SNDT Women's University
Department of Geography, PGSR Complex
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CERTIFICATE COURSE IN SURVEYING

Duration : 04 Months (240 Hrs Theory & Practical)
Intake Capacity : Minimum 10, Maximum 20
Credits : 16 Credits
Course Fees/ Student : 15,000
Objectives : After successfully completing this course student should be able to know concept of measurement and determination of boundaries, areas, shapes, location through traversing techniques. Studets will be able to calculate and plot t survey data to analyze errors and derive unknown bearings, distances, coordinates, curve elements and areas. It also enhances the skills of the students in the field of survey for revenue purposes.

Course Contents

Courses	Modules	Hours	Total Credits
Fundamental Definitions and Concepts	1. History and Development in Surveying 2. Contribution of Human being /Local Participation 3. Basic concepts in Surveying 4. Principals of surveying 5. Classification of surveying 6. Importance of Technical Survey	15	1
Instruments and concepts in Surveying	1. Introduction to various surveying instruments and uses Definitions 2. Definitions of various Geographical concepts used in Cadastral surveys 3. Methods of Levelling 4. Levelling Instruments 5. Levelling Problems 6. Errors in Levelling	30	2
Traverse Survey	1. Introduction to Chain Survey 2. Use of tapes-open traverse, triangulation survey 3. Plane table; plan preparation, resection - one point and two point problem; three point problem; tracing paper method. 4. Prismatic compass: Open and closed traverse, elimination error	45	3

	5. Field Survey with Plane Table and Prismatic Compass (02 each)		
Dumpy level	1. Introduction to Dumpy Level its parts 2. Concepts/Terminology used in Dumpy Level Survey 3. Instrument Method 4. Rise and Fall Methods 5. Surveying with above two methods 6. Plotting of Traverse Survey 7. Contour plan preparation. 8. Field Survey with Dumpy Level(03)	60	**4**
Theodolite	1. Introduction to Theodolite, various types and its parts 2. Concepts/ Terminology used in Theodolite Survey 3. Measurement of Horizontal and Vertical angle 4. Tachometric Survey 5. Sources of error in Theodolite survey 6. Contour plan preparation 7. Interpolation of Contours 8. Field Survey with Theodolite (04)	75	**5**
Other smaller instruments	1. The Sextant 2. Abney level 3. Indian clinometers 4. Application of smaller survey instruments in mapping	15	**1**

Suggested Readings

- Clendinning , J. Principles and use of Surveying Instruments. 2nd edition, Blockie.A 1958.
- Clendinning ,J Principles of surveying 2nd edition 1960.
- Hotine, Major M.The re-triangulation of Great Britain. Empire survey review 1935.
- Mitra,R.P. and Ramesh A : Fundamentals of Cartography Revised Edition, Concept Publication, New Delhi.
- Monkhouse - Maps and diagrams Methuen 1971.
- Negi, Balbir Singh. Practical Geography Third revised Ed.Kedar Nath and Ram Nath, Meerut &Delhi, 1994-95.
- Sandover,J.A. Plane Surveying. Arnold 1961.
- Singh & Karanjta - Map work and Practical Geography Central Book Dept Allahabad 1972.
- Singh, R.L.and Dutt, P.K. Elements of Practical Geography, Kalyani Publication, New Delhi, 1979

Course. Co-ordinator.