

GOVT. POLYTECHNIC MAYURBHANJ

LESSON PLAN- 2022/23 (SUMMER)

Discipline : CIVIL ENGG.		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	
			UNIT-I	INTRODUCTION TO SURVEYING, LINEAR MEASUREMENTS:	
FEBRUARY	3RD	2ND	1.1 & 1.2	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	UNIT-II	CHAINING AND CHAIN SURVEYING :	
			2.1 & 2.2	Equipment and accessories for chaining. Ranging – Purpose, signaling, direct and indirect ranging, Line ranger – features and use, error due to incorrect ranging.	
		1ST	2.3	Methods of chaining –Chaining on flat ground, Chaining on sloping ground – stepping method, Clinometer-features and use, slope correction.	
		3rd	2.4	Setting perpendicular with chain & tape, Chaining across different types of obstacles –Numerical problems on chaining across obstacles.	
	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.	

MARCH	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.
				CLASS TEST-1
	3RD		UNIT-III	ANGULAR MEASUREMENT AND COMPAS SURVEYING :
		2ND	3,1 & 3.2	Measurement of angles with chain, tape & compass. Compass – Types, features, parts, merits & demerits, testing & adjustment of compass
		1ST	3.3	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	2ND	3.4	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.
		1ST	3.5	Effects of earth's magnetism – dip of needle, magnetic declination, variation in declination, numerical problems on application of correction for declination.
				INTERNAL ASSESSMENT
	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
		UNIT-III		MAP READING CADASTRAL MAPS & NOMENCLATURE:

	7TH	1ST	4.1	Study of direction, Scale, Grid Reference and Grid Square Study of Signs and Symbols 4.2 Cadastral Map Preparation Methodology
		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		CLASS TEST-2
	2ND	2ND		Numerical problem solved
		1ST		Numerical problem solved
	3RD	2ND		Revision
		1ST		Revision
	4TH	2ND		Revision
		1ST		Revision