UTKAL INSTITUTE OF ENGINEERING & TECHNOLOGY

DISCIPLINE: CIVIL	SEMESTER: 6TH Sem	NAME OF THE TEACHING FACULTY: Er.Rehebari Tarannum		
SUBJECT: **Th 1. LAND SURVEY– II**	No of Days/Per week class allotted: **5** Class P/W(**75**)	Semester From Date:16/01/2024 To Date:26/04/2024 No. Of Weeks: **15**		
WEEK	**CLASS DAY**	**THEORY TOPICS**	**REMARKS**	
1st	1st	TACHEOMETRY:Principles, stadia constants determination	Date	Dean/Principal
	2nd	Principles, stadia constants determination		
	3rd	Stadia tacheometry with staff held vertical		
	4th	Stadia tacheometry with staff held with line of collimation		
	5th	Stadia tacheometry with staff held with inclined, numerical problems.		
2nd	1st	Elevations and distances of staff stations		
	2nd	Elevations and distances of staff stations – numerical problems		
	3rd	Elevations and distances of staff stations – numerical problems		
	4th	REVISSION CLASS		
	5th	CURVES : compound, reverse and transition curve.		
3rd	1st	Purpose & use of different types of curves in field		
	2nd	Elements of circular curves, numerical problems		
	3rd	Preparation of curve table for setting out		

3	4th	Setting out of circular curve by chain and tape and by instrument angular methods (i) offsets from long chord		
	5th	Successive bisection of arc, (iii) offsets from tangents.		
4th	1st	(iv) offsets from chord produced, (v) Rankine's method of tangent angles (No derivation)		
	2nd	Obstacles in curve ranging – point of intersection inaccessible		
	3rd	Fractional or Ratio Scale, Linear Scale, Graphical Scale		
	4th	What is Map, Map Scale and Map Projections		
	5th	How Maps Convey Location and Extent		
5th	1st	How Maps Convey characteristics of features		
	2nd	How Maps Convey Spatial Relationship		
	3rd	Classification of Maps:Physical Map , Topographic Map		
	4th	Road Map, Political Map , Economic & Resources Map		
	5th	Thematic Map,Climate Map		
6th	1st	SURVEY OF INDIA MAP SERIES: Open Series map		
	2nd	Defense Series Map		
	3rd	Map Nomenclature		
	4th	Quadrangle Name		
	5th	Latitude, Longitude, UTM's		
7th	1st	Contour Lines		
	2nd	Magnetic Declination		
	3rd	Public Land Survey System		
	4th	Field Notes		
	5th	ASSIGNMENT		
8th	1st	BASICS OF AERIAL PHOTOGRAPHY, PHOTOGRAMMETRY, DEM AND ORTHO IMAGE GENERATION:		
	2nd	Film, Focal Length, Scale		
	3rd	Types of Aerial Photographs (Oblique, Straight)		

	4th	Photogrammetry: Classification of Photogrammetry		
	5th	Errestrial Photogrammetry ,Photogrammetry Process:		
9th	1st	Acquisition of Imagery using aerial and satellite platform		
	2nd	Control Survey		
	3rd	Geometric Distortion in Imagery Application of Imagery and its support data		
	4th	Orientation and Triangulation Stereoscopic Measurement		
	5th	DTM/DEM Generation ,Ortho Image Generation		
10th	1st	MODERN SURVEYING METHODS : Principles, features and use		
	2nd	MODERN SURVEYING METHODS : Principles, features and use		
	3rd	Micro-optic theodolite, digital theodolite		
	4th	Micro-optic theodolite, digital theodolite		
	5th	Working principles of a Total Station		
11th	1st	Working principles of a Total Station		
	2nd	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 and triangulation		
	3rd	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 and triangulation		

	4th	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 and triangulation		
	5th	DOUBT CLEAR CLASS		
		BASICS ON GPS & DGPS AND ETS: GPS: - Global Positioning		
	2nd	Working Principle of GPS,GPS Signals		
	3rd	Methods		
	4th	DGPS: - Differential Global Positioning System,Base Station Setup		
	5th	Post-Process and Export GPS data		
13th	1st	Sequence to download GPS data from flashcards ,Sequence to Post-Process GPS data		
	2nd	Sequence to export post process GPS data ,Sequence to export GPS Time tags to file		
	3rd	ETS: - Electronic Total Station ,Distance Measurement , Angle Measurement		
	4th	Leveling ,Determining position		
	5th	Reference networks ,Errors and Accuracy		
	1st	BASICS OF GIS AND MAP PREPARATION USING GIS, Components of GIS, Integration of Spatial and Attribute		
	2nd	Three Views of Information System		
	3rd	Database or Table View, Map View and Model View		
	4th	Spatial Data Model ,Attribute Data Management and Metadata Concept		
	5th	Prepare data and adding to Arc Map		

15th	1st	Organizing data as layers. Editing the layers		
	2nd	Switching to Layout View		
	3rd	Change page orientation		
	4th	Removing Borders. Adding and editing map information.		
	5th	Finalize the map		

Tejaswini Das

HOD

Chittaranjan Parida

DEAN

PRINCIPAL