OTM-842 Inventory and Warehouse Management

1. Almost all organizations have stocks of one kind or another. Clearly any organization that can achieve the right levels of stock will reduce their costs and thereby increase profits. In order to do this, organizations need to forecast how much stock is required and must also carry safety stocks to ensure no stock outs. As some stock are more important than others, the use of stock classification systems assist in determining priorities. Although not all organizations are in the manufacturing sector, almost all buyers will at some point purchase from manufacturers and so understanding inventory management from a manufacturing perspective is important. Once stock is purchased, it must be stored and managed utilizing a number of principles to ensure stocks are received, stored, issued and accounted for throughout the Inventory Life Cycle.

This course examines logistics systems that support the physical supply of raw and semi-finished materials to a firm, the planning and control of operations, and the delivery of the products or services up to the final customers, with the objective of achieving a sustainable competitive advantage and optimizing the value and the long-term performance of the firm and the supply chain as a whole.

Content

2. Topics covered in this subject are an introduction to the importance of inventory, difference between the western and Japanese approach towards inventory, key performance metrics for inventory, dependent demand and independent demand models, lot sizing techniques, economic order quantity, discount levels, safety stocks, deterministic & stochastic models, inventory policy, service levels, Cycle counting, reorder levels, inventory identification such as SKU's and HS codes, inventory classification techniques. A special emphasis will be made on Inventory management systems

3. **Objectives**

   a. The aim is to get familiar with the physical supply, in-plant movement and storage, and physical distribution that comprise logistics systems in industry.

   b. Topics include facility location, transportation, inventory management, networks, route planning and optimization and various logistics information systems.

Outcomes

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

a. Understand the financial impacts of inventory and the risks in both over and under holding of inventory - the management of inventory, including lead time management, demand planning and interfacing with other functional groups directly and indirectly involved in inventory planning and operations.
b. Understand the importance of effective warehouse management in minimizing the cost associated with the storing, moving and transporting goods into and out of the warehouse storage locations; the importance of reconciled physical count balances and system records and most importantly, the efficient, fast, precise and perfectly-timed issuances of the right quality & quantity of stocks to its intended users.
c. Use advanced techniques in order to reduce inventory and associated storage and handling costs.

5. **Text and reference books**

a. Essentials of Inventory Management (2011) by Max Muller
b. Excellence in Warehouse Management: How to Minimise Costs and Maximise Value (2011) by Stuart Emmett
c. SAP MM INVENTORY MANAGEMENT: Technical Reference and Learning Guide (2014) by P.K. AGRAWAL