B. Tech Civil Engineering				
Course code: Course Title	**Course Structure**			**Pre-Requisite**
CE 439: Traffic and Transportation Planning	L	T	P	**NIL**
	3	1	0	

Course Objective: This course aims to expose the students to advance topics of transportation engineering: transportation planning surveys, urban transport modes and travel demand forecasting process.

S. No.	Course Outcomes (CO)
CO1	To expose students to carry out origin destination surveys for travel demand estimation
CO2	To expose students to the features of different modes of urban transportation and urban infrastructure
CO3	To expose students to various issues of transportation planning
CO4	To equip students with the knowledge of various methods of analysing traffic data for trip generation, trip distribution, modal split, and assignment

S. No	Contents	Contact Hours
UNIT 1	Introduction: Urban travel characteristics, transportation planning process, demarcation of traffic zones, and collection of data.	10
UNIT 2	Trip generation analysis: Identification of study area, types and sources of data, roadside interview, home interview surveys, expansion factors, trip generation models, zonal models, category analysis, household models, trip attractions of work centers.	10
UNIT 3	Trip Distribution analysis: Trip distribution models, Growth factor models, Gravity models, opportunity models.	10
UNIT 4	Mode Split analysis: Mode choice behaviour, mode split curves, probabilistic models	6
UNIT 5	Traffic Assignment: Elements of transportation network, minimum path trees, all-or-nothing assignment. Appropriate experiments would be taken up.	6
	Total	**42**

REFERENCES

S. No	Name of Books/ Authors/ Publishers	Year of Publication/ Reprint
1.	Khanna, S. K., Justo, C.E.G. and Veeraragavan A. "Highway Engineering", Nem Chand & Bros., Roorkee, U.K.	2014
2.	Kadiyali, L. R., "Traffic Engineering and Transportation Planning", Khanna Publishers, New Delhi.	2018

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