Faculty of Engineering & Technology

Introduction to Earthquack Engineering

Information :

Course Code :	SCM 525	**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 characteristics of earthquakes seismic waves response of structures to earthquakes seismic design regulations requirements for different types of buildings applications

Description :

Overview: Characteristics of earthquakes: causes, seismic waves, scales, regionalization, Response of structures to earthquakes, Concept and philosophy of seismic design regulations, Minimum requirements for different types of buildings in seismic codes, Applications.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Define the main terms of characteristics of earthquakes
2 -	Describe the main concept of seismic waves
b.Intellectual Skills: :	
1 -	Analyze the system of seismic waves
2 -	Calculate the values of response of structures to earthquakes
3 -	Solve problems regarding seismic design regulations
c.Professional and Practical Skills: :	
1 -	Apply Code provisions regarding requirements for different types of buildings
2 -	Prepare technical reports for applications
d.General and Transferable Skills: :	
1 -	Search for information and self-learning discipline

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
characteristics of earthquakes	8	6	2
seismic waves	8	6	2
response of structures to earthquakes	8	6	2

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
seismic design regulations	8	6	2
requirements for different types of buildings	8	6	2
applications	16	12	4
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 :

"Structural Dynamics, Theory and Computations", Mario Paz, 2013