

DISCIPLINE CIVIL ENGINEERING	SEMESTER 6th	NAME OF THE TEACHING FACULTY SUMAN PRADHAN
SUBJECT SURVEYING-II	NO. OF DAY / PER WEEK CLASS ALLOWED 4	SEMESTER FROM DATE - 10/03/2022 TO DATE - 30/06/2022 NO. OF WEEKS

MONTH	WEEK	CLASS DAY	THEORY TOPICS
		1st	* TACHEOMETRY
	2nd	2nd	* Principles, stadia constants determination
MARCH		1st	* stadia tacheometry with staff held vertically & with line of collimation horizontal or inclined, numerical problems
	3rd	2nd	* CURVES
		3rd	* compound, reverse and transition curves, purpose & use of different types of

MONTH	WEEK	CLASS DAY	THEORY OF TOPIC
	4th	1st	curves in field * Elements of circular curves, numerical problems
		2nd	* Preparation of curve table for setting out
		3rd	* Setting out of circular curve by chain and tape and by instrument angular methods
		4th	* (i) offsets from long chord (ii) successive bisection of arc * (iii) offsets from chord produces (iv) Rankine's method of tangent angles
	5th	1st	* Obstacles in curve ranging - point of intersection inaccessible
		2nd	* Basics on scale and basics of map



MONTH	WEEK	CLASS DAY	THEORY TOPIC
		3rd	* Fractional or Ratio scale, linear scale, graphical scale.
		4th	* What is map, map scale and map projections
APR	1st	1st	* How maps convey location and extent
	2nd	1st	* How maps convey spatial relationship
		2nd	* Classification of maps ① Physical map ② topographic map ③ Road map ④ political map ⑤ Economic & Resources map ⑥ Thematic map ⑦ Climate map
		3rd	* Survey of INDIA map series
		4th	* Defense series map
		5th	* Map nomenclature ① Quadrangle Name ② Latitude, Longitude, UTM's ③ contour lines ④ magnetic declination

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			(6) Public land survey system (7) Field notes
	3rd	1st	* Basics on scale and basics of map Fractional or Ratio scale, linear scale,
	3rd	1st	* Aerial photography * film, focal length, scale * Types of Aerial photographs (oblique/straight)
		2nd	* Classification of photogrammetry * Aerial photogrammetry * Terrestrial photogrammetry
		3rd	* Acquisition of imagery using aerial and satellite platform * control survey * Geometric Distortion in imagery



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		1st	* DTM/DEM Generation
	4th	2nd	* ortho image Generation
		3rd	* Modern, surveying methods
		4th	* Principles, features and use of micro optic theodolite, digital theodolite
		5th	* Working principles of points under of a Total station
		1st	* surveyed points relative to total station position using trigonometry & triangulation
	5th	2nd	* Basics on GPS & DGPS & ETS
		3rd	* Working principles of GPS, GPS signals
		4th	* Errors of GPS, positioning methods

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	1st	1st	* DGPS - Differential Global Positioning System
		2nd	* Base station setup
		3rd	* Rover GPS set up
MAY		4th	* Download, Post process and Export GPS data
		1st	* Sequence to download GPS data from flashcards
	2nd	2nd	* Sequence to Post Process GPS data
		3rd	* Sequence to export Post process GPS data
			* Sequence to export GPS time tags to file
		4th	* ETS - Electronic Total Station
		5th	* Distance measurement
		1st	* Angle measurement
		2nd	* Levelling
	3rd	3rd	* Determining Position



MONTH	WEEK	CLASS DAY	THEORY TOPIC
		4th	* Reference networks
		5th	* Errors and Accuracy
		1st	* Basics of GIS and MAP Preparation using GIS
	4th	2nd	* Components of GIS, Integration of spatial and attribute information
		3rd	* Three views of Information system
		4th	* Database or Table view map view and model view
		5th	* Spatial data model
		1st	* Attribute data management and metadata concept
JUNE			* Prepare data and adding to the map

MONTH	WEEK	CLASS DAY	THEORY TOPIC
		2nd	* Organizing data as layers
		3rd	* Switching to layout view
		1st	* Change page orientation
	2nd	2nd	* Removing Borders
		3rd	* Adding and editing map information
		4th	* Finalize the map