PNS SCHOOL OF ENGINEERING & TECHNOLOGY		
LESSON PLAN		
BRANCH-CIVIL	SEMESTER-6TH	NAME OF THE FACULTY-MADHUSMITA NAYAK
SUBJECT- SURVEY-1	NO OF DAYS PER WEEK -6	SEMESTER FROM 13.02.2023 TO 24.05.2023
Month/WEEK	CLASS DAY	THEORY TOPIC
FREBUARY-3RD	1ST	**Introduction** TACHEOMETRY: (Only concepts; applications without derivation) 1.1 Principles, stadia constants determination 1.2 Stadia tacheometry with staff held vertical and with line of collimation horizontal or inclined, numerical problems
	2ND	Elevations and distances of staff stations – numerical problems
	3RD	**CURVES :** compound, reverse and transition curve, Purpose & use of different types of curves in field
	4TH	Elements of circular curves, numerical problems
	5TH	Preparation of curve table for setting out 2.4 Setting out of circular curve by chain and tape and by instrument angular methods
4TH	6TH	(i) offsets from long chord, (ii) successive bisection of arc, (iii) offsets from tangents, (iv) offsets from chord produced, (v) Rankine's method of tangent angles (No derivation) 2.5 Obstacles in curve ranging – point of intersection inaccessible
	1ST	**BASICS ON SCALE AND BASICS OF MAP:**Fractional or Ratio Scale, Linear Scale, Graphical Scale
	2ND	What is Map, Map Scale and Map Projections How Maps Convey Location and Extent
	3RD	How Maps Convey characteristics of features .

	4TH	5 How Maps Convey Spatial Relationship 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	**SURVEY OF INDIA MAP SERIES:** Open Series map
5TH	6th	Defense Series Map Map Nomenclature
	1st	CONTINUING…
	2nd	4.3.1 Quadrangle Name 4.3.2 Latitude, Longitude, UTM's 4.3.4 Contour Lines 4.3.5 Magnetic Declination 4.3.6 Public Land Survey System 4.3.7 Field Notes
	3rd	Continuing…
MARCH -1ST	4th	**BASICS OF AERIAL PHOTOGRAPHY, PHOTOGRAMMETRY, DEM AND ORTHO** **IMAGE GENERATION:** 5.1 Aerial Photography:
	5th	Film, Focal Length, Scale 5.1.2 Types of Aerial Photographs (Oblique, Straight)
	6th	Photogrammetry: 5.2.1 Classification of Photogrammetry
	1st	Aerial Photogrammetry 5.2.3 Terrestrial Photogrammetry
2ND	2nd	Photogrammetry Process: 5.3.1 Acquisition of Imagery using aerial and satellite platform
	3rd	Control Survey 5.3.3 Geometric Distortion in Imagery
	4th	Continuing…
	5th	Application of Imagery and its support data Orientation and Triangulation.

3RD	6th	Stereoscopic Measurement 19.9.1 X-parallax 19.2.2 Y-parallax 5.4 DTM/DEM Generation 5.5 Ortho Image Generation
	1st	**MODERN SURVEYING METHODS :**
	2nd	Principles, features and use of (i) Micro-optic theodolite, digital theodolite
	3rd	Working principles of a Total Station
	4th	(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	**BASICS ON GPS & DGPS AND ETS:**
	3rd	GPS: - Global Positioning 7.1.1 Working Principle of GPS,GPS Signals,
	4th	Errors of GPS,Positioning Methods
	5th	DGPS: - Differential Global Positioning System
	6th	Base Station Setup 7.2.2 Rover GPS Set up
	1ST	Download, Post-Process and Export GPS data
5TH	2ND	Sequence to download GPS data from flashcards Sequence to Post-Process GPS data
	3rd	Sequence to export post process GPS data 7.2.7 Sequence to export GPS Time tags to file
	4th	ETS: - Electronic Total Station
	5TH	Distance Measurement
APRIL-2ND	6th	Angle Measurement 7.3.3 Leveling
	1st	Determining position 7.3.5 Reference networks
	2nd	Errors and Accuracy
	3rd	**BASICS OF GIS AND MAP PREPARATION USING GIS** 8.1 Components of GIS, Integration of Spatial and Attribute Information
	4th	Spatial Data Model 8.4 Attribute Data Management and Metadata Concept
3RD	5th	5 Prepare data and adding to Arc Map. 8.6 Organizing data as layers.
	6th	Editing the layers. 8.8 Switching to Layout View

	4th	Change page orientation.
	5th	8.10 Removing Borders
	6TH	Adding and editing map information.
	1ST	Finalize the map
	2nd	Continuing… (neumaric problem solution)
	3rd	Continuing… (neumaric problem solution)
	4TH	Continuing… (neumaric problem solution)
	5TH	Continuing… (neumaric problem solution)
5TH	1ST	Continuing… (neumaric problem solution)
	2ND	Continuing… (neumaric problem solution)
	3RD	Continuing… (neumaric problem solution)
	4TH	Continuing… (neumaric problem solution)
	5TH	Continuing… (neumaric problem solution)
	6TH	Continuing… (neumaric problem solution)
MAY-1ST	1ST	Continuing…rivising
	2ND	Continuing…rivising
	3RD	Continuing…rivising
	4TH	Continuing…rivising
	6TH	Continuing…rivising
2ND	1ST	Continuing…rivising
	2ND	Doubt clearing class
	3RD	Doubt clearing class
	4TH	Doubt clearing class
	5TH	Doubt clearing class
	6TH	Doubt clearing class
3RD	1ST	note cheacking
	2ND	note cheacking
	3RD	note cheacking
	4TH	note cheacking
	5TH	important questions solutiuons claqss
	6TH	important questions solutiuons claqss
4TH	1ST	important questions solutiuons claqss
	2ND	important questions solutiuons claqss
	3rd	important questions solutiuons claqss