

LESSON PLAN FOR SUMMER 2022

DISCIPLINE:- CIVIL ENGG.		SEMESTER:-6TH SEM 1ST SHIFT	NAME OF THE TEACHING FACULTY:- SUBHRADEEP DAS
SUBJECT:- LAND SURVEY- II (TH-1)		NO. OF DAYS/PER WEEK CLASS ALLOTTED:- 5T	SEMESTER - 6TH SEM 1ST SHIFT FROM DATE- 10/03/2022 TO DATE- 10/06/2022 NO. OF WEEKS-14WEEKS
WEEK	DATE	CLASS DAY	THEORY TOPICS
			1.TACHEOMETRY:(9P)
1ST WEEK	10.03.2022	1ST	1.1 Principles, stadia constants determination
	11.03.2022	2ND	1.1 Principles, stadia constants determination
	12.03.2022	3RD	1.2 Stadia tacheometry with staff held vertical and with
2ND WEEK	15.03.2022	1ST	1.2 Stadia tacheometry with staff held vertical and with
	17.03.2022	2ND	1.2 Stadia tacheometry with staff held vertical and with
3RD WEEK	22.03.2022	1ST	1.3 Elevations and distances of staff stations – numerical
	24.03.2022	2ND	1.3 Elevations and distances of staff stations – numerical
	25.03.2022	3RD	1.3 Elevations and distances of staff stations – numerical
			2. CURVES :(8P)
	26.03.2022	4TH	2.1 compound, reverse and transition curve, Purpose & use of different types of curve field
4TH WEEK	29.03.2022	1ST	2.2 Elements of circular curves, numerical problems
	31.03.2022	2ND	2.3 Preparation of curve table for setting out methods
	2.04.2022	3RD	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,(iii)tanents, (iv)offsets from chord produce,(v)Rankine's method
5TH WEEK	05.04.2022	1ST	2.4 Setting out of circular curve by chain and tape and by
	07.04.2022	2ND	2.5 Obstacles in curve ranging – point of intersection
	08.04.2022	3RD	2.5 Obstacles in curve ranging – point of intersection
			3.BASICS ON SCALE AND BASICS OF MAP:(8P)
	09.04.2022	4TH	3.1 Fractional or Ratio Scale, Linear Scale, Graphical Scale
6TH WEEK	12.04.2022	1ST	3.2 What is Map, Map Scale and Map Projections
	16.04.2022	2ND	3.3 How Maps Convey Location and Extent
7TH WEEK	19.04.2022	1ST	3.4 How Maps Convey characteristics of features
	21.04.2022	2ND	3.5 How Maps Convey Spatial Relationship
	22.04.2022	3RD	3.5.1 Classification of Maps ,3.5.1 Physical Map 3.5.2 Topographic map 3.5.3 Road Map 3.5.4 political Map
	23.04.2022	4TH	3.5.5 Economic & Resources Map 3.5.6 Thematic Map 3.5.7 Climate Map
			4 SURVEY OF INDIA MAP SERIES:(10)
8TH WEEK	26.04.2022	1ST	4.1 Open Series map
	28.04.2022	2ND	4.2 Defense Series Map

	29.04.2022	3RD	4.3 Map Nomenclature 4.3.1 Quadrangle Name
	30.04.2022	4TH	4.3.2 Latitude, Longitude, UTM's
9TH WEEK	05.05.2022	1ST	4.3.4 Contour Lines 4.3.5 Magnetic Declination
	06.05.2022	2ND	4.3.6 Public Land Survey System
	07.05.2022	3RD	4.3.7 Field Notes
	10.05.2022	1ST	4.3.7 Field Notes
			5. BASICS OF AERIAL PHOTOGRAPHY, PHOTOGRAMMETRY, DEM AND ORTHO IMAGE GENERATION:(10P)
10THWEEK	12.05.2022	2ND	5.1 Aerial Photography:
	13.05.2022	3RD	5.1.1 Film, Focal Length, Scale
	14.05.2022	4TH	5.1.2 Types of Aerial Photographs (Oblique, Straight)
11TH WEEK	17.05.2022	1ST	5.2 Photogrammetry:
	19.05.2022	2ND	5.2.1 Classification of Photogrammetry
	20.05.2022	3RD	5.2.2 Aerial Photogrammetry
	21.05.2022	4TH	5.2.3 Terrestrial Photogrammetry
12TH WEEK	24.05.2022	1ST	5.3 Photogrammetry Process:
	26.05.2022	2ND	5.3.1 Acquisition of Imagery using aerial and satellite platform
	27.05.2022	3RD	5.3.2 Control Survey
	28.05.2022	4TH	5.3.3 Geometric Distortion in Imagery
13TH WEEK	31.05.2022	1ST	Application of Imagery and its support data
	2.06.2022	2ND	Orientation and Triangulation
	03.06.2022	3RD	Stereoscopic Measurement
	04.06.2022	4TH	19.9.1 X-parallax
14TH WEEK	07.06.2022	1ST	19.2.2 Y-parallax
	09.06.2022	2ND	5.4 DTM/DEM Generation
	10.06.2022	3RD	5.5 Ortho Image Generation
			6.MODERN SURVEYING METHODS :(10P)
			6.1 Principles, features and use of (ii) digital theodolite
			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)
			7.1 GPS: - Global Positioning
			7.1.1 Working Principle of GPS,GPS Signals,
			7.1.2 Errors of GPS,Positioning Methods
			7.2 DGPS: - Differential Global Positioning System
			7.2.1 Base Station Setup
			7.2.2 Rover GPS Set up
			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

**EXTRA
CLASSES
REQUIRED**

		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
		8.BASICS OF GIS AND MAP PREPARATION USING GIS (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