1.	Title of the course	Transportation Engineering Laboratory
2.	Course number	CE308P
3.	Structure of credits	0-0-3-2
4.	Offered to	UG
5.	New course/modification to	Modification To CE3292/8
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 laboratory course presents hands-on experience of practices and techniques used in the design and evaluation of pavement mixtures: asphalt concrete and cement concrete. The students will also get exposed to traffic data collection and processing methods as well as analysis of video data and traffic simulation	
10.	**Course Content:** Pavement engineering laboratory: conventional asphalt binder consistency tests using penetrometer, ring and ball apparatus, rotational viscometer, advanced rheological tests using dynamic shear rheometer, aggregate toughness and specific gravities, Marshall mix design using Marshall hammer, Superpave mix design using gyratory compactor; Traffic engineering laboratory: speed and headway study, moving observer method study, saturation flow measurement, intersection delay measurement, exposure to use of software such as video data analysis software and traffic simulation software	
11.	**Textbook(s):** 1. Mamlouk M S and Zaniewski J P, *Materials for Civil and Construction Engineers*, Pearson Prentice Hall (2010). 2. Roess R P, Prassas E S and McShane W R, *Traffic Engineering*, Pearson Prentice Hall (2011).	
12.	**Reference(s):** 1. Khanna S K, Justo C E G and Veeraragavan A, Highway Engineering, NemChand & Brothers (2015). 2. Kadiyali L R, Traffic Engineering and Transport Planning, Khanna (2011).	