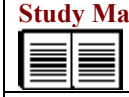
Logistics & Supply Chain (850)

Unit: Procurement & Logistics Management **Exam Paper No.:** 4	**Guided Learning Hours:** 220
Prerequisites: Basic knowledge of business procedures.	**Corequisites:** A Pass or better in Certificate in Business Studies or equivalence.
Aim: This course outlines the role of procurement and logistics in supply management. Logistics can be divided into materials and distribution management. The core of logistics is planning, controlling and implementation. This course focuses on the 7Rs of logistics; getting product(s) in the right quantity, in right condition, at the right time, at the right place, to the right customer and of course, at the right price. Learners will learn the importance and role played by procurement and logistics in the global economy. On completion of the course, learners will fully understand what logistic is, its concepts and how distributors and suppliers can be more efficient and effective; the control of logistics in setting goals, performance, planning and strategy; how manufacturing companies convert raw materials (production) and have the products distributed and transported all over the globe and the procurement, transportation and collaboration processes; including the risks within the supply chain.	
Required Materials: Recommended Learning Resources.	**Supplementary Materials:** Lecture notes and tutor extra reading recommendations.
Special Requirements: None	
Intended Learning Outcomes:	**Assessment Criteria:**
1. Understand the importance of logistics in supply chain value chain creation, its dimensions both at national and international level and the technologies that play a vital role.	1.1 Describe logistics role in manufacturing, inventory and distribution in fulfilling both customer and business needs. 1.2 Explore logistics history over the years. 1.3 Describe dimensions of logistics such as; customer service, inventory management, procurement (supply process), transportation and distribution and storage. 1.4 Be able to explain the functions of distribution and transport related activities. 1.5 Explain 6Rs of reverse/inverse logistics. 1.6 Define and describe goals of performance indicators. 1.7 Assess the importance of outsourcing in logistics. 1.8 Be able to describe Value Network Technology uses, benefits and disadvantages.
2. Understand the importance of strategic planning; including the different levels of planning within the manufacturing system in order to manage demand; ranging from customer order, forecast processes and historic data calculation methods.	2.1 Be able to make strategic plans for manufacturing. 2.2 Demonstrate different manufacturing plans; including Sales and Operations Planning, Master Production Scheduling, Order planning and Production activity control. 2.3 Describe manufacturing planning hierarchy. 2.4 Be able to calculate maximum/normal capacity. 2.5 Demonstrate knowledge of customer orders/reservations, planned production (MSP), Projected Available Balance (PAB) / Projected on hand inventory and Available to Promise (ATP). 2.6 Describe judgmental (qualitative methods) and (quantitative methods) forecast processes and how to make calculations.

	2.7	Evaluate forecast errors in order to identify both random and systematic errors.
	2.8	Be able to differentiate independent vs dependent demand.
	2.9	Demonstrate push vs pull demand.
3. Understand the decisions included in planning when and how much to order; material management, material requirements planning methods and processes of ensuring efficient and effective transportation systems.	3.1	Demonstrate reorder point calculations.
	3.2	Describe how material requirement planning method works.
	3.3	Be able to demonstrate Kanban system.
	3.4	Demonstrate lot size problem, the implications and effective resolution strategies.
	3.5	Explain safety mechanisms to control elements of uncertainty in material flows involving both requirements and supplies.
	3.6	Describe transport consolidation and its effect on delivery lead time, cost, the environment etc.
	3.7	Explore varies ways of dealing with required capacity and available capacity.
	3.8	Describe tracking and tracing characteristics.
	3.9	Explain factors that determines the price of a transport.
4. Understand the procurement process, associated supply chain risks, supply contracts and material procurement financial considerations.	4.1	Differentiate procurement and operational processes.
	4.2	Explore both customer and supplier procurement process.
	4.3	Evaluate supply contracts.
	4.4	Describe procurement Total Cost of Ownership.
	4.5	Explain supplier evaluation process and criterias.
	4.6	Identify complexities, issues and supply chain risks.
	4.7	Describe characteristics of functional products vs innovative products.
5. Understand supply chain negative effects and complexities associated with the supply chain; including the emerging practices to counteract these effects.	5.1	Describe the variations in demand and associated bullwhip effect.
	5.2	Explore fluctuations time line between different stakeholders i.e. from shop to raw material producer.
	5.3	Explain reasons behind cascading effects of bullwhip effect.
	5.4	Highlight the effects of time delays within supply chain and how this can be rectified.
	5.5	Explore long delivery times and lack of delivery precision (precise delivery scheduling).
	5.6	Explain the driving forces towards increased co-operation.
	5.7	Identify supply chain collaboration concepts.
	5.8	Explore supply chain design and risk management strategies.

Methods of Evaluation: A 2½-hour essay written examination paper with 5 questions, each carrying 20 marks. Candidates are required to answer all questions. Candidates also undertake project/coursework in Procurement & Logistics Management with a weighting of 100%.

Recommended Learning Resources: Procurement & Logistics Management

Text Books	• Logistics and Supply Chain Management by Martin Christopher. ISBN-13 : 978-1292083797 • Supply Chain Management: Strategy, Planning, and Operation by Sunil Chopra. ISBN-13 : 978-1292257891 • Global Logistics and Supply Chain Management by John Mangan, Chandra Lalwani, Agustina Calatayud. ISBN-13 : 978-1119702993
Study Manuals 	BCE produced study packs
CD ROM 	Power-point slides
Software 	None