

Add-on- Certificate Course on Basic Digital Mapping Technique

Course Code: ADC-02 (Duration: 30 Hours)

Department of Geography, IQAC, St. Xavier's College (Autonomous) Ranchi

Commencement of Classes- From 06th August 2025



Remote Sensing and GIS Lab-01, Beside Room no-57



Remote Sensing and GIS Lab-02, Beside Proost Hall

Course Coordinator:	Dr. Sandeep Chandra, Dept of Geography, SXC
Course Director:	Dr. Rajeev Ranjan Shrivastava, Dept of Geography, SXC
No. of seats:	30
Course eligibility:	10+2/ UG/PG (Geography, History, Economic, Political Science, Sociology, Botany, Zoology, Geology)
Requirement:	Basic operation of Computer
Course Fee:	2000/-
Commencement of class:	6 th August 2025
course completion period-	August 2025 to Dec 2025
Class timing	8:25 am to 9:55 am (four days in a week)

Course Registration through College website- www.sxcran.ac.in

Note- this course will run only in case of minimum admission of 18 students.

About the course:

This training aimed to impart a basic knowledge of digital mapping techniques. Students will develop skills in using computer for mapping and spatial data presentation. Spatial data are widely used by planners, economists, political analysts such as electoral analysis, Biologists in mapping plant and animal distribution, geologists in geological mapping, and so on. The course is designed to introduce basic concepts of cartography as well as develop the understanding of digital map making techniques among the students. Department of Geography, St. Xavier's College have state of the art infrastructure which includes 2 Remote sensing and GIS lab having about 80 computers, high speed internet connection through LAN and Wifi, in-house NAS/Cloud space, Digital display board etc. GIS Lab have licenses of ERDAS Imagine, ArcGIS, Geomedia software. We encourage students to use Free and open source software such as QGIS, ILWIS etc.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Have sound knowledge regarding the classification and elements of maps.
2. Have proper utilization of maps for the development.
3. Appreciate the preparation of various thematic maps with the application of various techniques.

Course Content:

Sl no	Topic	Hours
Theoretical Session (10 hrs)		
1.	Maps – Classification and Types	2 hrs
2.	Thematic Mapping Techniques – Properties, Uses and Limitations Elements of map,	2 hrs
3.	Spatial and non-Spatial data; Point, Line and Areal Data	2 hrs
4.	Coordinates system	2 hrs
5.	Principles of Map Design	2 hrs
Practical Session (20 hrs)		
6.	Introduction of GIS software- QGIS	4 hrs
7.	Spatial data handling, creation, editing	4 hrs
8.	Joining of spatial and non-spatial data	4 hrs
9.	Spatial data browsing and downloading	4 hrs
10.	Creating thematic maps, Layout preparation	4 hrs