

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Traffic and Transportation Planning - II**  
**SUBJECT CODE: 1045503**  
**B.PLAN 4<sup>th</sup> SEMESTER**

**Prerequisite: B.Plan 3<sup>rd</sup> Year**

**Teaching and Examination Scheme:**

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
3	2	0	5	50	50		100	

L- Lectures; T- Tutorial/Teacher Guided Student Activity/Field work; P- Practical; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment.

**Content:**

Sr. No.	Content	Total Hrs	% Weightage
Unit - 1	<b>Urban Structure and Transport System</b> Types of Urban Form and Structure, Impact of urban form and structure on transport system development, urban structure and mobility levels, concept of accessibility, land use -Transport Cycle and integration, Transit Oriented Development (TOD), Case Studies.	12	25
Unit - 2	<b>Comprehensive Transport Planning</b> Study area definitions, surveys and studies, survey techniques; and transport planning process -trip generation, trip distribution, modal split, trip assignment; land use transport models, Scenario development, Comprehensive Mobility Plan (CMP) Components, Urban Street and Junction design, Road Safety parameters, Case studies.	12	25
Unit - 3	<b>Economic Evaluation</b> Economic appraisal of transport projects, techniques for estimating direct and indirect road user costs and benefits, value of travel time.	6	10
Unit - 4	<b>Transport and Environment</b> Traffic noise -factors affecting noise, noise abatement measures, standards; air pollution -factors affecting air pollution levels, abatement measures, standards; Traffic Safety-accident reporting and recording systems, factors affecting road safety; Transport Planning for Target groups -Children, adults, handicapped and women; Norms and Guidelines for highway landscape; Street lighting type standards and design considerations.	9	20
Unit - 5	<b>Transport Policy and Management</b> Review of national, state and local level transport policies and their relevance in spatial and economic planning; pricing and funding of transport systems; energy and environment implications in transport; existing organizational and legal framework, transport co-ordination; Transport System Management (TSM) Plans	9	20
	<b>Total</b>	48	100

**Assessment /Evaluation Criteria:**

Attendance &amp; Class Participation: 10%

Assignment 1: 10%

Assignment 2: 10%

Midterm Exam: 20%

Final Exam: 50%

Lecture Hours per Week	3
Total Marks	100
Internal Assessment	50
Examination	50

**Reference Books:**

<b>Text / Reference Books:</b>				
<b>S. No.</b>	<b>Name of Authors</b>	<b>Titles of the Book</b>	<b>Edition</b>	<b>Name of the Publisher</b>
1.	L.R. Kadiyali	Traffic Engineering and Transport Planning	--	Khanna Publishers
2.	J. Khisty and Lal	Transportation Engineering	--	Prentice Hall
3.	M. Bruton	Transport Planning	--	Prentice Hall
4.	C. Buchanan	Traffic in Towns	--	HMSO, V.K.
5.	OECD	Better Towns with Less Traffic	--	OECD
6.	Salter	Analytical Transport Planning	--	OECD
7.	Subhash C. Saxena	Traffic and Design	--	DhanpatRai and Sons
8.	M. Taylor, W. Young, Bansall	Understanding Traffic Systems: Data analysis and presentation	--	Avebury
9.	Indian Road Congress codes	Publications on standards and guidelines	--	Indian Roads Congress (IRC)
10.	UDPFI	Standards and Guidelines: Guidelines on Transportation		ITPI
11.	Transportation and Town Planning	Kurt Leibbrand	--	Translated by Nigel Seymer; Leonard Hill Books, 1970
12.	Comprehensive Transport Planning	G.R. Wells		Charles Griffin and Company Ltd., London and High Wycombe

**Course Outcome:**

<b>List of Exercises / Practicals:</b>	
	Visit to Traffic and Transport Department / Cell of Development Authority. Field visit for conducting, Technical Surveys on Traffic and Transportation

**List of Assignments/Tests :**

1	Test
2.	Assignments

**List of Experiments:**

**ACTIVE LEARNING ASSIGNMENTS:** Preparation of power-point slides, which include videos, animations, pictures, graphics for better understanding theory and practical work – The faculty will allocate chapters/ parts of chapters to groups of students so that the entire syllabus to be covered. The power-point slides should be put up on the web-site of the College/ Institute, along with the names of the students of the group, the name of the faculty, Department and College on the first slide. The best three works should submit to GTU.