responsibility (CSR) and sustainability

#### Strategy Implementation

- Organizational structure and design
- Strategic control and performance measurement
- Strategy execution and managing change
- Strategic leadership and culture

#### Strategic Evaluation and Control

- Criteria for evaluating strategies
- Balanced Scorecard approach
- Learning from strategic failures and successes
- Making strategic adjustments

#### **Practical component (if any) –**

**N/A**

#### **Essential/recommended readings**

1. Kazmi, A: Business policy and Strategic management, Tata McGraw Hill.
2. Dess and Miller, Strategic Management, Tata McGraw Hill.
3. Cherunilam, F: Strategic Management, Himalaya Publishing House.
4. Budhiraja, S.B. and Athreya, M.B: Cases in Strategic Management, Tata McGraw Hill.
5. Thomson and Strickland: Strategic Management, McGraw Hill.
6. Hill, C. W., Jones, G. R., & Schilling, M. A. (or latest edition), Strategic Management: Theory & Cases: An Integrated Approach.
7. Peter. M. Ginter, Strategic Management of Healthcare Organizations