

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN



LESSON PLAN

SUBJECT: LAND SURVEY II (TH 1)

FACULTY: SHRI KANIT PALAKIA

ACCADEMIC SESSION: 2022-23

SEMESTER: 6TH

SEC: C

Sd/-
H O D (Civil Engg.)

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Discipline: Civil Engineering	Semester: 6th (C)	Name of the teaching faculty: Shri Kanit Palakia	
Subject: Land Survey II	No of days per week class allotted: 05 periods/week (Mon, Wed, Thu, Fri and sat-1 period each)	Semester : From date: 14-02-2023 to date : 23-05-2023 No of weeks: 15 weeks	
Week	Class date	No of Period Available	Topics to be Covered
1ST	15/02/2023	1	1.1.Principles
	16/02/2023	1	1.1.stadia constants determination
	17/02/2023	1	1.2. Stadia tacheometry with staff held vertical and with line of collimation horizontal
2ND	20/02/2023	1	1.2.Stadia tacheometry with staff held vertical and with line of collimation inclined
	22/02/2023	1	1.2.Stadia tacheometry with staff held vertical and with line of collimation inclined
	23/02/2023	1	Numerical problems
	24/02/2023	1	Numerical problems
	25/02/2023	1	1.3. Elevations and distances of staff stations – numerical problems
3RD	27/02/2023	1	Numerical problems
	01/03/2023	1	2.1.compound, reverse and transition curve,
	02/03/2023	1	Purpose & use of different types of curves infield
	03/03/2023	1	2.2.Elements of circular curves
	04/03/2023	1	Numerical problems
4TH	06/03/2023	1	Numerical problems
	09/03/2023	1	2.3.Preparation of curve table for settingout 2.4.Setting out of circular curve by chain and tape and by instrument angular methods (i) offsets from long chord
	10/03/2023	1	Setting out of circular curve by (ii) Successive bisection of arc,
	11/03/2023	1	(iii) Offsets from tangent

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5TH	13/03/2023	1	Setting out of circular curve by(iv)offsets from chord produced,
	15/03/2023	1	(v) Rankine's method of tangent angles (No derivation)
	16/03/2023	1	2.5. Obstacles in curve ranging – point of intersection inaccessible Numerical problems
	17/03/2023	1	3.1.Fractional or Ratio Scale, Linear Scale, Graphical Scale 3.2.What is Map
	18/03/2023	1	3.3. Map Scale and Map Projections
6TH	20/03/2023	1	3.3How Maps Convey Location and Extent 3.4.How Maps Convey characteristics of features 3.5.How Maps Convey Spatial Relationship
	22/03/2023	1	3.6.Classification of Maps 3.6.1.Physical Map 3.6.2Topographic Map
	23/03/2023	1	3.6.3.RoadMap 3.6.4.Political Map 3.6.5.Economic &Resources Map
	24/03/2023	1	Class Test
	25/03/2023	1	3.6.6.Thematic Map 3.6.7.ClimateMap
7TH	27/03/2023	1	4.1.Open Series map 4.2.Defense Series Map
	29/03/2023	1	4.3.Map Nomenclature 4.3.1QuadrangleName
	31/03/2023	1	4.3.2. Latitude, Longitude, 4.3.2. UTM
8TH	03/04/2023	1	4.3.3. Contour Lines 4.3.4.Magnetic Declination
	05/04/2023	1	4.3.5.Public Land Survey System
	06/04/2023	1	4.3.6.Field Notes
	08/04/2023	1	5.1.Aerial Photography:
9TH	10/04/2023	1	5.1.1.Film, Focal Length, Scale
	12/04/2023	1	5.1.2. Types of Aerial Photographs (Oblique, Straight)
	13/04/2023	1	5.2.Photogrammetry: 5.2.1.Classification of Photogrammetry
	15/04/2023	1	5.2.2. Aerial Photogrammetry

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
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LESSON PLAN

10TH	17/04/2023	1	5.2.3. Terrestrial Photogrammetry
	19/04/2023	1	5.3. Photography process 5.3.1. Acquisition of Imagery using aerial and satellite platform
	20/04/2023	1	5.3.2. Control Survey 5.3.3. Geometric Distortion in Imagery
	21/04/2023	1	5.3.3. Application of Imagery and its support data orientation and triangulation stereoscopic measurement
11TH	24/04/2023	1	5.4. DTM/DEM Generation 5.5. Ortho Image Generation
	26/04/2023	1	6.1. Principles, features and use of (i) Micro-optic theodolite, digital theodolite
	27/04/2023	1	6.2. Working principles of a Total Station (Set up and use of total station to measure angles, distances of points under survey from total station and the co-ordinates (X, Y & Z or northing, easting, and elevation) of surveyed points relative to Total Station position using trigonometry
	28/04/2023	1	INTERNAL ASSESSMENT
	29/04/2023	1	INTERNAL ASSESSMENT
12TH	01/05/2023	1	Triangulation, Distances of points under survey from total station and the co-ordinates (X, Y & Z or northing, easting, and elevation) of surveyed points relative to Total Station position using trigonometry and triangulation.
	03/05/2023	1	6.2 Continue.....
	04/05/2023	1	7.1. GPS: - Global Positioning 7.1.1. Working Principle of GPS, GPS Signals,
	06/05/2023	1	7.1.2. Errors of GPS, Positioning Methods
13TH	08/05/2023	1	7.2. DGPS: - Differential Global Positioning System 7.2.1. Base Station Setup 7.2.2. Rover GPS Setup 7.2.3. Download, Post-Process and Export GPS data 7.2.4. Sequence to download GPS data from flashcards

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			7.2.5.Sequence to Post-Process GPS data 7.2.6.Sequence to export post process GPS data 7.2.7.Sequence to export GPS Time tags to file
	10/05/2023	1	7.3.ETS: - Electronic Total Station 7.3.1..1DistanceMeasurement 7.3.2.AngleMeasurement
	11/05/2023	1	7.3.3.Leveling 7.3.4.Determining position7.3.5.Reference networks
	12/05/2023	1	7.3.6. Errors and Accuracy
	13/05/2023	1	8.1.Components of GIS, Integration of Spatial and AttributeInformation 8.2Three Views of InformationSystem 8.2.1Database or Table View, Map View and ModelView
14TH	15/05/2023	1	8.3.Spatial DataModel 8.4.Attribute Data Management and MetadataConcept 8..5.Prepare data and adding to ArcMap. 8.6.Organizingdata aslayers.8.7.Editing the layers. 8.8.Switchingto LayoutView. 8.9..Changepageorientation.
	17/05/2023	1	Class Test
	18/05/2023	1	8.10.RemovingBorders. 8.11.Adding and editing mapinformation Previous year question discussion 8.12. Finalize themap
	20/05/2023	1	Questions Discussion
15TH	22/05/2023	1	Questions Discussion