

## 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 :**

"Definition and basic concept of Surveying.  
 "Leveling computations and applications.  
 "Theodolite adjustment and measurements.  
 "Different types of structures along with all inherent reactions and stability.

**Description :**

Types and usage of buildings: concrete, metallic, Construction materials and Specifications, Types of walls and ceilings, Foundations, Design methods of machine base and foundations, First principles of geodetic surveying, Surveying equipment, Leveling methods, Longitudinal and transverse contour sections.

**Course outcomes :**

**a. Knowledge and Understanding: :**

1 -	Define all possible surveying instruments and measurements.
2 -	Specify the requirements for leveling observations and computations.
3 -	Compute the Earth works volumes for longitudinal sections in different projects.
4 -	Differentiate between different methods of measuring and computing both horizontal and vertical angles by theodolite.
5 -	Compute the reactions and internal forces subjected to the different types of structures.

**b. Intellectual Skills: :**

1 -	Ability to differentiate between different types of surveying instruments.
2 -	Ability to compute the level of any point.
3 -	Ability to measure both horizontal and vertical angles and eliminating any associated errors
4 -	Ability to deal with all loads for achieving the stability of structures.

**c. Professional and Practical Skills: :**

1 -	Ability to eliminate the errors in the both level and theodolite measurements
2 -	Ability to distinguish different types of loads and forces.

**d. General and Transferable Skills: :**

1 -	Requirements for level and theodolite measurements.
2 -	Capability of minimizing the effect of errors in surveying measurements.
3 -	Capability of specifying the requirements for structure stability.

**Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
Definition and classification of surveying	2	2	
Fundamental of leveling instruments, observations and observations	6	6	
Leveling application in profile	4	4	
Theodolite measurements for both horizontal and vertical angles	4	4	
Basic concept of structure analysis	2	2	
Different types of loads and structures	2	2	
Reactions and internal forces computations for beams and frames	6	6	

**Teaching And Learning Methodologies :**

Class Lectures
tutorial

**Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
Final Exam	40.00	15	to assess understanding and scientific knowledge.
Mid-Term 1	15.00	7	to assess the ability to solve problems and analyze results independently.
Mid-Term 2	15.00	11	to assess the ability to solve problems and analyze results independently.
Performance	10.00	14	to assess the performance of the students through overall course
Quiz 1 & Assignment 1	10.00	5	to assess the ability to solve problems and analyze results independently.
Quiz 2 & Assignment 2	0.00	9	to assess the ability to solve problems and analyze results independently.