Faculty of Engineering & Technology

Design of Coastal Protection Works

Information :

Course Code :	SCM 532	**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 hydrodynamics of coastal areas Shoreline changes & erosion hore protection structures off-shore marine structures marine pipelines and cables construction methods & materials environmental impact

Description :

Introduction, Hydrodynamics of coastal areas, Sediment transport, Shoreline changes, Beach erosion, Design of shore
protection structures: marine walls, groins, breakwaters, Off-shore marine structures, Floating structures, Design of non structural beach protection systems, Design of marine pipelines and cables, Selection of construction methods and
type of materials, Environmental impact assessment.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Describe the main concept of hydrodynamics of coastal areas
2 -	Explain the principals of Shoreline changes & erosion
b.Intellectual Skills: :	
1 -	Calculate the values of hore protection structures
2 -	Analyze the system of off-shore marine structures
3 -	Analyze the system of marine pipelines and cables
4 -	Assess issues of construction methods & materials
c.Professional and Practical Skills: :	
1 -	Draw neat details of hore protection structures
2 -	Apply Code provisions regarding off-shore marine structures
3 -	Apply Code provisions regarding marine pipelines and cables
4 -	Demonstrate presentation regarding construction methods & materials
5 -	Prepare technical reports for environmental impact
d.General and Transferable Skills: :	
1 -	Search for information and self-learning discipline

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Hydrodynamics of coastal areas	4	3	1
Shoreline changes & erosion	8	6	2
Shore protection structures	12	9	3
Off-shore marine structures	12	9	3
Marine pipelines and cables	8	6	2
Construction methods & materials	8	6	2
Environmental impact	4	3	1
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 :

"Coastal Engineering ï Waves, Beaches, Wave-Structure Interactions", T. Sawaragi , Elsevier, 1995