FUTURE UNIVERSITY IN EGYPT جامعة المستقبل

Faculty of Engineering & Technology

Design of Massive Irrigation Structures

Information :

Course Code :	SCM 533	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Department of Structural Engineering & Construction Management

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 locks retaining walls elements of dams operation of reservoir concrete dams spillways basins

Description :

Locks: types; planning, filling and emptying systems, design of foundation and retaining walls; dams: purpose, types, annual and long-semester storage, reservoir design and operation, design of concrete dams, earthquake loads, design
of embankment dams, seepage control- spillways: types, hydraulic design, stilling basins: types, effects and design.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Define the main terms of retaining walls
2 -	List the main items of elements of dams
3 -	Explain the principals of operation of reservoir
4 -	Define the main terms of basins
b.Intellectual Skills: :	
1 -	Calculate the values of locks
2 -	Design the elements of retaining walls
3 -	Analyze the system of elements of dams
4 -	Calculate the values of spillways
c.Professional and Practical Skills: :	
1 -	Prepare technical reports for retaining walls
2 -	Draw neat details of concrete dams
3 -	Draw neat details of spillways
d.General and Transferable Skills: :	
1 -	Search for information and self-learning discipline

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
locks	8	6	2
retaining walls	8	6	2
elements of dams	8	6	2
operation of reservoir	8	6	2
concrete dams	8	6	2
spillways	8	6	2
basins	8	6	2
Revision	4	3	1

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		
First Mid-term Exam	15.00		
Quizzes / Assig.	15.00		
Report / Present.	15.00		
Second Mid-term Exam	15.00		

Course Notes :

Handout notes on MOODLE

Recommended books :

"Irrigation and Drainage Engineering", ElSaie Moh. Yasser, Fattoh Ehab, 2004