

AR-306

CODE	SUBJECT	CREDITS
AR-306	SURVEY & LEVLLING-I	02
FOCUS		
	The main emphasis is on understanding about various instruments used for surveying, to develop an understanding in the physical survey work of open spaces and building and techniques for preparation of measured drawings.	
CONTENT		
	<ol style="list-style-type: none">1. Fundamental definitions and concepts: Definition & object of surveying. Principles of surveying, plane and geodetic surveying, classification of surveying, units of measurements, scale of drawing, representative fraction of scale, plain, diagonal and vernier scales.2. Chain and Tape surveying : Suitability of chain surveying, selection of surveying station, ranging out survey lines, methods of ranging, offsets, equipments required for chain surveying, principle of chain surveying, survey lines, field work, Errors in chain surveying, chaining on slopping ground, Obstacles in chaining.3. Chain and Compass surveying : Open and closed traverse. Prismatic compass and surveyor's compass, its component parts and adjustments. Bearing of survey lines, whole circle bearing and reduced circle bearing system. Fore and back bearing. True meridian and magnetic meridian. Computation of included angles from bearings. Local attraction and its corrections. Chain and compass, closed traverse survey, plotting and its adjustment.4. Plane table surveying: Merits and demerits. Equipments required. Adjustment of plane table, orientation by different methods. Methods of plane tabling. Errors in plane tabling.5. Computation of area: General methods of determining areas. Computation of area of figures having irregular boundaries by planimeter. Introduction to digital planimeter.6. Setting out of buildings on a site.	
METHODOLOGY		
	Practical demonstration and documented site work is a must to familiarize students with use of all relevant instruments, in addition to lectures on the basic concepts and theory .	
REFERENCES:		
	<ul style="list-style-type: none">- Surveying and Leveling by T.P. KANETKAR AND S.V.KULKARNI.- Surveying and Leveling by B.C. PUNMIA- Surveying Vol -1 by DR. B.C.PUNMIA, ASHOK K.JAIN AND ARUN K.JAIN- Concise practical surveying by R.F.LANE AND W.C.CARTIN	