

**ADD ON CERTIFICATE COURSE**

*On*

**Surveying & Mapping**



**Date of commencement: 19.02.2025**

*PROSPECTUS*



Conducted by

Department of Geography  
Ananda Chandra College, Jalpaiguri

## **Add on Certificate Course on 'Surveying & Mapping'**

### **About the course**

Add-on courses are short-term training programs that are designed to supplement the core curriculum of a degree program. These courses are usually offered as certificate or diploma courses, and they provide students with additional skills and knowledge that are relevant to their field of study. The present course of 'Surveying & Levelling' is a hands-on training of different survey instruments. Surveying is the art of determining the relative positions of different objects on the surface of the earth by measuring the horizontal distances between them, and by preparing a map to any suitable scale. The art of Surveying is helpful to prepare topographical maps, to prepare contour maps, to prepare a plan or outline of field, construction etc. Handling and management of different survey instruments like Plane table, Dumpy Level, Theodolite, & Prismatic Compass etc. will be taught in this course. These manual instruments are very helpful to prepare plan or map of small areas. After attending the course, the learners will be able to draw maps and plans. The survey maps include details of different objectives, such as roads, railways, irrigation canals etc.

### **Course objectives**

The main objective of this course is to make the students understand to handle the survey instruments. The learners will learn the conventional survey instruments which are helpful to prepare map for a small area conveniently. In the age of modern Remote Sensing & GIS, the basic map making tools are gradually losing their importance, but for small area mapping and accuracy, the traditional survey instruments are very helpful. This course is designed especially for the undergraduate students of Geography to provide practical knowledge of preparing maps using the survey instruments by collecting data from the field.

### **Expected Learning outcome**

The learning outcome of this course may be outlined as follows.

- i) Students will learn to handle the survey instruments
- ii) Students will be capable to collect field data from the field for mapping.
- iii) Students will learn the logical reasoning behind this survey techniques.
- iv) Students will able to prepare the maps of small areas accurately.

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### **Duration of the course**

A total of 32-34 hours classes will be made in this course. There will be different modes of classes in this course. The theoretical classes cum demonstration and Practical classes in the field or hands on training. Classes will be held after the normal class hours [3.30 pm-5.30 pm].

### **Intake capacity**

Total intake capacity is 30. Students of 4<sup>th</sup> & 6<sup>th</sup> Semesters can apply for the course. 20 students from Geography Major/ Honours course and 10 students from other disciplines can enroll their names for participating in the course. Seats may increase if needed.

### **Important Dates**

<b>Events</b>	<b>Date(s)</b>
Online applications	04.02.2025 to 07.02.2025.
Publication of shortlisted candidates	08.02.2025
Deposition of registration fees	10.02.2025 to 11.02.2025
Publication of final list of selected Candidates	12.02.2025
Inauguration of the course	19.02.2025
Tentative date of termination of the course	04.04.2025

### **How to apply**

Interested students can participate through online mode by filling google forms. Advertisement will be published in college website and notice board of the Geography department. The link of the application form is <https://forms.gle/PD52Mf6VSpGmEhbZ8>.

### **Registration fee**

There will be no course fee. However, a registration fee of only Rs. 150/- (Rs. One hundred fifty only) is needed. After receiving of application through online form, the shortlisted candidates' names will be published in department notice board on 08.02.2025. Only shortlisted candidates will be allowed to deposit the registration fee at the department. The shortlisted candidates those who will fail to deposit the registration fee on time, their candidature will be rejected.

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### Procedure of selection

If number of valid applications are more than the intake capacity, the marks of the last examination and the attendance of the last semesters will be considered for selection. However, a waiting list will be prepared with 20% of intake capacity.

### Course content

**Unit-I: Basics of surveying & Levelling:** Definition, objects, principles and classification of surveying and levelling; role of surveying in making maps.

**Unit-II: Compass Surveying:** Traversing by Prismatic Compass, problems of fore and back bearings, correction of bearings and closing errors; Uses of chains to spot the objects; Preparation of maps.

**Unit-III: Plane Table surveying:** Principle and accessories, traversing by plane table, drawing of planes/ maps; Advantages & disadvantages of plane tabling.

**Unit-IV: Contouring by Dumpy Level:** Procedure of data collection, Rise and fall method, Collimation method, computation missing data table; methods of contouring, Interpolation of contours, Preparation of Contour maps.

**Unit-V: Theodolite Traversing:** Measurement of horizontal angles, traversing by Theodolite, Computation of latitude & Departure; Balancing of Traverse, Omitted measurement.

### Expected duration of classes for each Unit

Unit	Topic	Theory hours	Hands-on training hours
I	Basics of surveying & Levelling	2 hours	-.
II	Compass Surveying:	4 hours	4 hours
III	Plane Table Surveying	2 hours	4 hours
IV	Contouring by Dumpy Level	4 hours	4 hours
V	Theodolite Traversing	4 hours	4 hours
	<b>Test/Examination</b>	1 hour	2 hours
	<b>Total</b>	<b>17 hours</b>	<b>18 hours</b>

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### Resource persons

	<b>Prof. (Dr.) Ranjan Roy</b> Professor, Department of Geography & Applied Geography, University of North Bengal, Darjeeling, West Bengal. Areas of Specialization: Cartography
	<b>Dr. Debarshi Ghosh</b> Assistant Professor, Department of Geography, Dhupguri Girls' College, Dhupguri, Jalpaiguri, West Bengal Areas of Specialization: Cartography, RS & GIS
	<b>Dr. Bipul Chandra Sarkar</b> Associate Professor, Department of Geography, Ananda Chandra College, Jalpaiguri Areas of Specialization: Cartography
	<b>Mr. Chiranjib Sarkar</b> Assistant Professor, Department of Geography, Ananda Chandra College, Jalpaiguri Areas of Specialization: Cartography
	<b>Dr. Ershad Ali</b> State Aided College Teacher, Department of Geography, Ananda Chandra College, Jalpaiguri Areas of Specialization: Remote Sensing & GIS
	<b>Mr. Subrata Kundu Paul</b> State Aided College Teacher, Department of Geography, Ananda Chandra College, Jalpaiguri Areas of Specialization: Remote Sensing & GIS

### Assessment & Grading

After completion of the course, an examination of 25 marks will be taken with 25 short and multiple-choice question sets. Another Practical Examination of 25 marks will be conducted to test the learners' ability to judge the understanding level on instruments. Successful candidates will be awarded certificates with eligible grades following the standard norms.

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