



DINABANDHU ANDREWS COLLEGE



30 Hour Certificate Course on
EVOLUTION OF MAPPING TECHNIQUES IN GEOGRAPHY

Offered by the Department of Geography
DINABANDHU ANDREWS COLLEGE (C-11955) P.O. GARIA,
KOLKATA 700 084

Mamila Mondal

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Evolution of mapping Techniques in Geography

Prerequisite: Any undergraduate (UG) students having Geography as a subject in 10+2 level.

Contact Hours: 30 Hours

Instructors: Smt. Madhumita Chakraborty Goswami, Smt. Moumita Nandi, Ms. Srabani Mitra

Mode of Teaching: Offline

Syllabus (3 modules):

Module 1: (Introduction to mapping techniques in Geography) – 10 Hours

- Fundamentals of mapping techniques in Geography
- Historical perspective
- Early techniques of mapping.
- Morphometric analysis in Geographical mapping
- Problems related to different mapping techniques in Geography

Module 2: (Development of mapping techniques in Geography using open-source software **15 Hours**

- Introducing mapping software
- Conceptualising open-source software and paid software.

Moumita Nandi

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- Preparing maps using mapping software: Digitisation of features and administrative boundaries. Data attachment, overlay, and preparation of annotated thematic maps

Module 3: (Geographical Information Systems and Global Navigation Satellite System)

05 Hours

- GIS data structures types: Spatial and non-spatial, raster and vector. Principles of preparing attribute tables, data manipulation, and overlay analysis
- Principles of GNSS positioning and waypoint collection. Principles of transferring of GNSS waypoints to GIS. Area and length calculations from GNSS data
- Waypoint collection from GNSS receivers, exporting to GIS database and plotting

Course References

Bhatta, B. 2011. Global Navigation Satellite Systems: Insights into GPS, GLONASS, Galileo, Compass and Others, CRC Press.

Brewer, C.A. 2015. Designing Better Maps: A Guide for GIS Users, 2nd ed, Esri Press.

Monkhouse, F.J., Wilkinson, H.R. 1971. Maps and Diagrams: Their Compilation and Construction, 3rd ed (2017 reprint), Alphaneumera-Kolkata.



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