

**Faculty of Engineering & Technology**

**Surveying**

**Information :**

**Course Code :** SCM 223

**Level :** Undergraduate

**Course Hours :** 2.00- Hours

**Department :** Department of Architectural Engineering

**Instructor Information :**

Title	Name	Office hours
Associate Professor	Ahmed Emad Hafez Mustafa Raghib	11
Assistant Lecturer	Ahlam Ibrahim Sadek Elgendy	1

**Area Of Study :**

By the end of the course the students will be introduced to:

- Different units systems and how to transform among them.
- Distance measurements operations and its usage in mapping.
- Scales used in mapping.
- Surveying application in mapping.
- Leveling process.
- Angular measurements using theodolite.
- Theodolite application through Tacheometry.

**Description :**

Basic elements of surveying and their architectural applications, Plotting scales, verniers, linear of angular and simple angular measurement devices, Chain surveying, Leveling & theodolites, Map drawing, Photogrammetry and its architectural applications.

**Course outcomes :**

**a. Knowledge and Understanding: :**

1 -	Define basic concepts of surveying operations.
2 -	Adequate knowledge of basic surveying instruments.

**b. Intellectual Skills: :**

1 -	Ability to derive various solutions for distance measurement obstacles.
2 -	Capability to differentiate between mapping scales.
3 -	Usage of surveying for mapping purposes.
4 -	Ability to analyze leveling data for elevation calculation.
5 -	Ability to asses angular measurements.

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

1 -	Ability to distinguish distance measurement tools and instruments.
2 -	Ability to identify different types of surveying levels.

3 -	Ability to categorize surveying level and theodolite screws and parts.
4 -	Ability to handle and practically work with the level and theodolite.
<b>d.General and Transferable Skills: :</b>	
1 -	The skill and gift of working in team.
2 -	Writing and presentation of surveying observations and results.

<b>Course Topic And Contents :</b>			
<b>Topic</b>	<b>No. of hours</b>	<b>Lecture</b>	<b>Tutorial / Practical</b>
Introduction.	4	2	2
Distance measurement operations.	10	5	5
Surveying for mapping.	6	3	3
Usage of scales for mapping.	4	2	2
Coordinate Computation.	4	2	2
Leveling process.	12	6	6
Basic Concept of Theodolite.	4	2	2
Angular measurements using theodolite.	4	2	2

<b>Teaching And Learning Methodologies :</b>
Class Lectures.
Tutorials.
Practicals.
Presentations.

<b>Course Assessment :</b>			
<b>Methods of assessment</b>	<b>Relative weight %</b>	<b>Week No</b>	<b>Assess What</b>
Final Examination.	40.00		
Mid Term Examinations.	20.00		
Practical Examination.	10.00		
Semester Work.	30.00		

<b>Course Notes :</b>
No Course Notes.

<b>Recommended books :</b>
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<b>Periodicals :</b>
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**Web Sites :**

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