LESSON PLAN FOR SUMMER 2022			
DISCIPLINE:- CIVIL ENGG.		**SEMESTER:- 6TH SEM 2ND SHIFT**	**NAME OF THE TEACHING FACULTY:-SIMADRI KUMAR BAL**
SUBJECT:-LAND SURVEY-II ,TH.1		**NO. OF DAYS/PER WEEK CLASS ALLOTED:- 5T**	**SEMESTER - 6TH SEM 2ND SHIFT** **FROM DATE-10/03/2022 TO DATE- 10/06/2022** **NO. OF WEEKS-14WEEKS**
WEEK		**CLASS DAY**	**THEORY TOPICS**
			1 TACHEOMETRY: (9P)
	3/10/2022	1st	(Only concepts; applications without derivation) 1.1 Principles
1st WEEK	3/12/2022	2nd	1.1 Stadia constants determination
			1.2 Stadia tacheometry with staff held vertical and with line of collimation horizontal
	3/14/2022	1st	Numerical problems
	3/15/2022	2nd	1.2 Stadia tacheometry with staff held vertical and with line of collimation inclined,
2nd WEEK	3/17/2022	3rd	Numerical problems
	3/21/2022	1st	1.3 Elevations and distances of staff stations – numerical problems
	3/22/2022	2nd	Numerical problems
			2 CURVES :(8P)
	3/24/2022	3rd	2.1 Compound, reverse and transition curve, Purpose & use of different types of curves in field
3rd WEEK	3/26/2022	4th	2.2 Elements of circular curves, numerical problems
	3/28/2022	1st	2.3 Preparation of curve table for setting out
	3/29/2022	2nd	2.4 Setting out of circular curve by chain and tape and by instrument angular methods (i) offsets from long chord, (ii) successive bisection of arc
	3/31/2022	3rd	, (iii) offsets from tangents, (iv) offsets from chord produced, (v) Rankine's method of tangent angles (No derivation)
4th WEEK	4/2/2022	4th	Numerical problems 2.5 Obstacles in curve ranging – point of intersection inaccessible
			3 BASICS ON SCALE AND BASICS OF MAP (8P)
	4/4/2022	1st	3.1 Fractional or Ratio Scale, Linear Scale, Graphical Scale
	4/5/2022	2nd	3.2 What is Map, Map Scale and Map Projections

	4/7/2022	3rd	3.3 How Maps Convey Location and Extent 3.4 How Maps Convey characteristics of features 3.5 How Maps Convey Spatial Relationship
			3.5.1 Classification of Maps
5th WEEK	4/9/2022	4th	3.5.1 Physical Map 3.5.2 Topographic Map
	4/11/2022	1st	3.5.3 Road Map
	4/12/2022	2nd	3.5.4 Political Map
6th WEEK	4/16/2022	4th	3.5.5 Economic & Resources Map
	4/18/2022	1st	3.5.6 Thematic Map
	4/19/2022	2nd	3.5.7 Climate Map
			4 .SURVEY OF INDIA MAP SERIES: (10P)
	4/21/2022	3rd	4.1 Open Series map
7th WEEK	4/23/2022	4th	4.2 Defense Series Map
			4.3 Map Nomenclature
	4/25/2022	1st	4.3.1 Quadrangle Name
	4/26/2022	2nd	4.3.2 Latitude, Longitude, UTM's
	4/28/2022	3rd	4.3.4 Contour Lines
8th WEEK	4/30/2022	4th	4.3.5 Magnetic Declination
	5/2/2022	1st	4.3.6 Public Land Survey System
	5/5/2022	3rd	4.3.7 Field Notes
			5.BASICS OF AERIAL PHOTOGRAPHY, PHOTOGRAMMETRY, DEM AND ORTHO IMAGE GENERATION:(10P)
			5.1 Aerial Photography:
9th WEEK	5/7/2022	4th	5.1.1 Film, Focal Length, Scale
	5/9/2022	1st	5.1.2 Types of Aerial Photographs (Oblique, Straight)
			5.2 Photogrammetry:
	5/10/2022	2nd	5.2.1 Classification of Photogrammetry 5.2.2 Aerial Photogrammetry
	5/12/2022	3rd	5.2.3 Terrestrial Photogrammetry
			5.3 Photogrammetry Process:
10th WEEK	5/14/2022	4th	5.3.1 Acquisition of Imagery using aerial and satellite plat
	5/17/2022	2nd	5.3.2 Control Survey
	5/19/2022	3rd	5.3.3 Geometric Distortion in Imagery Application of Imagery and its support data Orientation and Triangulation Stereoscopic Measurement 19.9.1 X-parallax 19.2.2 Y-parallax
11th WEEK	5/21/2022	4th	5.4 DTM/DEM Generation 5.5 Ortho Image Generation
			6.MODERN SURVEYING METHODS : (10P)
	5/23/2022	1st	6.1 Principles, features and use of (i) Micro-optic theodolite
12th WEEK	5/24/2022	2nd	6.1 Principles, features and use of (i) Micro-optic theodolite
	5/26/2022	3rd	6.1 Principles, features and use of (ii) digital theodolite
	5/28/2022	4th	6.2 Working principles of a Total Station

13th WEEK	5/31/2022	2nd	6.2 Working principles of a Total Station (Set up and use of total station to measure angles
	6/2/2022	3rd	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 and triangulation.
	6/4/2022	4th	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 and triangulation.
			7 BASICS ON GPS & DGPS AND ETS: (10P)
14th WEEK			**7.1 GPS: - Global Positioning**
	6/6/2022	1st	7.1.1 Working Principle of GPS,GPS Signals,
	6/7/2022	2nd	7.1.2 Errors of GPS,Positioning Methods
			7.2 DGPS: - Differential Global Positioning System
	6/9/2022	3rd	7.2.1 Base Station Setup 7.2.2 Rover GPS Set up
EXTRA CLASSES REQUIRED			7.2.3 Download, Post-Process and Export GPS data 7.2.4 Sequence to download GPS data from flashcards 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
			7.3 ETS: - Electronic Total Station
			7.3.1 Distance Measurement 7.3.2 Angle Measurement 7.3.3 Leveling
			7.3.4 Determining position 7.3.5 Reference networks 7.3.6 Errors and Accuracy
			(10P)
			8.1 Components of GIS, Integration of Spatial and Attribute Information
			8.2 Three Views of Information System 8.2.1 Database or Table View, Map View and Model View 8.3 Spatial Data Model
			8.4 Attribute Data Management and Metadata Concept 8.5 Prepare data and adding to Arc Map. 8.6 Organizing data as layers. 8.7 Editing the layers. 8.8 Switching to Layout View.

			8.9 Change page orientation. 8.10 Removing Borders.
			8.11 Adding and editing map information. 8.12 Finalize the map

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