<table>
<tr><td>No</td><td colspan="2">Information on Surveying III Subject</td></tr>
<tr><td>1.</td><td colspan="2">Unit Name: Surveying III</td></tr>
<tr><td>2.</td><td colspan="2">Unit Code: CE -31011</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): CE-21011</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 calculate Aerial & Astronomy Survey
b) Discussion RS , GIS & GPS</td></tr>
<tr><td>13.</td><td colspan="2">Synopsis of Unit:
Field Astronomy, Aerial Survey, Remote Sensing, Geographic Information System, Global Positioning System.</td></tr>
<tr><td>14.</td><td colspan="2">Topic 1: Field Astronomy
Introduction
Celestial Sphere
Solar System</td></tr>
</table>

	Definitions Position Of ACelestisal Relationship Between Coordinates Spherical Trigonometry And Spherical Triangle The Astronomical Triangle Time Conversion Of Time Astronomical Corrections Determination Of Time Determination Of Azimuth
	Topic 2: Aerial Survey Introduction Scale of vertical Photographic Scale of Tilted Photographic Displacement And Errors Aerial Photogrammetry Displacement due to Tilt Flight planning Parallax
	Topic 3: Remote Sensing Introduction Electromagnetic Energy Electromagnetic Spectrum Effect Of Atmosphere On Electromagnetic Radiation Energy Interaction With Earth Surface Feature Remote Sensing Sensor Systems Platforms Ideal And Real Remote-Sensing System Data Acquisition And Interpretation Resolution Concept In Remote Sensing Applications Of Remote Sensing Land Use/Land Cover Analysis

	Methodology For Land Use/Land Cover Mapping
	Topic 4 : Geographic Information System Introduction Subsystem Of GIS Hardware Of GIS Data For GIS Representation Of Features Data Structure For GIS Vector Data Structure Raster Data Structure Vector VS Raster Data Structure Data Format Conversions Capabilities/Functionalities Of GIS Neighbourhood Functions Map Overlay Analysis Data Quality Sources Of Errors In GIS Application Of GIS Selective GIS Softwares
	Topic 5: Global Positioning System Introduction GPS Overview Satellite Constellation Operational Control Segment (OCS) Equipment Segment Principle Of Position Determination VIA Satellite Generated Ranging Signal Determining Satellite To-User Range GPS Surveying Techniques GPS Accuracy

15	Main References: SK Duggal, professor and head, Department of Civil Engineering Motilal Nehru National Instruction of Technology Allahabad