

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

Course Material	Book
Author	Lee, S et. al.
Publishing Year	2005

Title	Elements of Quantity Surveying
Subtitle	
Edition	
Publisher	Blackwell
ISBN	1405125632

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

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

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

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

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.