

Construction & Building Engineering Courses (CB)

Construction Management Courses Group

CB 311 – Construction Management 1

COURSE INFORMATION

Course Title: Construction Management 1

Code: CB 311

Hours: Lecture – 2 Hrs. Tutorial – 2 Hrs. Credit –3.

Prerequisite: None

GRADING

Class Performance/Attendance: 10%

Midterm # 1/Assignments – (7th Week): 30%

Midterm # 2/Assignments – (12th Week): 20%

Final Exam: 40%

COURSE DESCRIPTION

The nature of the construction industry, participants of the construction project, management functions, organizational structures, time value of money and interest, cash flow diagram and equivalence, measures of worth, comparison of alternatives, feasibility studies, application of economic analysis principles to the construction industry.

TEXT BOOK

MODERN CONSTRUCTION MANAGEMENT sixth edition by HARRIS, MCCAFFER EDUM-FOTWE. Publisher: BLACKWELL PUBLISHING.

REFERENCE BOOKS

Professional Construction Management by Barrie, D.S. and Paulson, B.C. Publisher: McGraw Hill Inc., N.Y., USA, 1992.

Modern Construction Management by McCaffer, R., Harris, F. and Edum-Fotwe, F. Publisher: McGraw Hill Inc., N.Y., USA, 2004.

COURSE AIM

The course aims at introducing the student to the fundamentals of feasibility analysis of construction projects.

APPENDIX A-81

SPECIFIC OUTCOMES OF INSTRUCTION

The student should know the basics of construction management including organizational concepts, engineering economic analysis, and feasibility studies.

The student will also be provided with the necessary knowledge of organizational concepts and economic analysis, accompanied with practical applications in construction.

COURSE OUTLINE

Week Number 1-3: Introduction to construction management:

- Basic definitions and types of construction projects. The nature of the construction industry.
- Participants in construction projects: The main project participants and teams, their responsibilities and goals. Management functions: The general management functions and their application to construction management.
- Organizational concepts: functional organizations, line and staff organizations, matrix organizations, and simply structured organizations. Aspects, advantages and disadvantages of each.

Week Number 4-5: Introduction to engineering economic analysis:

- Time value of money and interest, simple / compounding interest rates, The principle of discounting.

Week Number 6: Equivalence: Cash flow diagram and principle of equivalence.

Week Number 7: Measures of worth: Net cash flow, present worth, future worth.

Week Number 8: Measures of worth (continued): Annual worth, internal rate of return.

Week Number 9-10: Comparison of alternatives: economic evaluation and comparison of different alternatives.

Week Number 11: Sensitivity analysis: Break even analysis, single parameter sensitivity.

Week Number 12: Introduction to feasibility studies: Definitions and importance of feasibility analysis.

Week Number 13-14: Feasibility studies: Elements of feasibility study, marketing, technical, environmental, economic and financial feasibility.

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Week Number 15: Public projects: the economic evaluation of public construction projects.

Week Number 16: Final Exam.

COURSE COORDINATOR AND DEMAND

Course Coordinator: Dr. Mohamed Emam.

Course Demand: *Required*