FUTURE UNIVERSITY IN EGYPT
جامعة المستقبل

Faculty of Engineering & Technology

Advanced technology of Construction Materials

Information :

Course Code :	SCM 414	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Department of Structural Engineering & Construction Management

Instructor Information :

Title	Name	Office hours
Professor	Mohamed Abdel Moaty Khalaf Mohamed	13
Professor	Mohamed Abdel Moaty Khalaf Mohamed	13
Assistant Lecturer	Youssef Ahmed Elsayed Kamaleldin Ahmed Awad	4
Assistant Lecturer	Youssef Ahmed Elsayed Kamaleldin Ahmed Awad	4
Assistant Lecturer	Reham Milad Kamel Samaan	3

Area Of Study :

Upon successful completion of this course, the student should be able to:
- Understand the basic concepts and main principles
- Calculate the values of the essential terms

Regarding advanced construction materials fibers & polymers properties fabrication techniques stiffness & strength characteristics flexural strengthening of RC with ACM shear strengthening of RC with ACM axial strengthening of RC with ACM

Description :

The main concern and focus of this course will be about the Advanced concrete technology, Advanced technology of finishing and insulating materials, Adapted technology of alternative building materials for low-cost construction, New developments and innovative uses of construction materials, Miscellaneous non-conventional construction materials and products : refractories, polymers and plastics, injection materials and joint sealants, composite, optical fibers, carbon fibers, Material-related failures of structures, Maintenance and repair techniques of materials in structures.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	a1- Define the main terms of advanced construction materials
2 -	a2- List the main items of fibers & polymers properties
3 -	a3- List the main items of fabrication techniques
b.Intellectual Skills: :	
1 -	b1- Calculate the values of fibers & polymers properties
2 -	b2- Solve problems regarding stiffness & strength characteristics
3 -	b3- Calculate the values of flexural strengthening of RC with ACM
4 -	b4- Calculate the values of shear strengthening of RC with ACM
5 -	b5- Calculate the values of axial strengthening of RC with ACM

Copyright É 2013 [Future University in Egypt]. All rights reserved.

c.Professional and Practical Skills: :	
1 -	c1- Prepare technical reports for fabrication techniques
2 -	c2- Demonstrate presentation regarding flexural strengthening of RC with ACM
3 -	c3- Demonstrate presentation regarding shear strengthening of RC with ACM
4 -	c4- Demonstrate presentation regarding axial strengthening of RC with ACM
d.General and Transferable Skills: :	
1 -	d1- Cooperate and communicate effectively

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
advanced construction materials	10	6	4
fibers & polymers properties	10	6	4
fabrication techniques	10	6	4
stiffness & strength characteristics	10	6	4
flexural strengthening of RC with ACM	10	6	4
shear strengthening of RC with ACM	10	6	4
axial strengthening of RC with ACM	10	6	4
Revision	5	3	2

Teaching And Learning Methodologies :

Interactive Lec.

Discussion

Problem Solving

Report / Present

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final Exam	40.00		
Mid- Exam I, II	30.00		
Quizzes / Assig	15.00		
Report / Present	15.00		

Course Notes :

-

Recommended books :

-

Periodicals :

Copyright É 2013 [Future University in Egypt]. All rights reserved.

-

Web Sites :

-

Copyright É 2013 [Future University in Egypt]. All rights reserved.