

# ISM 205: Supply Chain Management

*Credits: 3*

*Lecture Hours: 48*

## **Course Objectives**

Supply chain management, both in industry and in academia, has grown rapidly over the past several years mainly due to an increase in corporate goals of reducing manufacturing costs and the savings that come from planning and managing the supply chain effectively. This course aims to focusing on the integration of components associated with developing new products, buying materials, transforming them, and shipping them to customers.

## **Course Description**

This course contains introduction, supply management, operations management, process management, distribution and customer relationship management, SC integration and performance measurement.

## **Course Details**

### **Unit 1: Introduction**

**LH 7**

Concept, defining supply chains, objective of SCM, importance of SCM, elements of SCM, decision phases in supply chain, importance of supply chain decisions, process view and examples of supply chains, current trends in SCM.

### **Unit 2: Supply Management**

**LH 7**

Role of SCM in an organization, the purchasing process, sourcing decisions, role of supply base, supplier selection, choosing suppliers, purchasing organization, developing supplier relationships, supplier evaluation and certification, supplier development.

### **Unit 3: Operations Management**

**LH 12**

Role of forecasting in a supply chain, characteristics of forecasts, Demand forecasting, forecasting techniques, collaborative planning, forecasting and replenishment, risk management in forecasting, operations planning , the aggregate production plan, master production scheduling, material requirements planning, capacity planning, distribution requirement planning, the development of enterprise resource planning system, advantages and disadvantages of enterprise resource planning system, concepts and tools of inventory management, inventory models, the role of cycle inventory in a supply chain, , managing multiechelon cycle inventory, estimating cycle inventory-related costs in practice, the role of safety inventory in a supply chain, determining appropriate level of safety inventory.

### **Unit 4: Process Management**

**LH 6**

Lean production and Toyota production system, lean thinking and SCM, the elements of lean, the origins of Six Sigma quality, comparing Six Sigma and SCM, the elements of Six Sigma.

**Unit 5: Distribution and Customer Relationship Management****LH 10**

Concept, the fundamentals of transportation, modes of transportation and their performance characteristics, transportation infrastructure and policies, the role of IT in transportation, risk management in transportation, warehousing and distribution, the impacts of logistics on SCM, reverse logistics, role of customer relationship in SCM, key tools and components of customer relationship management, designing and implementing a successful customer relationship program, recent trends in customer relationship management

**Unit 6: SC Integration and Performance Measurement****LH 6**

Concept, SCM integration model, obstacles to process integration along the supply chain, managing supply chain risk and security, concept of supply chain performance measurement, viewing the supply chain as competitive force, traditional and World-class performance measures, supply chain performance measurement systems, the balanced scorecard.

**Text and Reference Books:**

- Chopra, S. and Meindl, P. Supply Chain Management: Strategy, Planning, and Operation, Pearson
- Wisner, J.D., Tan, K., and Leong, G.K. Principles of Supply Chain Management: A Balanced Approach, South-Western, CENGAGE Learning.
- Fredendall, D. L. Basics of Supply Chain Management, Prentice-Hall.
- Handfield, R. B. and Nichols, I Jr. Introduction to Supply Chain Management, Pearson
- Lu, Dawei, Fundamentals of Supply chain Management, McBook Air Ventus Publishing
- ApSLambert., Douglas M., James R. Stock, and Lisa M. Ellram, Basic concept of Supply Chain Management, Wiley
- Chase, R.B. ,Shankar,R. and Jacobs, F. R. Operations & Supply Chain Management, McGraw-Hill Publishing Company Ltd, New Delhi