

Course Name		FUNDAMENTALS OF SURVEYING
Course Code	CE 209	
Department	Civil Engineering	
Course Instructor	Dr.Orhan ERCAN	
Telephone	+90312 480 65 26	
Office Number		
Hours / Semester	Lecture:14 hrs	Field Work / Laboratory: 56 hrs
Learning Outcomes	<p>Basic surveying operations&computations; theories of errors&their analysis; fundamental concepts of horizontal and vertical angel measurement, leveling; area computation, earthworks computation, profiles and cross-sections, circular curves, Principle of geodetic computations and their applications, Describing the equipment and operation involved in field surveying, Electronic and satellite based surveying instruments, traverse computations; location of man-made structures, map reading and interpretation, use of topographic maps.</p> <p>The course is supported with a field work activities. All the field work activities are performed in the campus site at the most suitable locations depending on the aim of each fieldwork. The field courses are designed to build upon theoretical and practical knowledge gained in all aspects of the course. Teaching in the field works along different lines than in the lecture theatre or practical laboratory.</p> <p>We will make use of the computer teaching laboratory. Generally teaching will involve manipulation of a numerical dataset and interactive comparison of observations with models. As a result students should become confident users of CAD based digital mapping software.</p>	
Course Content	<p>History of surveying and mapping, Principle of geodetic computations and their applications, Theories of error, Electronic and satellite based surveying instruments, Concepts of vertical and horizontal angle measurements, Traverse computations, Map reading, extracting metric information from maps (distances, coordinates etc.), Production line of topographic maps, Usage of topographic maps.</p>	
Type of course	Must	
Course level	Undergraduate	
Year of study		
Semester	Fall	
Course Credit (ECTS)	3 credits	
Course Length	1 semester	

Pre-requisite/s	None
Coursework	
Main Teaching Methods	Both theoretical and application oriented. The course is supported with a field work activities. Industrial trips will be organized.
Assessment Modes and Weights	Grading is based on Class Participation 10%, Field Works and report writing 30%, Midterm I 15%, Midterm II 15%, Final 30%. Closed-book examinations are usually given both in the midterm and finals.
Bibliography	Printed notes is available.