ASIAN SCHOOL OF TECHNOLOGY, BHUBANESWAR

DEPARTMENT OF CIVIL ENGINEERING

LESSON PLAN

Discipline: Civil engineering	Semester : 3rd	No. of periods available: 51	Name of Teaching Faculty: Swatishree Lenka
Subject: Land Survey-II	No. of Days/ per week class allotted : 4 periods per week		No. of weeks : 13
Week	Class Day		Topics to be covered
1st	1st	1	Principles, stadia constants determination
	2nd	1	Stadia tacheometry with staff held vertical and with line of collimation horizontal or inclined
	3rd	1	numerical problems
	4th	1	Elevations and distances of staff stations
2nd	5th	1	numerical problems
	6th	1	compound, reverse and transition curve
	7th	1	Purpose & use of different types of curves in field
	8th	1	Elements of circular curves, numerical problems
3rd	9th	1	Preparation of curve table for setting out
	10th	1	Setting out of circular curve by chain and tape and by instrument angular methods (i) offsets from long chord
	11th	1	(ii) successive bisection of arc, (iii) offsets from tangents, (iv) offsets from chord produced

	12th	1	(v) Rankine's method of tangent angles
4th	13th	1	Obstacles in curve ranging – point of intersection inaccessible
	14th	1	Quiz Test and Discussion
	15th	1	basics on scale and basics of map
	16th	1	Fractional or Ratio Scale, Linear Scale, Graphical Scale
5th	17th	1	What is Map, Map Scale and Map Projections
	18th	1	Maps Convey Location and Extent
	19th	1	Maps Convey characteristics of features
	20th	1	Maps Convey Spatial Relationship
6th	21st	1	Classification of Maps
	22nd	1	Physical Map, Topographic Map, Road Map
	23rd	1	Political Map, Economic & Resources Map, Thematic Map, Climate Map
	24th	1	INDIA MAP SERIES- Open Series map
7th	25th	1	Defense Series Map
	26th	1	Map Nomenclature
	27th	1	Quadrangle Name, Latitude, Longitude, UTM's ,Contour Lines
	28th	1	Magnetic Declination, Public Land Survey System , Field Notes
8th	29th	1	Aerial Photography
	30th	1	Film, Focal Length, Scale , Types of Aerial Photographs (Oblique, Straight)
	31st	1	Photogrammetry
	32nd	1	Classification of

			Photogrammetry, Aerial Photogrammetry ,Terrestrial Photogrammetry
9th	33rd	1	Photogrammetry Process
	34th	1	Acquisition of Imagery using aerial and satellite platform , Control Survey
	35th	1	Geometric Distortion in Imagery Application of Imagery and its support data
	36th	1	Orientation and Triangulation ,Stereoscopic Measurement
10th	37th	1	DTM/DEM Generation , Ortho Image Generation
	38th	1	Modern Surveying Methods-
	39th	1	Principles, features and use of (i) Micro-optic theodolite, digital theodolite
	40	1	Working principles of a Total Station of surveyed points relative to Total Station position using trigonometry and triangulation.
11th	41st	1	Basics of GPS, DGPS and ETS
	42nd	1	GPS: - Global Positioning Working Principle of GPS,GPS Signals,
	43rd	1	Previous Year Question Discussion
	44th	1	Errors of GPS, Positioning Methods DGPS: - Differential Global Positioning System
12th	45th	1	Base Station Setup-

			Rover GPS Set up, Download, Post- Process and Export GPS data
	46th	1	Sequence to download GPS data from flashcards Sequence to Post-Process GPS data
	47th	1	Sequence to export post process GPS data Sequence to export GPS Time tags to file
	48th	1	ETS: - Electronic Total Station Distance Measurement Angle Measurement , Levelling Determining position, Reference networks Errors and Accuracy
13th	49th	1	basics of gis and map preparation using gis Components of GIS Integration of Spatial Attribute Information
	50th	1	Three Views of Information System Database or Table View, Map View and Model View Spatial Data Model
	51st	1	Attribute Data Management and Metadata Concept
	52nd	1	Prepare data and adding to Arc Map Organizing data as layers Editing the layers. Switching to Layout View Change page orientation. Removing Borders. Adding and editing map information. Finalize the map
