

Lesson Plan on Land Survey Practice-II (S-26)

Total Contact Hours: 75 Hours

Weekly Hours: 5 Hours

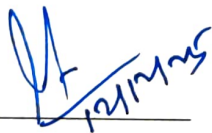
Duration: 15 Weeks

Faculty- Sri Amit Kumar Sahu and Manoranjan Patra

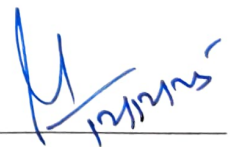
Week	Hours	Unit / Topic Covered	Practical / Activity Details
Week 1	5	Unit 1: Trigonometrical Surveying & Tacheometry	Introduction to trigonometrical surveying, principles, instruments used, determination of height of objects whose bases are accessible
Week 2	5	Determination of height of objects	Field observation for height measurement of 3 objects, calculation of angles, distances and elevations
Week 3	5	Determination of Stadia Constants	Study of tacheometer, stadia hairs, determination of multiplying constant (K) and additive constant (C)
Week 4	5	Stadia Method	Measurement of horizontal distance and elevation using vertical staff by stadia method; field calculations
Week 5	5	Unit 2: Setting Out Curves & Site Surveying	Introduction to simple circular curves, elements of curves, setting out curves by offsets from long chord
Week 6	5	Setting out simple circular curves	Setting out curves by offsets from tangent and offsets from chords produced
Week 7	5	Rankine's Method	Setting out circular curve by tangent angle (deflection angle) method; calculation and field procedure
Week 8	5	Site Surveying	Setting out center line and foundation width of building from given plan; practical layout work

Week 9	5	Foundation & Plot Layout	Setting out foundation line for culvert; dividing an area into plots of given size
Week 10	5	Unit 3: Study of Maps & Map Series	Study and interpretation of physical map, topographic map, road map and political map
Week 11	5	Map Analysis	Study of economic & resources map, thematic map, climate map, open series map and defense series map
Week 12	5	Unit 4: GPS, DGPS & ETS	GPS concepts, GPS signals, errors, positioning methods; introduction to DGPS and applications
Week 13	5	DGPS & ETS Practical	Base station setup, rover GPS setup, downloading and processing GPS data; export of GPS data
Week 14	5	Electronic Total Station (ETS)	Distance measurement, angle measurement, leveling, position determination, reference networks, errors and accuracy
Week 15	5	Unit 5: GIS & Map Preparation Using GIS	Components of GIS, spatial and attribute data, database/map/model view, spatial data model, adding data in ArcMap, layer editing, layout preparation and final map generation

Faculty Civil: _____


12/12/25

HOD Civil: _____


12/12/25