

**Subject : Applied Surveying**  
**Class : Second Year**  
**Hours : 2hrs ( Theoretical ) , 3hrs ( Practical )**

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**Objectives:**

**Introducing the fundamentals, purposes & the required calculations of the applied surveying to the students as well as qualifying him to use the different kinds of surveying instruments in design & execution of civil engineering projects.**

<b>Week</b>	<b>Practical syllabus</b>
<b>1&amp;2</b>	<b>Measuring horizontal &amp; vertical angles by using different kinds of theodolites.</b>
<b>3&amp;4</b>	<b>Construct close connected &amp; close circle traverses to survey small area.</b>
<b>5&amp;6&amp;7</b>	<b>Computations of the coordinates of stations traverse &amp; plotting a traverse , Problems in inverse computation.</b>
<b>8&amp;9</b>	<b>Measuring H. distances &amp; vertical distances by using tachometer , By using theodolite with sub tense-bar.</b>
<b>10&amp;11</b>	<b>Measuring slope , Horizontal &amp; vertical distances by using EDM instrument.</b>
<b>12&amp;13</b>	<b>Measuring area by using total station , Solve problems , Standard deviation.</b>
<b>14&amp;15</b>	<b>Setting out curves &amp; calculation , Curves field work surveying.</b>
<b>16&amp;17</b>	<b>Setting out small building &amp; roadway.</b>
<b>18</b>	<b>Practical problems in tunnel surveying.</b>
<b>19&amp;20</b>	<b>Practical problems in hydrographic surveying.</b>
<b>21&amp;22&amp;23</b>	<b>Applying exercises in computer lab.</b>
<b>24&amp;25</b>	<b>Basic measurements of photograph using pocket stereoscope , Using mirror stereoscope.</b>
<b>26&amp;27</b>	<b>Applying measuring on Arial photographs by using plotters such as Wild B8S &amp; Wild ALO autograph.</b>
<b>28&amp;29&amp;30</b>	<b>Field measurements or lab calculation for certain project.</b>

**References :**

- 1- Surveying for construction / William Irvine , FRICS.**
- 2- Text book of surveying / S.K. Husain , M.S. Naga. Raj.**

- 3- **Elements of photogrammetry / Wolf , Pual R.**
- 4- المساحة المستوية / د . فوزي الخالصي
- 5- المساحة المستوية والمائية / د . علي شكري