

Course Name:

Transportation Engineering

Course Number:

20433

Credit:

3

Prerequisite:

System Engineering

Course Content (outline):

- Introduction (Role of transportation in society, transportation and urban structure, transportation as a system, and transportation system components)
- Transportation planning process
- Problem identification and Objective setting
- Definition of study area and zoning
- Data needs and information gathering in supply and demand of transportation, land use, and socioeconomic variables
- Transportation demand (trip generation and distribution, mode and path of travel)
- Transportation supply (shortest path, traffic assignment) supply relations
- Transportation externalities (air and noise pollution)
- Evaluation and Decision-making
- Transportation system Management (TSM)
Country-wide transportation planning
- Other modes of transportation

References:

- Introduction to Transportation Engineering and Planning, E. K. Morlok, McGraw-Hill, New York, 1978.
- Principles of Urban Transport Systems Planning, B. G. Hutchinson, McGraw-Hill, New York, 1974.
- Metropolitan Transportation Planning, J. W. Dickey, R. C. Stuart, R. D. Walker, M. C. Comingham, A. G. Winslow, W. J. Diewald and G. Day Ding, McGraw-Hill, New York, 1974
- Transportation Engineering, C. J. Khisty, Prentice Hall, Englewood Cliffs, 1990.