GOVERNMENT POLYTECHNIC, PURI
DEPARTMENT OF CIVIL ENGINEERING

Discipline: **CIVIL ENGG.**	Semester: 6th	Name of the Teaching Faculty: **Mr. SURYAKANT DASH& Mrs.SUBHASHREE SAHOO**	
Subject: **LAND SURVEY PRACTICE -II**	No. of days/per week class allotted: 05	Semester From date: 10.03.2022 No. of Weeks:15	To Date:10.06.2022
PRE-REQUISITE	Basic knowledge of survey 1 practice.		
COURSE OUTCOMES	1. Conduct trigonometric leveling work in the field with the help of plane table surveying or geodetic surveying. 2. Prepare contoured maps or plans requiring both the horizontal as well as vertical control 3. Set out circular curve in the field. 4. Prepare survey map by conducting traverse survey with theodolite. 5. Lay out the construction plan of different types of structures at the site. 6. Study and use of modern electronic surveying instruments for its different applications.		

Week	Class day	Practical topics	Delivery Method
1ST	1ST	**TRIGONOMETRICAL SURVEYING & TACHEOMETRY:** 1.1 Determination of height of 3 objects whose bases are accessible	Demonstration
	2ND	1.1 Determination of height of 3 objects whose bases are accessible	Practice
	3RD	1.1 Determination of height of 3 objects whose bases are accessible	Practice
	4TH	1.2 Determination of stadia constants.	Demonstration
	5TH	1.2 Determination of stadia constants	Practice
2ND	1ST	1.2 Determination of stadia constants	Practice
	2ND	1.3 Determination of horizontal distance an elevation with Staff vertical , by stadia method	Demonstration
	3RD	1.3 Determination of horizontal distance an elevation with Staff vertical , by stadia method	Practice
	4TH	1.3 Determination of horizontal distance an elevation with Staff vertical , by stadia method	Practice
	5TH	**Viva voice**	
3RD	1ST	**SETTING OUT CURVES AND SITE SURVEYING:** 2.1 Setting out a simple circular curve by offsets from long chord	Demonstration
	2ND	2.1 Setting out a simple circular curve by offsets from long chord	Practice
	3RD	2.2 Setting out a simple circular curve by offsets from the tangent 2.3 Setting out a simple circular curve by offsets from chords produces	Demonstration
	4TH	2.2 Setting out a simple circular curve by offsets from the tangent 2.3 Setting out a simple circular curve by offsets from chords produces	Practice
	5TH	2.4 Setting out a simple circular curve by Rankine's method of tangent angle (Deflection angles) Setting out a site the center line and foundation width of a building from the given plan	Demonstration
4TH	1ST	2.4 Setting out a simple circular curve by Rankine's method of tangent angle (Deflection angles) Setting out a site the center line and foundation width of a building from the given plan	Practice
	2ND	2.5 Setting out the foundation line for a culvert	Demonstration
	3RD	2.5 Setting out the foundation line for a culvert	Practice
	4TH	2.6 Dividing an area into plots of given size	Demonstration
	5TH	**Viva voice**	
5TH	1ST	**STUDY OF MAP AND MAP SERIES:** 3.1 Physical Map	Demonstration
	2ND	3.2 Topographic Map	Demonstration
	3RD	3.3 Road Map	Demonstration
	4TH	3.4 Political Map	Demonstration

