

# PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH



## LESSON PLAN Session-2024-2025

Semester: 6<sup>th</sup> Discipline: CIVIL ENGG. Engg.

Subject: LAND-SURVEY - I

Name of the Teaching Faculty: SASWATI SUMAN SHARMA

Subject: LAND SURVEY - INo. of Days/per week class allotted : 5Semester From Date : 4-02-2025 To Date: 17-5-2025 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
1 <sup>st</sup>	1	Introduction to tacheometry
	2	Principle of tacheometry, stadia constant
	3	Stadia tacheometry with vertical staff
	4	Stadia tacheometry with horizontal & inclined staff
	5	Practice Numericals
2 <sup>nd</sup>	1	Methods to determine elevation & distance
	2	Numericals
	3	Understanding Curves
	4	Compound, Reverse and transition Curves
	5	Purpose of different types of Curves.
3 <sup>rd</sup>	1	Elements of Circular Curve, Numerical
	2	Preparation of Curve table & Setting out

Sachin Sumon Sharma  
Signature of the Faculty



Subject: LAND SURVEY - II No. of Days/per week class allotted : 5

Semester From Date : 4.02.2025 To Date: 17.5.2025 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
	3	Setting out by offset and successive bisection
	4	offsets from chords produced, Rankine method
	5	Obstacles during Curve Ranging.
4th	1	Fractional & Ratio Scale, Graphical Scale
	2	Map Scales and projections
	3	How maps convey locations & Elevation
	4	Maps conveying Spatial Relationship
	5	Classification of maps
5th	1	Understanding variety of maps
	2	Physical, Topographical Maps etc.
	3	Open Series Maps
	4	Significance of open series Maps.

Saeedat Sumon Shamma  
Signature of the Faculty

Subject: LAND SURVEY-II No. of Days/per week class allotted: 5

Semester From Date: 4.02.2025 To Date: 17.05.2025 No. of Weeks: 15

Week	Class Day	Theory /Practical Topics
	5	Defense Series Maps
6 <sup>th</sup>	1	Significance of defense series maps
	2	Map Nomenclature
	3	Quadrangal Name, Latitude & Longitude
	4	UTM and contour lines
	5	Public Land Survey & field Notes
7 <sup>th</sup>	1	Magnetic Declination
	2	Significance of magnetic Declination.
	3	Aerial photogrammetry
	4	Types of aerial photogrammetry
	5	Classification of photometry
8 <sup>th</sup>	1	Aerial & Terrestrial photometry

Saeed Simon Sharma  
Signature of the Faculty

Subject: LAND SURVEY-II No. of Days/per week class allotted: 5

Semester From Date: 4.02.2025 To Date: 17.05.2025 No. of Weeks: 15

Week	Class Day	Theory /Practical Topics
	2	Photometry process (acquisitions)
	3	Control Survey, Geometrical Distortion
	4	Orientation & triangulation
	5	Imagery & Support data
9th	1	DTM Generation
	2	DEM Generation
	3	Orthorectification generation
	4	Introduction to modern Survey
	5	Working principle of modern Equipment
10th	1	Micro-optics & Digital theodolite
	2	Working principle of total station
	3	Distance of points under Survey from T.S.

*Sasikal Surman Sharma*  
Signature of the Faculty

Subject: LAND SURVEY-IINo. of Days/per week class allotted: 5Semester From Date: 1.02.2025 To Date: 17.05.2025 No. of Weeks: 18

Week	Class Day	Theory / Practical Topics
	1	Setting up X, Y, Z axis, Northing, Easting
	5	Setting up Elevation
11 <sup>th</sup>	1	Using trigonometrical method
	2	Using triangulation method
	3	Introduction to GPS
	4	Working principle of GPS
	5	Signals, Errors and positioning methods
12 <sup>th</sup>	1	Introduction to DGPS
	2	Base station Setup, GPS Setup
	3	Post processing and Export GPS data
	4	Flash Cards, Sequence for time tags to file
	5	Sequence to download and export data

Saswat Suman Ghose  
Signature of the Faculty

subject: LAND SURVEY - I

No. of Days/per week class allotted : 5

Semester From Date : 1.02.2025 To Date: 17.05.2025 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
13 <sup>th</sup>	1	Introduction to Electronic total station
	2	Angle measurement, levelling, positioning
	3	Reference works - errors and accuracy
	4	Components of GIS
	5	Integration of spatial & Attribute info
14 <sup>th</sup>	1	3 views of information concept
	2	Table View, Map view and model view
	3	Spatial data modelling
	4	Attribute data management
	5	Metadata concepts
15 <sup>th</sup>	1	Preparing data and organizing as layer
	2	Organizing & Editing of layers.

Saswat Sumon Sharma  
Signature of the Faculty

subject: LAND SURVEY - II

No. of Days/per week class allotted : 5

Semester From Date : 1-2-2025 To Date: 17-5-2025 No. of Weeks : 18

Week	Class Day	Theory /Practical Topics
	3	Switching of layout view & Change Orientation
	4	Removing Borders, Adding, Editing map info
	5	finalising the map

*Saswat Kumar Shome*  
Signature of the Faculty