

K L UNIVERSITY
TRAFFIC ENGINEERING (11 – CE 344)

Pre – requisite: 13 - CE 305

L	T	P	Cr
3	0	0	3

SYLLABUS

Statistical Methods for Traffic Engineering: Need, Elementary concepts of Probability, Mean, Standard Deviation and Variance, Poisson and Binomial Distribution, Normal Distribution, Sampling Theory and Significance Testing, Linear Regression and Correlation, Multiple Linear Regression **Traffic Flow Theory:** Introduction, Fundamentals of Traffic Flow, Uninterrupted Traffic Flow – Stream Characteristics, Data Collection, Microscopic and Macroscopic Traffic flow Models, Capacity and LOS, Fundamentals of Interrupted Traffic flow – Shock Waves, Traffic flow at signalized and Un signalized Intersection. **Design Of Traffic Facilities:** Introduction, Freeways, Intersections – Un signalized Intersections, Signalized Intersections, Interchanges – Warrants for Interchanges, Design of Interchanges, Parking Facilities – Parking Demand, On street parking, Off street Parking, Parking stalls, Vehicle Circulation, Road Signs. **Traffic Safety:** Road Accidents, Accident Situation in National & International, Road, Weather and its effect on accidents, Speed in relation of Safety, Pedestrian Safety, Parking and its Influence, Traffic Management Measures and its Influence, Legislation, Enforcement, Education and Propaganda, Cost of Road Accidents, Road Safety Audit. **Traffic and the Environment:** Introduction, Detrimental Effects of traffic on the environment – Noise, Air pollution, Vibration, Visual Intrusion and degrading the aesthetics, Severance and Land Consumption, Evaluation Procedures, Environmental Areas, Situation in India.

Text Books

1. Principles and practices of highway Engineering by Dr. L. R. Kadiyali & Dr. N. B. Lal Khanna publishers – (2003).
2. Principles of Transportation Engineering by Partha Chakroborty and Animesh Das. Prentice Hall of India, New Delhi, 2003.

Reference Books:

1. Principles of Highway Engg., and Traffic Analysis by Fred L. Mannering etc., Wiley Publications, 4th edition, 2012 reprint
2. Transportation Engineering by C . Jotin Khisty, B.Kent Lall, Prentice Hall of India, New Delhi, 2008