	5TH	3.5 Economic & Resources Map	Demon
6TH	1ST	3.6 Thematic Map	Demonst
	2ND	3.7 Climate Map	Demonst
	3RD	3.8 Open Series map and Defense Series Map	Demonstra
	4TH	**Viva voice**	
	5TH	**STUDY ON GPS & DGPS AND ETS:** 4.1 GPS: - Global Positioning, GPS Signals, Errors of GPS,Positioning Methods	Demonstratio
7TH	1ST	4.1 GPS: - Global Positioning, GPS Signals, Errors of GPS,Positioning Methods	Demonstration
	2ND	4.2 DGPS: - Differential Global Positioning System 4.2.1 Base Station Setup 4.2.2 Rover GPS Set up	Practice
	3RD	4.2 DGPS: - Differential Global Positioning System 4.2.1 Base Station Setup 4.2.2 Rover GPS Set up	Demonstration
	4TH	4.2 DGPS: - Differential Global Positioning System 4.2.1 Base Station Setup 4.2.2 Rover GPS Set up	Practice
	5TH	4.2 DGPS: - Differential Global Positioning System 4.2.1 Base Station Setup 4.2.2 Rover GPS Set up	Practice
8TH	1ST	4.2.3 Download, Post-Process and Export GPS data	Demonstration
	2ND	4.2.3 Download, Post-Process and Export GPS data	Practice
	3RD	4.2.4 Sequence to download GPS data from flashcards	Demonstration
	4TH	4.2.4 Sequence to download GPS data from flashcards	Practice
	5TH	4.2.5 Sequence to Post-Process GPS data y	Demonstration
9TH	1ST	4.2.5 Sequence to Post-Process GPS data y	Practice
	2ND	4.2.6 Sequence to export post process GPS data	Demonstration
	3RD	4.2.6 Sequence to export post process GPS data	Practice
	4TH	4.2.7 Sequence to export GPS Time tags to file	Demonstration
	5TH	4.2.7 Sequence to export GPS Time tags to file	Practice
10TH	1ST	4.3 ETS: - Electronic Total Station 4.3.1 Distance Measurement	Demonstration
	2ND	4.3 ETS: - Electronic Total Station 4.3.1 Distance Measurement	Practice
	3RD	4.3 ETS: - Electronic Total Station 4.3.1 Distance Measurement	Practice
	4TH	4.3.2 Angle Measurement	Demonstration
	5TH	4.3.2 Angle Measurement	Practice
11TH	1ST	4.3.3 Leveling 4.3.4 Determining position 4.3.5 Reference networks	Demonstration
	2ND	4.3.3 Leveling 4.3.4 Determining position 4.3.5 Reference networks	Practice
	3RD	4.3.3 Leveling 4.3.4 Determining position 4.3.5 Reference networks	Practice
	4TH	4.3.6 Errors and Accuracy	Demonstration
	5TH	4.3.6 Errors and Accuracy	Practice
12TH	1ST	**Viva voice**	
	2ND	**STUDY OF GIS AND MAP PREPARATION USING GIS** 5.1 Components of GIS, Integration of Spatial and Attribute Information	Demonstration
	3RD	5.2 Three Views of Information System 5.2.1 Database or Table View, Map View and Model View	Demonstration

	4TH	5.3 Spatial Data Model	Demonstration
	5TH	5.4 Attribute Data Management and Metadata Concept	Demonstration
13TH	1ST	5.5 Prepare data and adding to Arc Map.	Demonstration
	2ND	5.6 Organizing data as layers	Demonstration
	3RD	. 5.7 Editing the layers.	Demonstration
	4TH	5.8 Switching to Layout View	Demonstration
	5TH	. 5.9 Change page orientation.	Demonstration
14TH	1ST	5.10 Removing Borders.	Demonstration
	2ND	5.11 Adding and editing map information.	Demonstration
	3RD	5.12 Finalize the ma	Demonstration
	4TH	**Viva voice**	
	5TH	**Viva voice**	
15TH	1ST	PRACTICE CLASS	
	2ND	PRACTICE CLASS	
	3RD	PRACTICE CLASS	
	4TH	PRACTICE CLASS	
	5TH	PRACTICE CLASS	

LEARNING RESOUCES:

1 A text book of surveying and leveling Khanna Publishers. - R. Agor
2 Surveying Vol. I, II, III Laxmi Publication - B. C. Punmia
3 S. Chand & Co. Advanced Surveying- D. Gaikwad,
4 Remote sensing & GIS Oxford Publication- Bhatta

WEBSITE RESOUCES:

01. https://youtu.be/uy2GvFwVJU4

Sunjayant Dash
SIGNATURE OF CONCERNED FACULTY

Snishra 10.3.2022
SIGNATURE OF HOD I/C

PRINCIPAL
G.P. PURI