<table>
<tr><td>No</td><td colspan="2">Information on Surveying II Subject</td></tr>
<tr><td>1.</td><td colspan="2">Unit Name: Surveying I</td></tr>
<tr><td>2.</td><td colspan="2">Unit Code: CE -21011</td></tr>
<tr><td>3.</td><td colspan="2">Classification : Engineering Subject</td></tr>
<tr><td>4.</td><td colspan="2">Credit Hours : 3</td></tr>
<tr><td>5.</td><td colspan="2">2 for lecture: (2 hours ×15 weeks)</td></tr>
<tr><td>6.</td><td colspan="2">Trimester/ Year Offered: 1/3</td></tr>
<tr><td>7.</td><td colspan="2">Pre-requisite (if any):</td></tr>
<tr><td>8.</td><td colspan="2">Mode of Delivery : Lecture, Tutorial and Practical</td></tr>
<tr><td rowspan="5">9.</td><td colspan="2">Assessment System and Breakdown of Marks::</td></tr>
<tr><td>Tutorial</td><td>10%</td></tr>
<tr><td>Practical</td><td>20%</td></tr>
<tr><td>Final examination</td><td>70%</td></tr>
<tr><td>Total</td><td>100%</td></tr>
<tr><td>10.</td><td colspan="2">Academic Staff Teaching Unit:</td></tr>
<tr><td>11.</td><td colspan="2">Objective of Unit:
The main objective of surveying is the preparation of maps or plans which are the basis in planning and design of engineering project such as route location of railway line, roads and water supply scheme.</td></tr>
<tr><td>12.</td><td colspan="2">Learning Outcome of Unit:
On completion of this unit, students shall be able to:
a) To understand the basic concepts of surveying.
b) To measure and calculate horizontal, vertical & direction on the earth surface.</td></tr>
<tr><td>13.</td><td colspan="2">Synopsis of Unit:
The unit is intended to
Fundamental Concepts, Horizontal Measurements, Compass Surveying, Theodolite, Trigonometric Levelling, Measurement of Vertical Distances, Traversing.</td></tr>
<tr><td>14.</td><td colspan="2">Topic 1: Fundamental Concepts
Introduction</td></tr>
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	Definitions Surveying Classification Of Survey Principles Of Surveying Practice Of Surveying Surveying-Character Of Work Field Work Office Work Errors
	Topic 2: Horizontal Measurements Chain Surveying Chain Tape Accessories For Chaining Running SurveyLines Linear Measurement with Chain Errors in Change Error In Measurement With Incorrect Chain Length Linear Measurement With Tape Tape Correction Offsets Obstacles To Changing Survey
	Topic 3 : Compass Surveying Definitions Types Of Compass Temporary Adjustments Of Compass Designation Of Bearings Reduced Bearing Force Bearing And Back Bearing Calculation Of Include Angles From Bearings Calculation Of Bearings From Include Angles

	Magnetic Declination DIP Local Attraction Determining True Meridian Chain Surveying Versus Compass Surveying
	Topic 4 : Theodolite Classification Construction Details Reading A Theodolite Temporary Adjustments Permanent Adjustments Measurement Of Horizontal Angle Measurement Of Vertical Angle Measurement Of Magnetic Bearing
	Topic 5 : Measurement of Vertical Distance Definitions of Basic terms Principals of Levelling Types Of Level Levelling Staff Temporary Adjustments Permanent Adjustments Principles Of Levelling Field procedure In Levelling Curvature and correction Trigonometric Levelling

	Topic 6 : Traversing Method Of Traversing Plotting Traverse Survey Checks Closing Error Balancing A Traverse Distribution Of Angular Error Adjustment Of Bearing Computation Of Area Of A Closed Traverse By Coordinates
15	Main References: SK Duggal, professor and head, Department of Civil Engineering Motilal Nehru National Instruction of Technology Allahabad