

ADDIS ABABA UNIVERSITY
ADDIS ABABA INSTITUTE OF TECHNOLOGY
SCHOOL OF CIVIL AND ENVIRONMENTAL ENGINEERING

Course: - *Construction Equipment, CENG 5213,*

ECTS : 5

CHAPTER 1: INTRODUCTION TO CONSTRUCTION EQUIPMENTS AND PLANTS

2.1 Construction Equipments

2.1.1 Introduction

- ❖ General
- ❖ Classification of Equipments

2.1.2 Earth Work

- ❖ Excavation and soil characteristics

2.1.3 Crane Shovel Family

- ❖ Face Shovel, Drag Line, Clam shells, Hoes

2.1.4 Heavy Earth moving Equipments

- ❖ Excavators, Loaders, Dozers, Scrapers

2.1.5 Grading Equipment

- ❖ Graders

2.1.6 Compaction Equipments

2.1.7 Hauling Equipment

CHAPTER 2: PRODUCTIVITY OF EARTH WORK EQUIPMENTS

2.1 Determination of Production of Equipment

2.2 Productivity of Shovel Family and Excavator

2.3 Productivity of Heavy Earth Moving and Grading Equipment

2.4 Construction Plants (Reading Assignment)

- ❖ Aggregate Production Plants
- ❖ Concrete Batching Plants

CHAPTER 3: CONSTRUCTION EQUIPMENTS MANAGEMENT

3.1 General

3.2 Equipment Planning and Selection

3.3 Operation and Maintenance of Construction Equipments

3.3 Economics of Construction Equipments

References

1. Construction Planning, Equipments and Methods, Peurifoy, 6th edition, McGraw Hill Publishers, 2002.
2. Construction Method and Management, Nunnally, S.W., 7th edition, Pearson Prentice Hall Publishers, 2007.
3. Fundamentals of Earthmoving Equipment, Gashaw Yayehyirad, Mega Publishing, 2009.
4. Construction equipment management for engineers, estimators, and owners, Gransberg, Popescu & Ryan, Taylor & Francis Group, 2006

Assessment: -

Semester Project and Test 50%

Final Exam 50%