

**Transportation Engineering**  
**Regional & Mass Transportation System Planning**

**01TR0212**

**(PEC)**

**Objective of the Course:**

- To understand the different types of plans.
- To get acquainted with various surveys and steps in urban planning process.
- To know the different analytical techniques of plan.
- To understand the significance of urban renewal.
- To expose to different experience of planning of new towns.

**Credit Earned: 3**
**Students learning outcomes:**

After successful completion of the course it is expected that student will be able to,

1. Plan for Smart Cities.
2. Use different planning surveys.
3. Use different analytical techniques of planning.
4. Renew the urban areas.
5. Plan new towns in appropriate patterns.

**Teaching and Examination Scheme**

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial/ Practical Marks		Total Marks
Theory	Tutorial	Practical		ESE (E)	IA (M)	CSE (I)	Viva (V)	Term Work (TW)	
03	00	00	03	50	30	20	25	25	150

**Detailed Syllabus**

Sr No.	Title of the unit	Number of hours
<b>1</b>	<b>Planning System</b>	<b>6</b>
	Planning system in India, Regional Plan, Master Plan, Structure Plan, and Detailed Development Plans. Concepts of Smart city.	
<b>2</b>	<b>Planning Surveys</b>	<b>8</b>
	Delineation of planning areas/regions, Type of planning surveys, data identification for various plan preparation. aerial photo and remote sensing techniques in planning. Formulation of standards for various urban functions.	
<b>3</b>	<b>Analytical Techniques</b>	<b>10</b>
	Delphi, Trade off-game, simulation models, gravity analysis, Lowry model, Threshold analysis, Multivariate analysis. Techniques of delineation of planning areas and planning regions. Land use models.	
<b>4</b>	<b>Urban Renewal</b>	<b>9</b>
	Decay: Causes and Impacts, Urban Renewal: significance, scope and limitations, identification of renewal areas, Renewal strategies. National Urban Renewal Schemes and policies.	
<b>5</b>	<b>New Towns &amp; Global Trends</b>	<b>9</b>
	Role and Functions, Planning and development considerations, Asian and Indian experience of planning and development of new towns. Recent trends in international planning.	
	<b>Total</b>	<b>42</b>

**Transportation Engineering****Suggested Theory Distribution**

The suggested theory distribution as per Bloom's taxonomy is as per follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember	Understand	Apply	Analyze	Evaluate	Create
05%	05%	20%	25%	25%	20%

**Instructional Method and Pedagogy:**

1. Use of Learning Management system like canvas
2. Demonstration through presentations on power point and videos and lectures
3. Brainstorming and group discussion sessions
4. Collaborative learning

**Recommended Study Material:****Reference Book:**

1. Lichfield N., et.al. (eds), 1998, Evaluation in Planning: Facing the challenge of complexity, Kluwer Academic publications, Dordrecht.
2. Knox P, and P. Taylor (eds), 1995, World Cities in a World System, Cambridge University Press, Cambridge.
3. Kaiser Edward J., et.al., 1995, Urban Landuse Planning 4th (ed) Urbana, University of Illinois Press.
4. Paul R. Wolf, 1986, Elements of Photogrammetry, McGraw Hill Books Co., London.
5. Hall, P., 2001, Cities of tomorrow: an intellectual history of urban planning and design inthe twentieth century, Blackwell, London.
6. Peter, G.H. and Tewdwr-Jones, M., 2011 Urban and Regional Planning, Routledge, London. Fifth Edition.