Faculty of Engineering & Technology

Properties & Strength of Materials

Information :

Course Code :	SCM 215	**Level :**	Undergraduate	**Course Hours :**	2.00- Hours

Department : Department of Architectural Engineering

Instructor Information :

Title	Name	Office hours
Professor	Ahmed Farouk Mohamed Hassan Deifalla	2
Assistant Lecturer	Youssef Ahmed Elsayed Kamaleldin Ahmed Awad	6
Assistant Lecturer	Noura Khedr Abdul raheem Ahmed	

Area Of Study :

Upon successful completion of the course, the student should be able to:
-Have a clear understanding of concrete constituents.
-Differentiate between the different types of each constituent, identify the properties, and be aware of testing methods of each constituent.
-Comprehend the properties and testing methods of each constituent.
-Judge the fresh and hardened concrete quality.
-Overview the different alternatives for specific job conditions.

Description :

Various building materials, their properties, testing and uses, Materials used in engineering products, Standards, Codes and inspections, The development of innovative uses of building materials, Concrete: components, manufacturing, quality control, Partitioning materials: gypsum, lime, timber and bricks, The effects of water on building materials

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Define some of construction materials such as: Portland cement, concrete aggregates, mixing water, and admixture
2 -	List concrete mix design procedures
3 -	List properties of fresh and hardened concrete
4 -	List experimental test methods for concrete and concrete materials
b.Intellectual Skills: :	
1 -	Identify different types of concrete materials, resources, different properties
2 -	Estimate different phases of concrete through its age
3 -	Conduct different concrete mix design methods
4 -	Select the appropriate materials and properties for specific job
c.Professional and Practical Skills: :	
1 -	Perform different mix design methods for concrete

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2 -	Conduct tests on concrete and concrete materials
d.General and Transferable Skills: :	
1 -	Work within constraints of time.
2 -	Manage time and meeting deadlines.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Basic Fundamental	5	3	2
Cement	12	6	6
Aggregates	12	6	6
Fresh Concrete	12	6	6
Hardened Concrete	8	4	4
Building Stones	12	6	6

Teaching And Learning Methodologies :

Class Lectures.

Tutorials.

Lab.

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments.	10.00		
Final Examination	40.00		
Midterms	25.00		
Performance & Participation	10.00		
Quizzes	15.00		

Course Notes :

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Recommended books :

Egyptian Code of Practice.
Concrete Technology, A.M.Neville and J.J.Brooks
Concrete Microstructure, Properties and Materials, P.K. Mehta and Pauli J.M. Monteiro.
Design and Control of Concrete Mixtures, Steven H. Kosmatka, Beatrix Kerkhoff, and William C. Panarese

Periodicals :

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Web Sites :

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