



# GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Post Graduate Diploma Hospital Management

Level: Post Graduate Diploma

Course / Subject Code: DH01077051

Course / Subject Name : Material Management & Inventory Control

w. e. f. Academic Year:	2024 - 2025
Semester:	1
Category of the Course:	Core Course (CC)

<b>Prerequisite:</b>	To Understand hospital material management and inventory control requires a foundational knowledge of several key areas. Firstly, familiarity with basic management principles, particularly those related to supply chain and logistics, is crucial. This includes knowledge of procurement processes, inventory systems, and distribution networks. Secondly, an understanding of healthcare operations is essential, as it provides context for the unique challenges and requirements of managing materials in a hospital setting. This includes knowledge of hospital departments, the flow of medical supplies, and regulatory requirements. Thirdly, basic principles of finance and accounting are important, as they help in managing budgets, cost control, and financial reporting related to inventory. Finally, a basic understanding of information technology systems, particularly those used for inventory management and data analytics, is beneficial. This multidisciplinary knowledge equips individuals with the tools to effectively manage and control hospital inventories, ensuring the availability of necessary supplies while minimizing waste and controlling costs.
<b>Rationale:</b>	Effective hospital material management and inventory control are critical to the efficient functioning of healthcare facilities. Proper management ensures that essential medical supplies, equipment, and pharmaceuticals are available when needed, thereby minimizing delays in patient care and enhancing the overall quality of healthcare services. Furthermore, efficient inventory control helps in reducing wastage and preventing stock outs or overstocking, which can lead to significant cost savings for hospitals. With the rising costs of healthcare and the increasing complexity of hospital operations, optimizing material management becomes even more crucial. Additionally, stringent regulatory requirements necessitate meticulous tracking and documentation of medical supplies, making robust inventory control systems indispensable. By implementing effective material management and inventory control practices, hospitals can improve operational efficiency, ensure compliance with regulations, and ultimately provide better patient care while managing resources more effectively.



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## Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	To study about Material Management department in Hospital & material planning as per various categories (consumables, non-consumables & Others) in the Hospital	Understand
02	To learn about the different procurement methods used for hospital material management & Outsourcing Services applicable in Hospital	Understand & Apply
03	To understand the creation of a purchase request, a comparison of quotes, a purchase order, and a GRN & purchase procedure applicable in Hospital. To be familiar with negotiations, their applications, and the factors that affect them.	Understand
04	To comprehend inventory control and implement various inventory control strategies, as well as to measure those approaches and conduct ongoing reviews of them in everyday hospital operations with various inventory tools & techniques applications.	Understand & Apply
05	To use various methods and procedures that are appropriate for managing hospitals' sub stores and managing the different hospital stores. Should be aware of the features & operations of the hospital pharmacy The Function of the Drug Committee and the Hospital's Drug Formulary	Understand & Apply

\*Revised Bloom's Taxonomy (RBT)

## Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Tutorial / Practical		
				ESE (E)	PA / CA (M)	PA/CA (I)	ESE (V)	
4	0	0	4	50	50	-	-	100

## Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	<b>Principles of Materials Management</b> Definition, Scope, Functions of Material Management, Aims & Objectives of Material Management, Classification of Materials, Importance of Material Management in Hospitals, Concept of Logistic	10	8



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	Management, Material Forecasting, Budgeting, Latest Trends in Material Management		
2.	<p>Purchase Management</p> <p>Definition, Objectives, Purchase Procedure, Selection of Suppliers, Tendering Procedures, Analyzing Bids , Price Negotiations ,Issue of Purchase Orders, Rate Contracts , Follow up actions, Outsourcing Services</p> <p><b>Receipt of Materials</b> Inspection of Materials , Preparation of Defect/Discrepancy Report , Disposal of Rejected items , Stocking of accepted items Accounting of Materials, Letter of Credit</p>	15	12
3.	<p><b>Equipment Planning &amp; Management</b> Benefit of Equipment Management, Components of Management Cycle</p> <p><b>Inventory Control</b> Aims &amp; Objectives, Scope of Inventory Control , Lead Time, Buffer Stock, Reorder Level, Two Bin System, EOQ</p> <p><b>Tools &amp; Techniques of Inventory Control</b> Classification of Inventory, Techniques of Inventory Control, ABC, VED, Other</p>	15	15
4.	<p><b>Store Management</b></p> <p>Store Function, Location &amp; Layout, Standardization, Codification, Physical Distribution, Bin System, Documentation, Condemnation &amp; Disposal, Types of Stores in Hospital, Flow of Goods, LIFO,FIFO, Computerization of Inventory transactions , Security of Stores</p> <p><b>Medical Stores</b> Functions , Storage condition/Monitoring, Expiry Dates &amp; Action , Cold Chain , Role of Review Committee , Hospital Formulary, Obsolescence</p>	15	15



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5.	<p><b>Application of Concept</b></p> <p>All the students of the program will be given practical assignments/Quiz on the application of the above mentioned topics from the syllabus. The applications of the theory concepts would be in the form of Standard Operating Process Making of Material Management, Project on Hospital Stores Function, Hospital Surgical Procedure Package Costing, Presentation, Case Study, Group Project</p>	<b>15</b>	<b>CEC (50 Marks)</b>
<b>Total</b>		<b>60</b>	<b>50</b>

**Suggested Specification Table with Marks (Theory):**

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks (Assessment as per Revised Bloom's Taxonomy Level*)						Total Marks
			RM	UN	AP	AN	EL	CR	
I	Principles of Material Management	07	00	05	03	00	00	00	8
II	Purchase Management in Hospital	08	00	04	04	04	00	00	12
III	Equipment Planning, Inventory Control & Techniques of Inventory Control	07	00	05	05	05	00	00	15
IV	Stores Management & Pharmacy Management	08	00	05	05	05	05	00	15
V	Application of Concept	15	00	00	00	00	00	00	-
<b>Total</b>		<b>60</b>	<b>00</b>	<b>10</b>	<b>20</b>	<b>15</b>	<b>05</b>	<b>00</b>	<b>50</b>

*Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)*

**References/Suggested Learning Resources:**

**(a) Books:**

S. No.	Title of Book	Author	Publication with place, year and ISBN	Edition
1	Handbook of Materials Management	Handbook of Materials Management	Prentice Hall India.	Latest Edition



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2	Purchasing & Materials Management	Purchasing & Materials Management	Prentice Hall India.	Latest Edition
3	Introduction to Materials Management	Introduction to Materials Management	Pearson	Latest Edition
4	Hospital Stores Management	Hospital Stores Management	Jaypee	Latest Edition
5	Purchasing & Material Management for Hospitals	Nitin Johri	Anmol Publication Pvt. Ltd	Latest Edition

**(b) Open source software and website:**

1. <https://www.youtube.com/watch?v=XCvJ0tKOqQs>
2. <https://www.youtube.com/watch?v=ZIwnhjHI3vA>
3. [https://www.youtube.com/watch?v=gc7\\_5SgE5ug](https://www.youtube.com/watch?v=gc7_5SgE5ug)

**Suggested Project List, if any:**

SOP & Policy Making, Hospital Surgical Package Costing, Project on Hospital Stores Function

**Suggested Activities for Students, if any:**

Group Project, Presentation, Case Study

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