

| Course Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Course Title                         | L                | T | P | C        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------|---|---|----------|
| OLMBA607                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Materials Management                 | 3                | 1 | 0 | 4        |
| Pre-requisite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | NIL                                  | Syllabus version |   |   |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      | 1.0              |   |   |          |
| Course Objectives:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                      |                  |   |   |          |
| <div><div></div><div>1. To comprehend and apply principles, concepts, strategies, and techniques pertaining to materials management.</div><div>2. To improve their capacity to lead materials management.</div><div>3. Enhance the performance of materials management.</div><div>4. Have a significant impact on the competitiveness of the supply chain.</div></div>                                                                                                                                                                                                            |                                      |                  |   |   |          |
| Course Outcomes:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                      |                  |   |   |          |
| <div><div></div><div>1. Apply the principles and techniques of materials management, whilst ensuring their congruence with the mission and goals of the organization.</div><div>2. Learn inventory control tools and techniques to improve business competitiveness in the supply chain.</div><div>3. Identify specific and special features of the vendor management for cost effective operations.</div><div>4. Develop the ability to work independently in procurement activities with additional knowledge of quality management and materials handling systems.</div></div> |                                      |                  |   |   |          |
| Module:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Introduction to Materials Management |                  |   |   |          |
| Introduction, Operating Environment, The Role of Inventory in Supply Chain Management, The Effect of IT on Inventory Management, The Elements of Inventory Management, Inventory and Environment. Sales and Operations Plan, Production Planning System, Master Scheduling, Production Activity Control, Inventory control and Classification.                                                                                                                                                                                                                                    |                                      |                  |   |   |          |
| Module:2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Forecasting and Demand Planning      |                  |   |   |          |
| Introduction to Demand, Characteristics of Demand, Principles of Forecasting, Forecasting Techniques, Seasonality, Tracking the Forecast, Collaborative Planning Forecasting and Replenishment (CPFR).                                                                                                                                                                                                                                                                                                                                                                            |                                      |                  |   |   |          |
| Module:3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Procurement & Vendor Management      |                  |   |   |          |
| Foundations of Strategic Sourcing and Supply Management, Supplier Selection, Analytics Hierarchy Process (AHP), Negotiation, Procurement Cost, Vendor Management, Vendor Engagement, Vendor Development, Vendor Rating, Supplier Performance Management, Sustainable Procurement, Import and Export.                                                                                                                                                                                                                                                                              |                                      |                  |   |   |          |
| Module:4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Material Handling System             |                  |   |   |          |
| Definitions and classifications, Unit load concepts, Industrial hand trucks, AGV, Conveyors, Overhead lifting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |                  |   |   |          |
| Module:5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Storage Systems                      |                  |   |   |          |
| Basic Storage Equipment and Methods, Storage Systems, Warehousing, Containers, Packaging and Materials handling, Freight Elevators, Strategic significance of warehousing/distribution centre.                                                                                                                                                                                                                                                                                                                                                                                    |                                      |                  |   |   |          |
| Module:6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Quality Management                   |                  |   |   |          |
| Quality Management and Audit; Supply Quality Management; Inspection, Acceptance Sampling, Quality Control of supplies; Supply Base Integration.                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                  |   |   |          |
| Module:7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Decision Making and IT               |                  |   |   |          |
| Simulation, Information Technology, ERP – Materials Management Module, Metrics & reporting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                      |                  |   |   |          |
| Total Hours of Study:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |                  |   |   | 120 Hrs. |

| Text Book(s)                                 |                                                                                                                           |            |                  |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------|------------------|
| 1.                                           | J.R. Tony Arnold, Stephen N. Chapman, Lloyd M. Clive, (2017), Introduction to Materials Management, 8th edition, Pearson. |            |                  |
| 2.                                           | Russell and Taylor (2015), Operations and Supply Chain Management, 8 <sup>th</sup> Edition, Wiley                         |            |                  |
| Reference Books                              |                                                                                                                           |            |                  |
| 1.                                           | Taylor III, B.W. (2019) Introduction to Management Science, 13 <sup>th</sup> Global Edition, Pearson                      |            |                  |
| 2.                                           | Tate, W.L (2020) Definitive Guide to Supply Management and Procurement, CSCMP                                             |            |                  |
| Mode of Evaluation: Quiz/ Assignment/CAT/FAT |                                                                                                                           |            |                  |
| Recommended by Board of Studies              |                                                                                                                           | 02-11-2023 |                  |
| Approved by Academic Council                 |                                                                                                                           | No. 72     | Date: 13-12-2023 |