

Liverpool John Moores University

Title: PRODUCTION MANAGEMENT FOR CONSTRUCTION
Status: Definitive
Code: **4204BEHN** (119871)
Version Start Date: 01-08-2018

Owning School/Faculty: Built Environment
Teaching School/Faculty: Built Environment

Team	Leader
John McLoughlin	Y
Raj Shah	
Sian Dunne	
Wilfred Matipa	

Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 62

Total Learning Hours: 200 **Private Study:** 138

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	36
Tutorial	24

Grading Basis: BTEC

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Report	40	
Exam	AS2	Exam	60	2

Aims

This module aims at providing learners with an understanding of the application of management principles, such as effective communication methods, control and reporting techniques for the construction business. Learners will gain skills in cost forecasting and creating planning and programming charts for construction projects.

Learners will also understand the importance of efficient productivity, whilst addressing quality and environmental issues.

Learning Outcomes

After completing the module the student should be able to:

- 1 Describe the principles and application of effective site management
- 2 Explain the importance of effective communication in planning and resource management
- 3 Be able to apply cost forecasting, control and reporting techniques
- 4 Be able to create planning and programming charts for construction projects
- 5 Summarise how quality issues and environmental considerations are addressed during the production process.

Learning Outcomes of Assessments

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

Report	3	4	
Exam	1	2	5

Outline Syllabus

Principles and application of effective site management

- *Principles of site management: forecasting; planning; organising; motivating; controlling; coordinating; communicating; leadership of teams; management of the workforce and sub-contractors; site induction; training; competence; skill requirements*
- *Application of effective site management to: contractor-employed sub-contractors, specialist sub-contractors, nominated sub-contractors, named sub-contractors, labour-only personnel, artists and tradespeople, nominated suppliers and manufacturers, prime cost sums*

Effective communication in planning and resource management

- *Communication techniques: written; visual; oral; IT*
- *Barriers to effective communication: physical; psychological; intellectual; as applied to site communications e.g. site meetings, site diaries*
- *Planning techniques: programming and progression; sub-contract organisations; key dates and milestones*

Cost forecasting, control and reporting techniques

- *Costing techniques: variance analysis e.g. unit costing, marginal costing, variable costs, standard costing, absorption costing; break-even analysis e.g. estimated costs, target costs, actual costs ;*
- *Forecasting, control and reporting techniques: site cost control; cost forecasting e.g. cash flow, profit, return, cost, value; liquidity e.g. borrowing, working capital,*

profitability

- *Reconciliation: cost and value reconciliation; value-time relationships; cost-time relationships*
- *Purchasing: selection of suppliers and goods; orders; specification; quality; goods received; standards; ownership of goods and materials; maintenance*

Planning and programming charts for construction projects

- *Reasons for planning; types of plan e.g. method statements, pre-contract, pre-tender, project, short-term and long-term plans*
- *Planning tools: type of programmes e.g. bar charts, linked bar charts, network analysis,*
- *Precedence diagrams, line of balance, time-change diagrams*
- *Programming: design of systems; production control; production coordination*
- *Progress: control; implementation; control and coordination of sub-contractors*

Quality Management and Quality Control issues and environmental considerations

- *Quality considerations: e.g. material and workmanship samples; testing of materials and workmanship (including sub-contract suppliers and manufacturers); supervision of own and sub-contracted labour*
- *Environmental considerations: e.g. law, national, local and company policies, strategies for environmental protection during the construction process; environmental impact of construction e.g. materials manufacture, embodied energy, on-site construction, prefabrication*

Learning Activities

Lectures

Tutorials and workshops

Computer based learning for automated planning and costing

Notes

This module facilitates the resourcing of construction activities in general. The module integrates well with construction business issues such as health and safety, project management for construction as well as human resource management. Productivity is central to any business hence the need a practical knowledge of production management that is tailored for construction.