CIPE3006 TRAFFIC ENGINEERING (3-0-0)

Course objective:

- To study traffic control and operation
- To design of different types of traffic facilities
- To carry out demand Modeling to assess trips for the future

Module I

Macroscopic and microscopic traffic flow parameters: distance headway, time headway, speed, flow, density. Fundamentals of traffic flow: flow characterization, Uninterrupted traffic flow, interrupted traffic flow.Capacity and level of service: Indian and American practice

Module II

Design of traffic facilities: Unsignalized and signalized intersections, Design aspects of signalized intersection, Inter changes, Expressways, Parking areas, Traffic signs.Traffic surveys: Speed, volume, delay, origin and destination, parking.

Module III

Brief Description of urban and regional transportation systems. Definition of a system. System analysis: scope and limitations.Transportation planning based upon system analysis, Survey and analysis of existing conditions.

Course outcomes:

After the completion of this course, students will be able to:

- Understand traffic flow fundamentals and transportation planning processes
- Develop data base for calibration of traffic flow and transportation planning models
- Calibrate and validate traffic flow and transportation planning models

Books

- L.R. Kadiyalli, Traffic Engineering and Transport Planning, Khanna Publishers
- C. S. Papacostas, P. D. Prevedouros, Transportation Engineering and Planning, PHI Publication
- M.J. Bruton, Introduction to Transportation Planning (Built Environment), Routledge
- R. P. Roess, E. S. Prassas, & W.R. Mc Shane, Traffic Engineering, Prentice Hall