

## Liverpool John Moores University

Title: Logistics Operations and Materials Management  
Status: Definitive  
Code: **5039MAR** (116874)  
Version Start Date: 01-08-2019

Owning School/Faculty: Maritime and Mechanical Engineering  
Teaching School/Faculty: Maritime and Mechanical Engineering

Team	Leader
Jun Ren	Y
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**Academic Level:** FHEQ5      **Credit Value:** 24      **Total Delivered Hours:** 72  
**Total Learning Hours:** 240      **Private Study:** 168

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	33
Tutorial	36

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Exam	60	3
Report	Rpt	Report 1	20	
Report	Rpt	Report 2	20	

### Aims

*The aim is to develop students' appreciation of the workings of logistics and supply chains with particular focus on customer service, together with an appreciation of the impact of e-business technology and how this has redefined supplier-buyer relationships.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Develop an awareness of the elements of logistics, their mutual interaction and with other elements of business activity.
- 2 Show an understanding of the operation of the various forms of logistics systems and the relationships between them.
- 3 Demonstrate an appreciation of some of the analytical and management techniques in current use in these areas.
- 4 Demonstrate understanding of current developments in purchasing, inventory management, production planning, and customer service.
- 5 Appraise the key characteristics of how the above functions form part of a wider supply chain.
- 6 Appraise the effectiveness of a range of case studies in the field of logistics operations and materials management.

## Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Exam	1	3	4	5
Report 1	2			
Report 2	6			

## Outline Syllabus

*Purchasing and procurement management: purchasing strategy and supplier/customer relationships, impact of customer service.*

*Demand management: forecasting, patterns of demand; qualitative and quantitative methods.*

*Material handling and control supplier relationships: the changing nature. The electronic interfaces*

*Master production scheduling: the master scheduling process, rough-cut capacity planning fences, final assembly scheduling.*

*Operations planning: Bill of Material structure and design, ERP, MRP II and Materials requirements planning, scheduling and inventory control.*

*Inventory management: EOQ model, Production model.*

*Lean logistics and agile supply chain: just-in-time logistics, agile supply chain, the culture and manufacturing techniques, kanbans, one-piece flow and set-up time reduction.*

*Warehouse management: warehouse design, location and management, the changing nature. The electronic interfaces*

*Information flow and modelling and its application in logistics and supply chain management.*

## Learning Activities

A programme of lectures, tutorials and case studies. Teaching methods used will include case studies (in groups) with presentations, exercises, lectures by guest speakers.

### **Notes**

The module explores modern logistics and supply chain management principles and provides an understanding of purchasing processes, materials control methods, production planning, inventory management, warehouse management and material handling systems.