FUTURE UNIVERSITY IN EGYPT جامعة المستقبل

Faculty of Engineering & Technology

Civil Engineering

Information :

Course Code :	SCM 217	**Level :**	Undergraduate	**Course Hours :**	2.00- Hours

Department : Department of Electrical Engineering

Instructor Information :

Title	Name	Office hours
Lecturer	HOSAM MOSTAFA MAHMOUD EID HEGAZY	
Lecturer	khaled Mahmoud Abdelaziz Mahmoud Boray	
Assistant Lecturer	Muhammad Diab Saadeldin Abdl aal	
Assistant Lecturer	Noura Khedr Abdul raheem Ahmed	
Teaching Assistant	Mahmoud Mohamed Khalaf Ahmed	

Area Of Study :

Develop the students' knowledge about the definition and basic concept of Surveying.
Prepare students to specify leveling computations and applications.
Teach students how to compute 2D ground coordinates.
Train students to differentiate among multiple types of structures along with all inherent reactions and stability.

Description :

The main purpose and applications of surveying, Different classifications of surveying and its role in engineering projects, Cut/Fill volume computations in longitudinal section applications, basic requirements for 2D ground coordinates computations, Different types of structures along with all possible loads and supports, Internal forces in both beams and frames.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Define all possible surveying instruments and measurements.
2 -	Specify the requirements for leveling observations and computations.
3 -	Specify the Earth works volumes required for longitudinal sections in different projects.
4 -	Differentiate between different types of bearings and coordinates.
5 -	Illustrate the reactions and internal forces subjected to the different types of structures.
b.Intellectual Skills: :	
1 -	Differentiate between different types of surveying instruments.
2 -	Compute the level of any points.
3 -	Manipulate the required data for 2D coordinates computations.
4 -	Interpret variable loads for achieving the stability of all types of structures.

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c.Professional and Practical Skills: :	
1 -	Eliminate the errors in the level measurements.
2 -	Compute the required bearings for coordinates computations.
3 -	Identify different types of loads and internal forces.
d.General and Transferable Skills: :	
1 -	Work in stressful environment and within constraints.
2 -	Communicate effectively.
3 -	Effectively manage tasks, time, and resources.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Definition and classification of surveying	5	4	1
Different types of map scales	3	2	1
Fundamental of leveling instruments, observations and computations	7	4	3
Leveling application in profile	6	4	2
Types of bearings and 2D coordinates computations	6	4	2
Basic concept of structure analysis	5	4	1
Different types of loads and structures	6	4	2
Reactions and internal forces computations for beams	7	4	3

Teaching And Learning Methodologies :

Interactive Lecture
Discussion
Problem-based Learning
Report
Experiential Learning

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments	10.00	15	to assess the ability to solve problems and analyze results independently.
Final Exam	40.00		
First Mid-Term Exam	15.00	7	to assess the ability to solve problems and analyze results independently.
Quizzes	10.00		to assess the ability to solve problems and analyze results independently.
Reports	10.00		
Second Mid-Term Exam	15.00	11	to assess the ability to solve problems and analyze results independently.

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Recommended books :

1. John Uren and Bill Price, Surveying for Engineers, 5th Edition, 2010, Macmillan International Higher Education.
2. Russell C. Hibbeler, Mechanics of Materials, 10th Edition, 2017, ISBN-13: 978-0134319650

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