

GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for B. Arch
EIGHTH SEMESTER

SUBJECT NAME: INFRASTRUCTURE-I

SUBJECT CODE: 1085015

FOCUS:

The focus is to be familiar with the basic concepts of urban infrastructure planning like Mass Transportation systems and its influence on the urban development / smart cities. The connecting networks are generally perceived as the parameter of the urban development or Smart cities

CONTENT:

- Mode of Transportation - Road, Underground Tunnel, Railway, Air and Water. Elements, norms, general design considerations for said mode of transportation and Coordination and integration between road, rail, water and air transport network
- Mass Transportation – It's Basic needs of Urban Planning / Smart cities
- Mass Transport networks and terminals: definitions, scope, relationships and their importance in infrastructure planning in urban and regional context;
- Study of Various modes of Mass Transportation [ROAD] – Metro, Rail, BRTS, City Bus, Tram, Flyovers and local regional transport etc....
- Integration of networks and terminals with other components of mass transportation; Characteristics and types of networks and terminals
- Road network: urban / Rural and regional; Concepts, types, elements, norms, basic design considerations and importance of road geometry; Roadside furniture etc.
- Needs of Intersections and Public parking in infrastructure planning for Mass transportation.
- Traffic signs, signals and markings: their types and importance as infrastructure, norms and design considerations;
- Intelligent mass transportation system: concept, need and importance in mass transport system management.
- Concepts, components, and importance, norms and design considerations for terminal design for mass transportation

Suggested Readings:

- Arasan, V, Thamizh (2004), "Transportation Systems Planning and Operation", Allied Publishers Pvt. Ltd., Chennai.
- Kadiyali, I. R. (1991), "Traffic Engineering and Transport Planning", Khanna Publishers, New Delhi.
- Kanda, Arun and Others (2002), "Transportation Systems: status and directions", Phoenix Publishing House Pvt. Ltd., New Delhi.
- C.S. Papacostas & P.D. Prevedouros (2001), "Transportation Engineering and Planning", Prentice Hall.