



Course Descriptor [COEN282 Construction Equipment]

Proposed Academic Year	2015-2016	Last Reviewed Academic Year	2020-2021
Course Code	COEN282	Course Title	Construction Equipment
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 to the evaluation and selection of construction equipment using scientific principles.]

2. AIMS

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

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. Select appropriate construction equipment	Lectures	Assignments + Exams
2. Analyze construction equipment production	Lectures, Group work, presentations	Assignments + Exams
3. Estimate of construction equipment ownership and operating costs	Lectures	Assignments + Exams
4. Properly apply the time value of money to construction equipment applications	Lectures	Assignments + Exams
5. Competent in the economic analysis of equipment alternatives	Lectures, Group work, presentations	Assignments + Exams
6. Understand construction equipment maintenance programs.	Lectures	Assignments + Exams

4. ASSESSMENT WEIGHTING



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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)
Time value of money	3
Ownership and operating cost	6
Cost estimation associated with equipment	6
Fundamentals of earthmoving. Tractors, Loaders, scrapers, excavators, trucks, haulers, and grader	6
Soil compaction, stabilization, and compactors	6
Operational analysis	6
Lifting and loading equipment	6
Equipment fleet management	6
TOTAL HOURS	45
Plus RECOMMENDED INDEPENDENT STUDY HOURS	90
TOTAL COURSE HOURS	135

7. RECOMMENDED READING

Core text/s:

Robert L. Peurifoy and all (2018) Construction Planning, Equipment, and Methods, Ninth Edition, McGraw-Hill Education.

Library + online resources: