

**Civil and Environmental Engineering Department**  
**Course Syllabus**

<b>Instructor Name</b>	<b>Dr. Sameh S. Ahmed</b>				
<b>Course Title:</b>	<b>Surveying II</b>	<b>Course code:</b>	<b>CE 371</b>	<b>Cr. Hrs:</b>	<b>(2,1,2)</b>
<b>Prerequisite:</b>	CE 370	<b>Co-requisite:</b>	---	<b>Tutorial Time:</b>	MO: 11:00– 12:00 pm
<b>Academic Year:</b>	2018/2019		<b>Semester:</b>	First	
<b>Lecture Times:</b>	SU.: 8:00-10:00 am		<b>Lab Time:</b>	TH: 10:00– 12:00	
<b>Office Hours</b>	MO.: 9:00-10:00	TU: 9-10:00	<b>Office number</b>	003-2-40-5	

**Course Objectives**

This course aims to achieve the following objectives

1	To enable students to measure horizontal and vertical angles using all available instruments.
2	To enable student to measure the distances using all available instruments and specify the accuracy of each technique.
3	To enable students to produce surveying maps using modern techniques with traversing.
4	To enable student to design horizontal and vertical curve.

**Student Learning Outcomes**

<b>Course Learning Outcomes</b>		<b>ABET Student Outcomes</b>
By the end of this course the students will be able to		
1	Ability to measure horizontal and vertical angles and distances using all available instruments.	a,k,h
2	Understanding all surveying techniques to produce Detailed map and topographic map	a,b,d,e,k
3	Ability to use different methods in surveying for measuring angles, distance or bearing.	a,b,e,f
4	Ability to design elements of horizontal and vertical curves.	a,b,k

**Assessment**

<b>N</b>	<b>Methods of Assessment</b>	<b>Assessed Learning Outcomes</b>	<b>Maximum Score</b>
1	First exam	1,2	15
2	Second exam	2,3,4	15
3	Quizzes, Report, and homework	1,2,3,4,5	20
4	Lab Exam	1,4	10
5	Final Exam	1,2,3,4,5	40
	<b>Total</b>		<b>100</b>

**Course Contents**

<b>N</b>	<b>Short Description</b>	<b>Week</b>
1	Introduction of surveying instruments	1
2	Angle measurements	2,3
3	Distance measurements	4
4	Traverses	5,6
5	<b>Midterm 1</b>	7
6	Closed Traverses	8,9
7	Intersection and resection	10
8	Design of horizontal curves	11,12

9	Design of vertical curves	13
10	<b>Midterm-II</b>	14
11	Digital Mapping	15
12	Mini Project	16

<b>Books</b>	
<b>Textbook:</b>	<b>Burr, F.K., "Surveying principals and applications" prentice hall, (Last edition).</b>
<b>References:</b>	Kanetkar and Kulkarni, "Surveying and leveling", (Last edition).