



**GOVERNMENT POLYTECHNIC DARLIPALI, SUNDARGARH**


ସରକାରୀ ବହୁକୃତ ଅନୁଷ୍ଠାନ ଦଲିପାଲି, ସୁନ୍ଦରଗଡ଼  
GOVERNMENT OF ODISHA | ଓଡ଼ିଶା ସରକାର


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**LESSON PLAN**

Discipline: Mining Engineering			Semester: 4th		Name of the Teaching faculty: Ghanshyam Dhurua
Subject: Mine Survey-II Code: MIEPE202 (TH:1)			No of Days/Week class allotted: 3		Semester from Date: 22/12/2025 to 18/04/2025 No of weeks: 17 No. of Period Available: 45
Month	Week	No of periods available	Class Day	Unit	Theory topics to be covered
DEC	1	3P	1	I	Introduction to syllabus & Subject Tachometry Intro: Stadia and its principle, Diaphragm, reticules.
			2	I	Instruments: Tacheometer features, instrument constants.
			3	I	Calculations (1): Height and distance from stadia intercepts (Horizontal).
	2	3P	4	I	Calculations (2): Height and distance (Inclined/Depression).
			5	I	Tangential Systems: Principles and methods.
			6	I	Movable Hair Method: Introduction and application.
JAN	3	3P	7	I	Advanced Tachometry: Tangential system problems.
			8	I	Practice: Numerical problems on Stadia method.
			9	I	Review Unit I: Summary and Quiz on Tachometry.
	4	2P	10	I/II	Unit I Wrap-up: Final doubts on Tachometry.
			11	II	Triangulation: Principles, classification (Primary/Secondary/Tertiary).
			12	II	Field Work: Reconnaissance survey, station selection.
	5	3P	13	II	Angle Measurement (1): Reiteration method.
			14	II	Angle Measurement (2): Repetition method.
			15	II	Base Line: Measurement using EDM.
6	2P	16	II	Tape Corrections: Corrections for base line measurement.	
		17	II	Permanent Stations: Triangulation station of permanent nature.	
		18	II	Problems: Numerical problems on Tape corrections.	
FEB	7	3P	19	II	Class test-I & Review Unit II: Summary of Triangulation/Trilateration.
			20	III	Correlation Intro: Direct correlation by traversing and optical methods.
			21	III	Shaft Orientation (1): Orientation by wires in two shafts.
	8	3P	22	III	Shaft Orientation (2): Correlation by wires in vertical shafts.
			23	III	Weissbach Method: Weissbach triangle concept & calculation.
			24	III	Weiss Quadrilateral: Methods and application.
	9	3P	25	III	Co-planning: Co-planning and alignment methods.
			26	III	Magnetic Correlation: Precise magnetic correlation methods.

	10	3P	27	III	Problems: Numerical problems on Correlation/Weissbach.
			28	III	Advanced Problems: Complex correlation scenarios.
	11	1P	29	III	Review Unit III: Assessment on Correlation methods.
			30	IV	Curves Intro: Elements of curves, Designation of curves.
	12	3P	31	IV	Curve Types: Simple, compound, and reverse curves.
			32	IV	Setting Out (1): Surface/Underground by chords and offsets. Setting Out (2): Setting out by chords and angle.
			33	IV	Setting Out (3): Tangent and offset, plate layers method.
	13	3P	34	IV	Instrumental Setting Out: Chain and one theodolite method. Two Theodolites: Setting out using two theodolites.
			35	IV	Advanced Curves: Super elevation, transition curves. Introduction and setting out.
			36	IV	Class Test-2 & Review Unit IV: Practice problems on Curves.
	14	3P	37	V	Stope Surveying: Tape triangulation, Instrumental survey.
			38	V	Stope Plans: Stope face, Preparation of stope plans.
	15	2P	39	V	Area Extraction: Area of extraction by Planimeter.
			40	V	Calculations: Calculation of triangle thereof.
			41	V	Modern Survey: GPS & Total Station basic principles.
	16	3P	42	V	DGPS & Review: Introduction to DGPS / Course Wrap-up.
			43	V	VST-1
			44	V	VST-2
	17	2P	45	V	Revision & Previous year question & answer discussion
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 Prepared By.  
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