

Year & Sem: E1S1	Course Code: CE1103	Course Name: Surveying	No. of Credits: 4	L 2	T&PS 2	P 0
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UNIT-I: Chain Survey:

Classification of surveying-Principles of Surveying-Linear measurements, Direct measurement. Problems on Base line measurement- -Offsets-Basic problems in chaining-obstacles in chaining-Problems.

UNIT- II: Compass Survey:

Introduction to compass survey Definitions of Bearing. True bearing, True meridian, Magnetic Meridian, Magnetic bearing. F.B. & B.B of lines – Designation of bearings – W.C.B. & R.B. – related problems. Theory of Magnetic compass (i.e. Prismatic compass) – Magnetic dip-Description of Prismatic Temporary adjustments of compass-Magnetic Declination – Local attraction-Related Problems-Errors in compass survey.

UNIT- III: Plane table surveying:

Introduction-Advantages accessories-Temporary adjustment. Methods of plane tabling-Plane table traversing-Three point problem – Mechanical method – Two point problem-Errors in plane tabling.

UNIT- IV: Levelling:

Definitions of terms-Methods of levelling-Uses and adjustments of dumpy level- Temporary and permanent adjustments of dumpy level leveling, Differential leveling, profile leveling, Reciprocal leveling, H.I. method-Rise and fall method-Checks-Related problems- Reciprocal levelling-Related problems-L.S & C.S Levelling-Problems in levelling-Errors in levelling.

UNIT-V: Contouring:

Definitions-Interval, Characteristics of contours-methods of locating contours-Direct and indirect methods-Interpolation of contours-Contour gradient-Uses of contour maps.Introduction to Auto Level.

UNIT VI: Minor Instruments

Line Ranger, Optical Square, Abney level, Clinometer, Ceylon Ghattracer, Pantagraph, Sextant and Planimeter.

References/Text Books:

1. Dr. K.R. Arora, Surveying Vo.I, Standard Book House, 6th edition, 2000
2. Punmia, Surveying Vol.I, Standard Book House, 9th edition, 1985
3. S.K.Duggal, Surveying Vol.I, Tata Mcgraw Hill, 2nd edition.

Lecture Plan: Unit-I & -II syllabus for MID-I, Unit-III & -IV syllabus for MID-II and Unit-V & -VI syllabus for MID-III examinations.

Video Lectures (Web Links):

1. <http://www.nptelvideos.in/2012/11/surveying.html>