



Course Descriptor [COEN280 Construction Methodology]

Proposed Academic Year	2019-2020	Last Reviewed Academic Year	2020-2021
Course Code	COEN280	Course Title	Construction Methodology
Credit hours	3	Level of study	Undergraduate
College / Centre	College of Engineering	Department	Civil & Environmental Engineering
Co-requisites		Pre-requisites	

1. COURSE OUTLINE

[This course is to introduce students the basic principles, techniques, terminology, codes, specifications, communications, and safety issues of the construction industry as well as skills associated with reading and interpreting construction plans.]

2. AIMS

[The purpose of this course is to expose students to various types of construction methodologies that will be encountered in the field and to develop in the students a basic understanding of the uses and management of the different construction methods.]

3. LEARNING OUTCOMES (*Definitive*) and TEACHING, LEARNING and ASSESSMENT METHODS

Learning Outcomes (<i>Definitive</i>)	Teaching and Learning methods (<i>Indicative</i>)	Assessment (<i>Indicative</i>)
Upon successful completion of this course, students will be able to:		
1. demonstrate appropriate knowledge and understanding of construction methods and materials	Lectures	Assignments + Exams
2. demonstrate ability to communicate effectively using technical terms and information obtained from a set of plans and specifications	Lectures, Group work, presentations	Assignments + Exams
3. be aware of professional, ethical, and safety issues and their global impact on the construction industry and society	Lectures	Assignments + Exams
4. learn the importance of having a commitment to	Lectures	Assignments + Exams



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quality, timeliness, and continuous improvement		
5.		

4. ASSESSMENT WEIGHTING

Assessment	Percentage of final mark (%)
Assignment & Participation	20%
Quiz / Case Study	20%
Midterm	20%
Final Exam	40%
TOTAL	100%

5. ACHIEVING A PASS

Students will achieve 3 credit hour for this course by passing ALL of the course assessments (Assignments, Quiz, Midterm and Final examinations) and achieving a minimum overall score of 50.%

NB *Ensure that ALL learning outcomes are taken into account

6. Course Delivery Plan

LECTURE TOPIC	TIME (HOURS)
Syllabus presentation	1.5
General presentation of main topics	1.5
Phases of site investigation	1.5
Process of site investigation	1.5
Safety and security planning and regulations	1.5
Facilities and services	1.5
Earthworks & Excavation-Area calculation	1.5
Earthworks & Excavation-Volume calculation	1.5
Earthworks & Excavation-Excel exercises	1.5
Earthworks & Excavation-Needed resources estimation	1.5
Construction systems	1.5
Construction systems-Case study	1.5
Critical Path Method	1.5
Critical Path Method-Exercise	1.5



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Architectural and Structural Plan	1.5
Structural drawings – Concrete structure	1.5
Steel structure - Basics	1.5
Steel structure drawings	1.5
Repetitive Floor Network-Presentation	1.5
Repetitive Floor Network-Construction Method	1.5
Repetitive Floor Network-Exercise	1.5
Repetitive Floor Network-Case study	1.5
Concrete supply alternatives	1.5
Concrete supply alternatives-Breakeven method	1.5
Exercises and applications	9
TOTAL HOURS	45
Plus RECOMMENDED INDEPENDENT STUDY HOURS	90
TOTAL COURSE HOURS	135

7. RECOMMENDED READING

Core text/s:

Hanizam Awang & Md Azree Othuman Mydin (2016) Construction Methods and Technology, Penerbit Universiti Sains Malaysia

Building Construction: Principles, Materials, and Systems by Madan Mehta, Walter Scarborough, and Diane Armpriest, Pearson Prentice Hall, 2008

Library + online resources:

Francis D. K. Ching (2008) Building Construction Illustrated, 4th edition, Wiley.
<https://www.pdfdrive.com/building-construction-illustrated-4th-edition-e183731129.html>

ANDREW WATTS (2016) MODERN CONSTRUCTION HANDBOOK, FOURTH EDITION, Birkhäuser.

Bernard Vuillerme & Henri Richaud (1995) Chantiers de bâtiment : Préparation et suivi, NATHAN