

**GOVT. POLYTECHNIC MAYURBHANJ**  
**LESSON PLAN- 2022/23 (SUMMER)**

Discipline : CIVIL		Semester: 4th		Name of the Teaching Faculty : SUBHASHMITA NAIK		
Subject : LAND SURVEY-I (TH.3)		No. of Days / per week class allotted : 02		Semester From date : 14.02.2023 To Date : 23.05.2023		
MONTH	Week	Day	Unit	Topics		
<b>FEBRUARY</b>	3RD	2ND	1.1 & 1.2	<b>UNIT-I INTRODUCTION TO SURVEYING, LINEAR MEASUREMENTS:</b> Surveying: Definition, Aims and objectives. Principles of survey-Plane surveying- Geodetic Surveying- Instrumental surveying.		
		1ST	1.3 & 1.4	Precision and accuracy of measurements, instruments used for measurement of distance, Types of tapes and chains. Errors and mistakes in linear measurement – classification, Sources of errors and remedies.		
	4TH	2ND	1.5	Corrections to measured lengths due to-incorrect length, temperature variation, pull, sag, numerical problem applying corrections		
		1ST	1.5	numerical problem applying corrections		
	5TH	2ND	<b>UNIT-II CHAINING AND CHAIN SURVEYING :</b>		Equipment and accessories for chaining. Ranging – Purpose, signaling, direct and indirect ranging, Line ranger – features and use, error due to incorrect ranging.	
			2.1 & 2.2	Methods of chaining –Chaining on flat ground, Chaining on sloping ground – stepping method, Clinometer-features and use, slope correction.		
		1ST	2.3	Setting perpendicular with chain & tape, Chaining across different types of obstacles –Numerical problems on chaining across obstacles.		
		3rd	2.4	problems on chaining across obstacles.		
	<b>MARCH</b>	1ST	2ND	2.4	problems on chaining across obstacles.	
			1ST	2.5	Purpose of chain surveying, Its Principles, concept of field book. Selection of survey stations, base line, tie lines, Check lines.	
		2ND	3rd	2.7	Offsets – Necessity, Perpendicular and Oblique offsets, Instruments for setting offset – Cross Staff, Optical Square.	
				2.8	Errors in chain surveying – compensating and accumulative errors causes & remedies, Precautions to be taken during chain surveying.	
<b>CLASS TEST-1</b>						
3RD		<b>UNIT-III ANGULAR MEASUREMENT AND COMPAS SURVEYING :</b>		Measurement of angles with chain, tape & compass. Compass – Types, features, parts, merits & demerits, testing & adjustment of compass		
		2ND	3,1 & 3.2	Designation of angles- concept of meridians – Magnetic, True, arbitrary; Concept of bearings – Whole circle bearing, Quadrantal bearing, Reduced bearing, suitability of application, numerical problems on conversion of bearings		
4TH		1ST	3.3	Use of compasses – setting in field-centering, leveling, taking readings, concepts of Fore bearing, Back Bearing, Numerical problems on computation of interior & exterior angles from bearings.		
	2ND		3.4			

		1ST	3.5	Effects of earth's magnetism – dip of needle, magnetic declination, variation in declination, numerical problems on application of correction for declination.	
				<b>INTERNAL ASSESSMENT</b>	
	5TH	2ND	3.6	Errors in angle measurement with compass – sources & remedies.	
1ST		3.7	Principles of traversing – open & closed traverse, Methods of traversing.		
APRIL	2ND	2ND	3.8	Local attraction – causes, detection, errors, corrections, Numerical problems of application of correction due to local attraction.	
		1ST	3.8	problems of application of correction due to local attraction.	
	3RD	2ND	3.8	problems of application of correction due to local attraction.	
		1ST	3.9	Errors in compass surveying – sources & remedies. Plotting of traverse – check of closing error in closed & open traverse	
	4TH	2ND	3.9	Bowditch's correction & problem	
		1ST	4.1	UNIT-III <b>MAP READING CADASTRAL MAPS &amp; NOMENCLATURE:</b> Study of direction, Scale, Grid Reference and Grid Square Study of Signs and Symbols 4.2 Cadastral Map Preparation Methodology	
	5TH	2ND	4.2	Cadastral Map Preparation Methodology	
		1ST	4.3 & 4.4	Unique identification number of parcel 4.4 Positions of existing Control Points and its types	
	MAY	1ST	2ND	4.5	Adjacent Boundaries and Features, Topology Creation and verification.
			1ST		<b>CLASS TEST-2</b>
2ND		2ND		Numerical problem solved	
		1ST		Numerical problem solved	
3RD		2ND		Revision	
		1ST		Revision	
4TH		2ND		Revision	
		1ST		Revision	

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