## Surveying Engineering Program Department of Civil Engineering College of Engineering King Saud University



King Saud University				
	SE 471 Survey Camp			
Credit and Contact hours	3 / 1(Lectures); 0(Tutorials); 2(Field Work)			
Required, or Elective	Required for a BSCE degree			
Course Description	Introduction; practical training on precise leveling & trigonometry; measuring distances using electronic distances measurements instrument; measurement of vertical & horizontal angles; GNSS observation & processing, observation treatment and electronic map drawings; computer applications.			
Prerequisites or Co- requisites	SE 413			
Course Learning Outcomes	Students completing this course successfully will be able to			
	Course Learning Outcomes	Related Student Outcomes (SO)		
	CLO1: Design and plan surveying project	SO2		
	<b>CLO2</b> : Conduct field observations using survey instruments to produce final project group report	SO5		
	<b>CLO3</b> : Use computer software in processing, analyzing data and producing map.	SO6		
	<b>CLO4</b> : Write and present a group final report on the project	SO3		
Student Outcomes	<ul> <li>SO2: an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety;</li> <li>SO3: an ability to communicate effectively with a range of audiences.</li> <li>SO5:an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives</li> <li>SO6 :an ability to develop and conduct appropriate experimentation, analyze and interpret data and use engineering judgment to draw conclusions</li> </ul>			

Topics Covered	List of Topics	Related CLOs	
	Introduction and project description and planning	CLO1	
	practical training on precise leveling & trigonometry	CLO2	
	measuring distances using electronic distances measurements instrument;	CLO2	
	measurement of vertical & horizontal angles	CLO2	
	GNSS observation & processing	CLO3	
	Computer applications.	CLO3	
	observation treatment, electronic map drawings and final report writing	CLO4	
Textbook(s) and Other Required Material	Textbook:		
Grading System	Course Work 60%		
	Presentation and Oral Exam 40%		
Instructors	Prof. Abdullah Salman A. Alsalman (2 A 31); e-mail: asalman@ksu.edu.sa		
Date of Review	Nov, 2020		