Urban transportation planning - Video course

COURSE OUTLINE

The course, “Urban Transportation Planning” is intended for Post Graduate students and research scholars working in the areas of Traffic and Transportation Engineering.

Knowledge in the fundamentals of Traffic and Transportation Engineering and Probability and Statistics is the desired prerequisite for the course.

The course aims at imparting knowledge on understanding of urban transportation problems in planners’ perspective, definition of the problem, setting clear goals and objectives to serve as guiding factors in the planning process, identification of the causal factors influencing the demand for urban travel and development of relationship between the factors and the travel demand.

The course also provides adequate exposure to travel demand forecasting and application of the results of the forecasting to identify the right type of the transportation system needed to cater to the future demand and quantify the same.

Contents:

Introduction, Transportation planning process, Problem definition, Setting objectives, Factors influencing travel demand, Travel demand modeling - Trip generation, Modal split, Trip distribution and Route assignment analyses, Transportation surveys, Land-use models, Travel demand forecasting, Urban structure and its influence of travel intensity, Urban goods movement.

COURSE DETAIL

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<tr>
<th>Sl. No.</th>
<th>Topic</th>
<th>No. of Hours</th>
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<tr>
<td>1</td>
<td>Introduction: Transport and Socioeconomic Activities,</td>
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<td>Historical Development of Transport, Transportation in the Cities, Freight Transportation, Future Developments.</td>
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| 2 | **Urban Transportation System Planning - Conceptual Aspects:**  
|   | **Trip Generation Analysis:**  
   | Trip Production Analysis, Category Analysis, Trip Attraction Modelling. |
| 4 | **Mode Choice Modelling:**  
| 5 | **Trip Distribution Analysis:**  
| 6 | **Route Assignment:**  
   | Description of transport network, Route Choice Behaviour, The Minimum Path, Minimum Path Algorithm, Route Assignment Techniques, All-or-Nothing Assignment, Multipath Traffic Assignment, Capacity-Restrained Traffic Assignment |
7. **Transportation Surveys:**

8. **Transport Related Land-Use Models:**
   Development of Land - Use models, The Lowry Model, Application of Lowry Model.

9. **Urban Structure:**

10. **Urban Goods Movement:**

**References:**


