

Faculty of Engineering & Technology

Planimetric Surveying 2

Information :

Course Code : SCM 222

Level : Undergraduate

Course Hours : 2.00- Hours

Department : Department of Structural Engineering & Construction Management

Area Of Study :

- Scales used in mapping.
- Surveying application in mapping.
- Coordinate computations and manipulations.
- Angular measurements corrections using theodolite.
- Theodolite application through Tacheometry.
- The total station as a powerful surveying tool.

Description :

Traverse, Tachometry, Surveying using plain table, Topographic surveying, Mapping, Horizontal and vertical curves layout, Engineering projects layout, Accuracy of surveying measurements, Probability theory.
Prerequisites : SCM 221

Course outcomes :

a.Knowledge and Understanding: :

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| 1 - | Define main concepts of surveying computations. |
| 2 - | - Adequate knowledge of commonly used surveying instruments. |
| 3 - | - Surveying as a mapping tool. |

b.Intellectual Skills: :

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| 1 - | Capability to differentiate between mapping scales. |
| 2 - | Usage of surveying for mapping purposes. |
| 3 - | Handling of coordinates and bearings. |
| 4 - | - Dealing with traverse calculations. |
| 5 - | Ability to assess and correct angular measurements. |
| 6 - | Fair knowledge of the total station. |

c.Professional and Practical Skills: :

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| 1 - | - Ability to categorize theodolite screws and parts. |
| 2 - | Ability to handle and practically work with the theodolite. |
| 3 - | Ability to classify and handle various kinds of total stations . |

d.General and Transferable Skills: :

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| 1 - | The skill and gift of working in team. |
| 2 - | Writing and presentation of surveying observations and results. |

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Angular measurements using theodolite	10	1	4
Computation of coordinates	4	1	1
Usage of scales for mapping	4	1	1
Surveying for mapping	6	2	1
Traverse computations	8	2	2
Theodolite Application - Tacheometry	6	1	2
Basic Concept of Total Station	2	1	
Theory of errors	4	2	

Teaching And Learning Methodologies :

4.1- Class Lectures

- Tutorials

Practicals

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
é Quizzes	5.00	3	
é Quizzes	5.00	9	
é 1st Mid term Exam	20.00	6	
é 2nd Mid term Exam	20.00	11	
Final Exam	40.00	15	

Course Notes :

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Recommended books :

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Periodicals :

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Web Sites :

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