

GUJARAT TECHNOLOGICAL UNIVERSITY
Traffic and Transportation Planning - II
SUBJECT CODE: 1045503
B.PLAN 4th SEMESTER

Prerequisite: B.Plan 3rd 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	Urban Structure and Transport System 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	Comprehensive Transport Planning 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	Economic Evaluation Economic appraisal of transport projects, techniques for estimating direct and indirect road user costs and benefits, value of travel time.	6	10
Unit - 4	Transport and Environment 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	Transport Policy and Management 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
	Total	48	100

Assessment /Evaluation Criteria:

Attendance & 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:

Text / Reference Books:				
S. No.	Name of Authors	Titles of the Book	Edition	Name of the Publisher
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:

List of Exercises / Practicals:	
	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.