CB352 Constructon Materials

COURSE INFORMATION

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
CB251	3	5	4	0	2	3

COURSE AIM

The aim of the course is to familiarize the students with different construction materials and their specifications.

COURSE WEEKLY CONTENTS

1	Terminology and basic geology of construction materials, Specifications and codes – Economy factor.
2	Engineering properties: Strength and deformation characteristics
3	Non-mechanical properties: Weight - Volume relationship, Sieve Analysis, Selection of materials for sustainable constructions.
4	Aggregates in Construction (1,2).
5	Aggregates in Construction (1,2).
6	Hydraulic Cements.
7	Properties of Cement Paste + Midterm Exam
8	Portland cement concrete: Basic ingredients, basic constituent.
9	Proportioning of concrete Mixtures.
10	Concrete Strength and behavior.
11	Concrete Durability.
12	Admixtures in Concrete.
13	Masonry.
14	Wood in Construction
15	Asphalt concrete: proportions, Mix procedures, Engineering properties, Quiz.

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	**20 Midterm**	← 10 MARKS To be freely distributed among possible assessments →					**30**
8 to 12	← 20 MARKS →						**20**
13 to 15	← 10 MARKS →						**10**
16 or 17	**40 Final**						**40**
Total	**Exams**	**Assign.**	**Quizzes**	**Reports**	**Present.**	**Lab.**	100

REFERENCES

Textbook	Materials for Civil and Construction Engineers, M.S. Mamlouk, J. P. Zaniewski, Pearson Education,3rd Edition, 2014.
Other	Materials for civil and Highway Engineers, Derucher,K.N.,Korfiatis, G.P.,and Ezeldin,A.S., Prentice-Hall, Englwood Cliffs,USA, 3rd Edition ,1994. Properties of Concrete, M.Neville, longman and Technical, England, 5th Edition, 2012. Concrete: Structure, properties, and Materials, P.K.Mehta and P.J.Monterio, Prentice-Hall, USA, 2nd Edition, 1993. The Science and Technology of Civil Engineering Materials, J. F. Young, Prentice Hall, Upper Saddle River, USA, 1998. Civil Engineering Materials, Shan Somayaji, Prentice-Hall, Englewood Cliffs, USA, 2nd Edition, 2001.