

# KIIT POLYTECHNIC, BHUBANESWAR

## LESSON PLAN

### Session(23-24)

<b>Discipline : Civil Engineering</b>	<b>Semester: 6<sup>th</sup> S/2024</b>	<b>Name of the Teaching Faculty: Suchismita Padhi</b> <b>Email: Suchismita.padhifce@kp.kiit.ac.in</b>
Subject: Land Survey-II	<b>No. of Days/week: 05</b>	Start Date: 16/01/2024 End Date: 26/04/2024
<b>Week</b>	<b>Class Day</b>	<b>Theory/Practical Topics</b>
1st	1st	Principles, stadia constants determination
	2nd	Stadia tacheometry with staff held vertical and with line of collimation horizontal or inclined
	3rd	numerical problems
	4th	Elevations and distances of staff stations
	5th	numerical problems
2nd	1st	compound, reverse and transition curve
	2nd	Purpose & use of different types of curves in field
	3rd	Elements of circular curves, numerical problems
	4th	Preparation of curve table for setting out
	5th	Setting out of circular curve by chain and tape and by instrument angular methods (i) offsets from long chord
3rd	1st	(ii) successive bisection of arc, (iii) offsets from tangents, (iv) offsets from chord produced
	2nd	(v) Rankine's method of tangent angles
	3rd	Obstacles in curve ranging – point of intersection inaccessible
	4th	Quiz Test and Discussion - 01
	5th	basics on scale and basics of map
4th	1st	Fractional or Ratio Scale, Linear Scale, Graphical Scale
	2nd	What is Map, Map Scale and Map Projections
	3rd	Maps Convey Location and Extent
	4th	Maps Convey characteristics of features
	5th	Maps Convey Spatial Relationship
5th	1st	Classification of Maps
	2nd	Physical Map, Topographic Map, Road Map

	3rd	Political Map, Economic & Resources Map, Thematic Map, Climate Map
	4th	INDIA MAP SERIES- Open Series map
	5th	Defense Series Map
6th	1st	Map Nomenclature
	2nd	Quadrangle Name, Latitude, Longitude, UTM's ,Contour Lines
	3rd	Magnetic Declination, Public Land Survey System , Field Notes
	4th	Quiz test and Discussion- 02
	5th	Aerial Photography
7th	1st	Film, Focal Length, Scale , Types of Aerial Photographs (Oblique, Straight)
	2nd	Photogrammetry
	3rd	Classification of Photogrammetry, Aerial Photogrammetry ,Terrestrial Photogrammetry
	4th	Photogrammetry Process
	5th	Acquisition of Imagery using aerial and satellite platform , Control Survey
8th	1st	Geometric Distortion in Imagery Application of Imagery and its support data
	2nd	Orientation and Triangulation ,Stereoscopic Measurement
	3rd	DTM/DEM Generation , Ortho Image Generation
	4th	Modern Surveying Methods-
	5th	Principles, features and use of (i) Micro-optic theodolite, digital theodolite
9th	1st	Working principles of a Total Station of surveyed points relative to Total Station position using trigonometry and triangulation.
	2nd	Previous Year Question Paper Discussion
	3rd	Quiz Test and Discussion- 03
	4th	Basics of GPS, DGPS and ETS
	5th	GPS: - Global Positioning
10th	1st	Working Principle of GPS,GPS Signals,
	2nd	Errors of GPS, Positioning Methods
	3rd	DGPS: - Differential Global Positioning System

	4th	Base Station Setup- Rover GPS Set up, Download, Post-Process and Export GPS data
	5th	Sequence to download GPS data from flashcards Sequence to Post-Process GPS data
11th	1st	Sequence to export post process GPS data Sequence to export GPS Time tags to file
	2nd	ETS: - Electronic Total Station
	3rd	Distance Measurement Angle Measurement , Levelling
	4th	Determining position, Reference networks
	5th	Errors and Accuracy
12th	1st	Quiz test and Discussion- 04
	2nd	basics of gis and map preparation using gis
	3rd	Components of GIS
	4th	Integration of Spatial
	5th	Attribute Information
13th	1st	Three Views of Information System
	2nd	Database or Table View, Map View and Model View
	3rd	Spatial Data Model
	4th	Attribute Data Management and Metadata Concept
	5th	Question paper Discussion- 02
14th	1st	Prepare data and adding to Arc Map
	2nd	Organizing data as layers
	3rd	Editing the layers.
	4th	Switching to Layout View
	5th	Change page orientation.
15th	1st	Removing Borders.
	2nd	Adding and editing map information.
	3rd	Finalize the map
	4th	Revision Exercise- 01
	5th	Revision Exercise- 02
	4th	Revision Exercise- 03