

Branch Name:	Civil Engineering
Semester/Year:	Semester VIII / Forth Year
Subject Title:	Traffic Engineering (Elective - IV)
Subject Code:	1ET1060804
Pre-requisite:	To know about road user's characteristics and vehicular characteristics, various traffic studies, accident studies, Traffic regulation such as Sign, marking an signal, methods of light distribution, basic geometric elements

Course Objective:

- To provide for the safe, rapid, comfortable efficient, convenient, and environmentally compatible movement of people, goods, and services.
- To future traffic flows, design of highway intersections/interchanges
- To strength the students knowledge and technical knowhow to be efficient Traffic Engineers.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
03	02	00	05	70	30	-	-	100

Subject Contents				
Sr. No	Topic	Total Hours	Weightage (%)	
1	Traffic Characteristics: (i) Road user's characteristics – general human characteristics, physical, mental and emotional factors, factors affecting reaction time, PIEV theory. (ii) Vehicular characteristics :(static and dynamic), Characteristics affecting road design-width, height, length and other dimensions. Weight, power, speed and braking capacity of a vehicle.	08	20	
2	Traffic Studies: Traffic volume count, methods of traffic volume count, Manual, mechanical, videography, passenger car unit. Presentation of traffic volume count. Speed studies, spot speed studies speed and delay studies and its presentation .Origin and destination studies. Necessity of parking studies types of parking off street parking, on street parking, Accident studies, causes of accidents, accident records condition and collision diagram, preventive measures.	12	30	
3	Traffic regulation: Traffic signs types of traffic signs, regulatory,mandatory, warning signs route marker, lane marking, lane width standards as IRC . Necessity of traffic signals criteria for providing traffic signals types of traffic signals. Methods of designing traffic signals.	08	20	

4	Street Lighting: (i) Methods of light distribution. (ii) Design of street lighting system. (iii) Definitions- Luminaire, foot candle, Lumen, utilization and maintenance factors. (iv) Different types of light sources used for street lighting. (v) Fundamental factors of night vision.	08	15
5	Traffic geometrics: Basic geometric elements, cross roads, rotary intersections grade separated intersection, clover leaf, fully and partial, terminal facilities	06	15

Course Outcome:

After learning the course the students should be able to:

- Aware of various traffic regulation and control devices.
- Conduct different types of Traffic Surveys
- Design of traffic signals at intersections and rotary intersection.
- Explain the reasons of accidents and their preventive measures

List of Reference Books:

1. Traffic Engineering and Transport Planning by L.R. Kadiyali, Khanna Publishers, Delhi
2. W.R. Mcshane and R.P. Roess "Traffic Engg"
3. D.R. Drew, Traffic Flow Theory.
4. G.J. Pingnataro, Principles of Traffic Engineering

E-Resources (If any):

<http://nptel.ac.in/>