MAHAMAYA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCE, NUAPADA

LESSON PLAN (MONTH: FEBRUARY TO MAY 2023)

FACULTY : Er.SANTOSH MAHANANDA BRANCH: CIVIL ENGG. SESSION:2022-23

Subject:- LAND SURVEY-II		Semester:-6TH
Week	Class Day	Theory Topics
1st	1st	TACHEOMETRY: (Only concepts; applications without derivation) 1.1 Principles, stadia constants determination
	2nd	1.2 Stadia tacheometry with staff held vertical and with line of collimation horizontal or inclined
	3rd	contd.
	4th	contd.
	5th	contd.
	6th	
2nd	1st	numerical problems
	2nd	numerical problems
	3rd	1.3 Elevations and distances of staff stations –
	4th	numerical problems
	5th	CURVES : 2.1 compound, reverse and transition curve
	6th	
3rd	1st	Purpose & use of different types of curves in field
	2nd	2.2 Elements of circular curves, numerical problems
	3rd	2.3 Preparation of curve table for setting out
	4th	2.4 Setting out of circular
	5th	curve by chain and tape and by instrument angular methods
	6th	
4th	1st	contd.
	2nd	2.5 Obstacles in curve ranging – point of intersection inaccessible
	3rd	BASICS ON SCALE AND BASICS OF MAP: 3.1 Fractional or Ratio Scale, Linear Scale, Graphical Scale
	4th	contd.
	5th	3.2 What is Map, Map Scale and Map Projections
	6th	
	1st	3.3 How Maps Convey Location and Extent
	2nd	3.4 How Maps Convey characteristics of features
	3rd	3.5 How Maps Convey Spatial Relationship

5th	4th	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 3.5.5 Economic & Resources Map 3.5.6 Thematic Map 3.5.7 Climate Map
	5th	contd.
	6th	
6th	1st	SURVEY OF INDIA MAP SERIES: 4.1 Open Series map
	2nd	contd.
	3rd	4.2 Defense Series Map
	4th	4.3 Map Nomenclature
	5th	4.3.1 Quadrangle Name
	6th	
7th	1st	4.3.2 Latitude, Longitude, UTM's
	2nd	4.3.4 Contour Lines
	3rd	4.3.5 Magnetic Declination
	4th	4.3.6 Public Land Survey System
	5th	4.3.7 Field Notes
	6th	
8th	1st	5.1 Aerial Photography: 5.1.1 Film, Focal Length, Scale 5.1.2 Types of Aerial Photographs (Oblique, Straight)
	2nd	contd.
	3rd	5.2 Photogrammetry: 5.2.1 Classification of Photogrammetry 5.2.2 Aerial Photogrammetry 5.2.3 Terrestrial Photogrammetry
	4th	contd.
	5th	contd.
	6th	
9th	1st	5.3 Photogrammetry Process: 5.3.1 Acquisition of Imagery using aerial and satellite platform 5.3.2 Control Survey 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
	2nd	contd.
	3rd	contd.
	4th	5.4 DTM/DEM Generation
	5th	5.5 Ortho Image Generation
	6th	
10th	1st	MODERN SURVEYING METHODS : 6.1 Principles, features and use of (i) Micro-optic theodolite, digital theodolite
	2nd	contd.
	3rd	6.2 Working principles of a Total Station

	4th	contd.
	5th	contd.
	6th	
11th	1st	Set up and use of total station to measure angles
	2nd	contd.
	3rd	contd.
	4th	X,Y & Z or northing, easting, and elevation
	5th	contd.
	6th	
12th	1st	BASICS ON GPS & DGPS AND ETS: 7.1 GPS: - Global Positioning
	2nd	7.1.1 Working Principle of GPS,GPS Signals,
	3rd	7.1.2 Errors of GPS,Positioning Methods
	4th	7.2 DGPS: - Differential Global Positioning System
	5th	7.2.1 Base Station Setup
	6th	
13th	1st	contd.
	2nd	contd.
	3rd	contd.
	4th	7.3 ETS: - Electronic Total Station
	5th	contd.
	6th	
14th	1st	8.1 Components of GIS, Integration of Spatial and Attribute Information
	2nd	8.2 Three Views of Information System
	3rd	8.3 Spatial Data Model
	4th	8.4 Attribute Data Management and Metadata Concept
	5th	8.5 Prepare data and adding to Arc Map.
	6th	
15th	1st	8.6 Organizing data as layers.
	2nd	8.7 Editing the layers. 8.8 Switching to Layout View.
	3rd	8.9 Change page orientation. 8.10 Removing Borders.
	4th	8.11 Adding and editing map information.
	5th	8.12 Finalize the map
	6th	

Santosh Ku. Mahanandia.
Signature of faculty member

counter signature of HOD