

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma in Transportation Engineering

Semester V

Subject Name: **Traffic Engineering – I**

Sr. No.	Course Content	Hrs.	% Weightage
1.	Introduction, basic components and their characteristics: - Road user characteristics - Vehicular characteristics	02	5
2.	Traffic flow characteristics: - Definitions - Basic flow parameters - Types of traffic flow - Relation between flow parameters, Speed – Density relationship, - Speed – Volume relationship, Volume – Density relationship	04	10
3.	O-D survey, methodology and analysis: - Purpose of OD studies - Methods of OD studies - Zoning of study area - Presentation of OD data	06	15
4.	Traffic Volume Study and characteristics: - Traffic Volume Study - Purpose of Traffic Volume Study - Methods of Traffic Volume Study - Analysis and presentation of Volume data	06	15
5.	Travel time and Delay studies: - Purpose of travel time and delay study - Methods of travel time and delay study - analysis and presentation of data	06	15
6.	Spot Speed studies and characteristics: - Definitions - Factors affecting spot speed - Purpose of spot speed study - Methods of spot speed studies - Analysis and presentation of data	06	15
7.	Parking survey, characteristics and interpretation: - Need for parking - Purpose of parking study - Methods of parking study - Analysis of data - Demand and deficiency for	06	15

8.	Road accidents and safety measures: - Accident reporting and recording - Causes of accidents - Purpose of accident study - Preventive measures for accidents - Speed analysis	06	15
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Reference Books:

1. L.J.Pingnataro, Traffic Engineering; Theory and Practice. Prentice Hall, Englewood Cliffs, 1973.
2. Traffic planning and design , Dhanpatrai Publications, By S.C.Saxena
3. M.Wohi and B.V.Martin, Traffic System Analysis for Engineering and Planners, McGraw-Hill. New York,1983.
4. D.R.Drew, Traffic Flow Theory and Control, McGraw Hill. New York 1968.
5. W.R.McShane, R.P.Roess and E.S.Prassas, Traffic Engineering, Prentice Hall, New Jersey, 1990.
6. R.J.Salter, Highway Traffic Analysis and Design, McMillan, Hampshire, 1989.
7. Highway Capacity Manual, Transportation Research Board, Washington D.C., 1997
8. W.R.Mcshane and R.P.Ross, Traffic Engineering
9. Wohl and Martin, Traffic system analysis for Engineering and planners –Wohl and Martin