

**Faculty of Engineering & Technology**

**Planimetric Surveying 1**

**Information :**

**Course Code :** SCM 221

**Level :** Undergraduate

**Course Hours :** 2.00- Hours

**Department :** Department of Structural Engineering & Construction Management

**Instructor Information :**

Title	Name	Office hours
Lecturer	Bahaa Aly Abd El Rahman Ahmed Shaheen	

**Area Of Study :**

- Conduct distance measurement operations and their usage in mapping.
- Use surveying instruments in mapping and various area computation techniques.
- Coordinate computations and manipulations.
- Compute angular measurements using theodolite and Traverse computation.

**Description :**

Distance measurements and their corrections, Surveying operations using distance measurements, Area computations, Leveling, Grid leveling, Contour maps, Profiles, Cross sections, Volume computations, Angle measurements using theodolites.

**Course outcomes :**

**a. Knowledge and Understanding: :**

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|-----|---|
| 1 - | Define basic concepts of surveying operations.                    |
| 2 - | Recognize primary surveying applications in engineering projects. |
| 3 - | Gather knowledge of commonly used surveying instruments.          |
| 4 - | Recall Surveying as a mapping tool.                               |

**b. Intellectual Skills: :**

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|-----|--|
| 1 - | Derive different solutions for distance measurement obstacles. |
| 2 - | Differentiate between area computational techniques            |
| 3 - | Assess and correct angular measurements.                       |
| 4 - | Use surveying for mapping purposes and scales.                 |
| 5 - | Handle coordinates and bearings.                               |
| 6 - | Handle traverse calculations.                                  |

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

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|-----|---|
| 1 - | Distinguish distance measurement tools and instruments. |
| 2 - | Categorize surveying theodolite screws and parts.       |

3 -	Handle and practically work with the theodolite.
4 -	Ability to handle and practically work with the level and theodolite
<b>d.General and Transferable Skills: :</b>	
1 -	Lead teams effectively
2 -	Work under pressure

<b>Course Topic And Contents :</b>			
<b>Topic</b>	<b>No. of hours</b>	<b>Lecture</b>	<b>Tutorial / Practical</b>
Introduction	3	1	1
Distance measurement operations	8	3	2
Usage of scales for mapping	3	1	1
Surveying for mapping	5	2	1
Computation of coordinates	3	1	1
Area Computation	5	2	1
Basic Concept of Theodolite	3	1	1
Angular measurements using theodolite	8	2	4
Traverse computations	7	2	3

<b>Teaching And Learning Methodologies :</b>
Lectures
Tutorials
practicals

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

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