LESSON PLAN: (LAND SURVEY II)		
Discipline :	**CIVIL ENGINEERING**	
Faculty :	**BIKASH JAYPURIA**	
Semester :	**6th**	
Duration :	**15 WEEKS (15th September 2022 to 22nd December 2022)**	
Work Load :	**Lecture :**	**5 Lectures per week (50 minutes per Class)**

Week	Week Day	Theory
1st	1st	Principles of tacheometry
	2nd	stadia constants determination of tacheometry
	3rd	Stadia tacheometry with staff held vertical
	4th	Stadia tacheometry with line of collimation horizontal
	5th	Stadia tacheometry with line of collimation inclined
2nd	6th	numerical problems of Stadia tacheometry
	7th	numerical problems of Elevations and distances of staff stations
	8th	numerical problems of Elevations and distances of staff stations
	9th	compound, reverse and transition curve, Purpose & use of different types of curves in field
	10th	Elements of circular curves, numerical problems
3rd	11th	Preparation of curve table for setting out
	12th	Setting out of circular curve by chain and tape
	13th	Setting out of circular curve by instrument angular methods
	14th	Setting out of circular curve by (i) offsets from long chord, (ii) successive bisection of arc,
	15th	Setting out of circular curve by (iii) offsets from tangents, (iv) offsets from chord produced, (v) Rankine's method of tangent angles
4th	16th	Obstacles in curve ranging – point of intersection inaccessible
	17th	Fractional or Ratio Scale, Linear Scale, Graphical Scale
	18th	Basics of What is Map, Map Scale and Map Projections
	19th	Basics of Convey Location and Extent of maps
	20th	Basics of characteristics of features of maps
5th	21st	Basics of How Maps Convey Spatial Relationship
	22nd	Physical Map,Topographic Map
	23rd	Road Map ,Political Map ,Economic & Resources Map
	24th	Thematic Map,Climate Map
	25th	Open Series map
6th	26th	Defense Series Map
	27th	Map Nomenclature
	28th	Quadrangle Name
	29th	Latitude, Longitude, UTM's
	30th	Contour Lines
7th	31st	Magnetic Declination
	32nd	Public Land Survey System
	33rd	Field Notes
	34th	Film, Focal Length, Scale
	35th	Types of Aerial Photographs (Oblique, Straight)
8th	36th	Classification of Photogrammetry
	37th	Aerial Photogrammetry
	38th	Terrestrial Photogrammetry
	39th	Acquisition of Imagery using aerial and satellite platform
	40th	Control Survey
9th	41st	Geometric Distortion in Imagery

	42nd	Application of Imagery and its support data Orientation and Triangulation
	43rd	Stereoscopic Measurement X-parallax Y-parallax
	44th	DTM/DEM Generation Ortho Image Generation
	45th	Principles, features and use of Micro-optic theodolite
10th	46th	Principles, features and use of digital theodolite
	47th	Working principles of a Total Station
	48th	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)
	49th	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)
	50th	survey of points relative to Total Station position using trigonometry and triangulation.
11th	51st	Global Positioning Working Principle of GPS,GPS Signals
	52nd	Errors of GPS,Positioning Methods
	53rd	Differential Global Positioning System Base Station Setup
	54th	Rover GPS Set up Download, Post-Process and Export GPS data
	55th	Sequence to download GPS data from flashcards Sequence to Post-Process GPS data
12th	56th	Sequence to export post process GPS data Sequence to export GPS Time tags to file
	57th	Electronic Total Station Distance Measurement
	58th	Angle Measurement Leveling
	59th	Determining position Reference networks
	60th	Errors and Accuracy Of Electronic Total Station
13th	61th	Components of GIS, Integration of Spatial and Attribute Information
	62th	Three Views of Information System Database or Table View, Map View and Model View
	63th	Spatial Data Model Attribute Data Management and Metadata Concept
	64th	Prepare data and adding to Arc Map
	65th	Organizing data as layers.
14th	66th	Editing the layers. Switching to Layout View
	67th	Change page orientation
	68th	Removing Borders
	69th	Adding and editing map information
	70th	Finalize the map