

GUJARAT TECHNOLOGY UNIVERSITY

M.Tech.(Civil)Transportation System Engineering

Syllabus

Major Elective1 : HIGHWAY GEOMETRIC DESIGN

Course Objective :

In this course, it is proposed to present a variety of design standards for different types of highway facilities. Besides familiarity with the standards, the detailed design of traffic facilities such as at-grade intersections, flyovers and parking lots shall be useful to the students in the future professional practice.

Course Contents :

Design controls and criteria. Roadway capacity analysis and design of lane requirements. Cross-section elements. Sight distance. Horizontal alignment. Vertical alignment. Geometric of at-grade intersections and Interchanges Geometric design for parking.

Introduction to MXROADS & HEADS softwares in Road Design.

Pre-requisite : Nil

Reference Books :

1. Garber, N. J., Hoel, L.A., "Traffic and Highway Engineering", West Publishing Company, New York, 1988
2. Khistry, C.J., "Transportation Engineering – An Introduction", Prentice Hall, Englewood Cliffs, New Jersey, 1990
3. Jones, J.H., "The Geometric Design of Modern Highways", E&FN SPON Ltd., London, 1961
4. Relevant codes IRC, AASHTO Standards.