UNIVERSITI TEKNOLOGI MARA

BCM654: PROJECT PLANNING AND CONTROL

Course Name (English)	PROJECT PLANNING AND CONTROL APPROVED
Course Code	BCM654
MQF Credit	4
Course Description	This course introduces to students the scientific approach to the planning, organizing and implementing of construction projects using the appropriate management techniques. Construction Management graduates are expected to carry out managerial roles and the course will be useful to assist them in carrying out their responsibilities diligently and efficiently. The course covers project planning and control, quality control and assurance and site management.
Transferable Skills	Adaption of various techniques in construction management with appropriate techniques of project planning & control. Knowledgeable in site management planning and monitoring of resources. Managing projects according to by-laws and regulations.
Teaching Methodologies	Lectures, Tutorial, Presentation, Computer Aided Learning, Project-based Learning
CLO	CLO1 Construct project work program through appropriate project planning tools to ensure success of construction projects CLO2 Apply appropriate project planning techniques for timely and cost-effective construction projects CLO3 Recommend solution for construction issues using appropriate project planning and monitoring technique CLO4 Organise information for a successful project management
Pre-Requisite Courses	No course recommendations

Topics
1. Construction Project Management : An Overview 1.1) The Construction Project Management Framework 1.2) Construction Industry 1.3) Construction Projects 1.4) Project Development Process 1.5) Project Management 1.6) 1.7) The Concept of Planning 1.8) Planning Process 1.9) Types of planning activities 1.10) Planning Tools and Techniques 1.11) Planning of Construction Projects 1.12) Planning tasks at different stages of the project lifecycle 1.13) Examples of Construction Plans and schedules
2. Project Planning and Control (Principles and Computer Application) 2.1) Method Statement 2.2) Definition 2.3) Types of Method Statement 2.4) Durations of activities 2.5) Time Planning and Scheduling Techniques 2.6) Bar/Gantt Charts 2.7) Critical Path Method (CPM) 2.8) Project Evaluation and Review Technique (PERT) 2.9) Precedence Network / Diagram 2.10) Lines of Balance

3. Cost and Financial Control for Construction Firms
3.1) (Principles and Computer Application)
3.2) Classification of Construction Costs
3.3) Budgets
3.4) Forecasting Cost and Forecasting Income – Standard 'S' Curve
3.5) Contract Budget for Labour, Plant and Preliminaries Control
3.6) Cash Flow – Cash Flow Diagram, 'S' Curve Presentation of Cash
3.7) Flow requirement, Financial Requirements to Fund Cash Flow, Cash Flow Aggregation for Budgeting
3.8) The Effect of Delayed Payment on the Contractor's Cash Requirements
3.9) Monthly Cost Control Procedures
3.10) Weekly Cost Control system

4. Resource Management
4.1) Types of Construction Resources
4.2) Distribution of Resources
4.3) Resource Levelling and allocations
4.4) Managing of Labour
4.5) Managing of Materials
4.6) Managing of Plant and Equipments
4.7) Resource Productivity Control

5. Quality Control and Assurance
5.1) Introduction
5.2) Definition of Quality
5.3) Importance of Quality
5.4) Quality of Conformance
5.5) Inspection
5.6) Quality Control Process

6. Site Management
6.1) Project Award
6.2) Site Layout
6.3) Site establishment, preliminaries and mobilisation
6.4) Temporary buildings
6.5) Workers huts and welfares
6.6) Related By-Laws and other statutory requirements
6.7) Economics and efficiency of layouts
6.8) Manufacturing, handling and storage of materials
6.9) Approval of 'PMA' for lifting equipment
6.10) Short-term planning on site
6.11) Site Management & Administration
6.12) Site office routine, office procedures, clerical functions, storage and retrieval of information
6.13) Insurances, Bonds and Guarantees
6.14) Acquisition of materials and plant
6.15) Payment of wages and other expenses
6.16) Communication on site
6.17) Sub-Contractors and Nominated Sub-Contractors
6.18) Definitions of sub-contractors and nominated sub-contractors
6.19) Sub-letting of work – processes and procedures
6.20) Selection of gangers and workers
6.21) Administer sub-contract work in accordance with the relevant contractual arrangements
6.22) Coordination, supervision and control of sub-contractors and suppliers
6.23) Provide appropriate information to assist in the preparation of claims
6.24) Valuations and Claims
6.25) Interim valuations
6.26) Variations and claims
6.27) Progress claims
6.28) Format used for claims

7. Site safety, By-Laws & Regulations
7.1) OSHA, By-Laws and other statutory requirements such as CIDB Greencard requirements
7.2) By-Laws and Regulations
7.3) The various statutory regulations, by-laws and local authority requirements affecting the site and its activities eg. Nuisances,
7.4) noise, cleanliness, safety, public rights, protection of property etc.
7.5) Procedures for obtaining licenses, permits or approval of works and activities.
7.6) Motivate and Develop Site Personnel
7.7) Personal conflicts
7.8) Trust and support of immediate superiors
7.9) Is money is the only motivator?
7.10) Relationships with colleagues and others who provide useful information
7.11) Organisational and personal development
7.12) Develop oneself within the job role

Assessment Breakdown	%
Continuous Assessment	40.00%
Final Assessment	60.00%

Details of Continuous Assessment

Assessment Type	Assessment Description	% of Total Mark	CLO
Assignment	n/a	10%	CLO4
Simulation Evaluation	n/a	20%	CLO1
Test	n/a	10%	CLO2

Reading List

Reference Book Resources

- **Schexnayder, C. J. & Mayo, R. E. 2004, *Construction management fundamentals*, Boston, Mass.: McGraw-Hill**
- **Richard, F. 2002, *Construction management in practice*, Oxford: Blackwell Science**
- **Pilcher, R. 2000, *Principles of Construction Management 3rd Edition*, McGraw Hill**
- **Harris, F. & Mc Caffer, R. 2001, *Modern Construction Management 5th Edition*, Oxford: Blackwell Science**
- **Tan, A. 1996, *Project Management in Malaysia*, Synergy Books**
- **Oxley, K. 1996, *Management Techniques Applied to the Construction Industry 5th Edition*, Blackwell Science**
- **Calvert, R. E. 1993, *Introduction to Building Management 6th Edition*, Butter-worth - Heinemann**
- **Lockyer, K. 1991, *Critical Path Analysis & Other Project Network Techniques 5th Edition*, Pitman**

Article/Paper List: This Course does not have any article/paper resources

Other References: This Course does not have any other resources