

1.	Title of the course	Surveying Practical
2.	Course number	CE203P
3.	Structure of credits	0-0-3-2
4.	Offered to	UG
5.	New course/modification to	Modification To CE2191/8
6.	To be offered by	Department of Civil and Environmental Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	Course Objective(s): The course gives exposure to students on practical use of surveying instruments including measuring tapes, chain, compass, levels, theodolites and total station. The course would help the students to understand and apply measurement error, accuracy, precision and techniques to improve accuracy of surveys. The students will gain knowledge on several methods for the computation of areas and volumes.	
10.	Course Content: Introduction to various instruments: chains, tapes, levels, theodolites, total station; Measurement of distances, directions and elevations; Traversing; Levelling; Contouring; Measurement of areas and volumes; Errors of measurements and their adjustments; Setting out curves	
11.	Textbook(s): 1. Arora K R, <i>Surveying Vol-I and II</i> , Standard Book House (2016). 2. Schofield W, <i>Breach M, Engineering Surveying</i> , Spon Press (2017).	
12.	Reference(s): 1. Punmia P C, <i>Surveying Vol. I and II</i> , Laxmi Publications (2005).	