

## Liverpool John Moores University

Title: SUPPLY CHAIN MANAGEMENT AND PROCUREMENT  
Status: Definitive  
Code: **5035BEUG** (107241)  
Version Start Date: 01-08-2011

Owning School/Faculty: Built Environment  
Teaching School/Faculty: Isle of Man College

Team	Leader
John Gammon	Y

**Academic Level:** FHEQ5  
**Credit Value:** 12.00  
**Total Delivered Hours:** 26.00  
**Total Learning Hours:** 120  
**Private Study:** 94

### Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	12.000
Tutorial	12.000

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Case study based	70.0	2.00
Report	AS2	Investigative study of prime contracting/framework agreements for major construction client	30.0	

### Aims

*This module examines the principles and practices of supply chain management; specifically it uncovers the supply chain and logistics arrangements of the construction industry. Students will develop an understanding of current and future approaches to supply chain management in the construction industry with an emphasis upon improving productivity, quality and seamless interaction between stages of the design and construction process, and site led delivery.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Analyse the similarities and differences between the construction industry and other process/manufacturing industries and the importance of technological and managerial developments in both.
- 2 Consider how the design, procurement and construction process can be improved and the application of process improvement techniques to eliminate waste, cost overruns and delays.
- 3 Examine the management of risk in the supply chain using various procurement strategies.
- 4 Evaluate the use of bespoke procurement arrangements and supply chains for large construction clients.
- 5 Analyse the remit of the main/principal contractor in respect of supply chain management.

## Learning Outcomes of Assessments

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

EXAM	1	3	5
REPORT	1	2	4

## Outline Syllabus

### 1. Introduction to supply chain arrangements

*Contractor employed subcontractors, specialist subcontractors, named and listed subcontractors, suppliers, manufacturers, prime cost sums. Classification by activities and functions, types of organisations, work carried out, specialisation, trends and developments in practice, effects such as efficiency, effectiveness and economy of the construction process*

### 2. Suppliers and component manufacturers

*Subcontractors: types and functions, specialist and non-specialist firms, suppliers, size, scope, types, products, goods, materials, components, availability of raw materials, labour only firms. Modular assembly, pre-fabrication and systems building: products, trends, development, innovation; work on site, effects of off-site manufacture, assembly on-site, quality, precision*

*Skill requirements: labour needs, materials handling and equipment, training and development, research and innovation practices*

### 3. Procurement methods and arrangements

*Contractual conditions, tendering arrangements, main contract implications, forms and agreements, intentions of parties, commencement and completion, control of the works, payments, insurance, determination.*

*Planning: programming, progressing and control, work packages.*

*Design and Build, Management Contracting, Construction Management, PFI and PPP*

*Framework agreements and Prime Contracting Arrangements. Bespoke client procurement arrangements: Procure21, BAA, Defence Estates*

#### **4. Planning**

*Incorporation of supply chain management within the contractor's overall contract programme, preplanning, short term planning, stages in the planning process, value chains and their importance in the construction process.*

*Purchasing: selection, orders, specification, quality, goods received, standards, ownership of goods and materials, maintenance.*

*Programming: techniques used, bar charts, linked bar charts, network analysis, precedence diagrams, line of balance, co-ordination of firms on site.*

*Progressing: review, recording against the programme, delays, interim payments, cash and trade discounts, retention, final payments, set-off, provisions in the main and subcontract conditions.*

### **Learning Activities**

1. Keynote lectures
2. Literature review based tasks
3. Workshops in tutorial sessions
4. Presentations
5. Assessment by coursework and examination

### **References**

<b>Course Material</b>	Book
<b>Author</b>	Lee, S et. al.
<b>Publishing Year</b>	2005

<b>Title</b>	Elements of Quantity Surveying
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Blackwell
<b>ISBN</b>	1405125632

<b>Course Material</b>	Book
<b>Author</b>	Kirkham, R. J.
<b>Publishing Year</b>	2007
<b>Title</b>	Ferry and Brandon's Cost Planning of Buildings
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Blackwell
<b>ISBN</b>	1405130709

<b>Course Material</b>	Book
<b>Author</b>	Jaggar, D et. al.
<b>Publishing Year</b>	2002
<b>Title</b>	Building Design Cost Management
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Blackwell
<b>ISBN</b>	0632058056

<b>Course Material</b>	Book
<b>Author</b>	Holti, R. et. al.
<b>Publishing Year</b>	0
<b>Title</b>	The handbook of supply chain management
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	CIRIA
<b>ISBN</b>	0-86017-546-4

<b>Course Material</b>	Book
<b>Author</b>	Oakland, J. S. and Marosszeky, M.
<b>Publishing Year</b>	2005
<b>Title</b>	Total Quality in the Construction Supply Chain
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Butterworth-Heinemann
<b>ISBN</b>	0750661852

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## Notes

This module crystallises the theory of supply chain management within the context of the construction industry and equips the student with the ability to understand the

complexities of procurement arrangements. Students completing this module will have sufficient knowledge to understand the dynamics of multifaceted project environments and how effective supply chain management can lead to overall cost, quality and efficiency improvements.