

# GUJARAT TECHNOLOGICAL UNIVERSITY

## CIVIL (TOWN & COUNTRY PLANNING) (48)

URBAN HOUSING

SUBJECT CODE: 2714801

SEMESTER: I

**Type of course:** Core Subject - II

**Prerequisite:** Basic understanding on building bylaws, planning terminology, operations using CAD and word processing software

**Rationale:** The course helps developing understanding on Mass Housing planning practices and procedures, Housing Scenario, Urbanization Pressure, Housing Shortage, Cluster Standard, and Housing Scheme for various Income Group running across the need for modification so as to facilitate infrastructure and other amenities; Physical Planning Process using Neighbourhood Concept.

### Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks						Total Marks
L	T	P		Theory Marks		Practical Marks				
			ESE (E)	PA (M)	PA (V)		PA (I)			
					ESE	OEP	PA	RP		
3	2#	2	5	70	30	20	10	10	10	150

### Content:

Sr. No.	Content	Total Hrs	% Weightage
1	<b>Urban housing</b> Housing forms, problems, shortage, growth, urbanization pressure, quantitative, and qualitative aspects, Housing scenario.	8	15
2	<b>Housing for mass and urban poor</b> Housing Evaluation for urban Poor, Aerial and cluster standards, materials, social amenities and services, locational parameters, Policies. Mass housing schemes, Slum theories, up gradation and relocation issues of slum dwellers, site & service schemes.	13	24
3	<b>Housing policies &amp; finance</b> Housing policies, Co-operative housing, Role of private and public sectors, financing institutes and their role, Housing Boards, HUDCO, NHB, Residex, Housing demand models, Housing market analysis.	15	28
4	<b>Planning of residential areas</b> Household and housing, housing requirement for different sections of society, building bylaws, housing projects layouts, Neighbourhood, Plan preparation, other amenities, housing norms, mass housing, Housing for different climatic conditions, institute housing.	18	33

### Reference Books:

1. Fredrick Gibberd, "Town Design", Architectural Press, London.
2. Charles Abrahms, "Housing in the Modern World", Faber and Faber, London.

3. D. J. Dwyer, "People & Housing in 3rd. World Cities", Longman, London.
4. D. Heggade and F. Cherunilam, "Housing in India", Himalaya Publishing House, Bombay.
5. Dwivedi R. M. (2007) "Urban development and housing in India 1947- 2007" New Century Publications
6. K. Thomas Poulse (Compilation), "Reading Material on Housing", Institute of Town Planners, India; New Delhi (2002)
7. Jan K. Brueckner, "Lectures on Urban Economics", PHI Learning Private Limited, New Delhi, 2011 (ISBN – 978-81-203-4752-6)
8. Prashant Narwade; "Land – Property: Practice & Law"; Global Publishers, Mumbai (2014)
9. Er. S. C. Basu Roy; "Techno-Legal aspects of Engineering, Planning & Construction" A Nabhi Publication (2012); New Delhi (ISBN: 978-81-7274-774-9)
10. P. K. Guha; "Housing: An Indian Perspective" Central Publications
11. Vishwa Lochan Madan; "Sale and Purchase of Properties: A legal guide"; Universal Law Publishing Company (2013), New Delhi (ISBN: 978-93-5035-283-0)
12. General Development & Control Regulations (bylaws) of Urban Development Authorities of Gujarat and other states of India
13. UDPFI Guidelines, TCPO Norms, The GTPUD Act, Other acts and Building Bylaws

### **Course Outcome:**

After learning the course the students should be able to:

Understand and perform Mass Housing Planning Practice and Procedure as well as exposure regarding various Housing policies, DCR, Financial aspect and housing pattern according to climatic condition

### **List of Experiments:**

During the Studio hours, students (in a team of maximum 4 students) shall be engaged to study and design township components inclusive of residential and other areas/ economic theme based townships using principles of planning. The township design shall be including selection of site, reconnaissance, site connectivity-vicinity-features analysis, building unit planning and designing, land use proposal, zoning/ clustering, facilities-transportation and service network planning/designs, cost estimates and project development timeline. Necessary working drawings, presentation drawings and report shall be prepared.

Academic visits may be conducted to visualize ideal township concepts (report of the same shall be compiled and submitted by students).

**Lab hour** group work shall be containing a studio of planning exercise for a neighborhood (15-20 Ha area):

1. Site selection and study of various features (locational; economical, city level, administrative, land use, population etc.)
2. Patterning and hierarchy of roads and network
3. Norms and guidelines for residential layout planning
4. Survey methods and analysis techniques
5. Sample size determination and calculations
6. Prepare conceptual plan (residential or economic activity support based theme)
7. Prepare final layout
8. Infrastructure component planning and designs
9. Cost estimation

Submission of the exercise shall be in form of report with drawings/ posters, presentation/ movie/ 2D-3D images.

### **Open Ended Problems:**

1. What is the best housing form for an urban area?
2. How housing form can affect urban pressures?
3. What are the factors that affect township to be sustainable?
4. Why it is important to address issues of urban poor?

5. How the housing market analysis can help urbanization?

**Assignment work:**

Students shall refer the books and reference materials and prepare answers to the assignment problems including the topics of syllabus. Also, prepare a “Graduate Report” of Innovative Technique and Practice and submit the same with presentation.

**Major Equipment:**

Computers with higher configuration and internet, server

**List of Open Source Software/learning website:**

- CAD drafting tools, Google Earth, Google SketchUp Pro
- The World Bank (<https://publications.worldbank.org/>)
- National Housing Bank ([www.nhb.org.in](http://www.nhb.org.in))
- HUDCO ([www.hudco.org](http://www.hudco.org))
- Gujarat Housing Board ([www.gujarathousingboard.org](http://www.gujarathousingboard.org))
- UPlan is a simple rule based urban growth model intended for regional or county level modeling (<http://ice.ucdavis.edu/doc/uplan>) (<http://ice.ucdavis.edu/doc/uplan/download>)
- UCDAVIS (<http://ultrans.its.ucdavis.edu/projects/improved-data-and-tools-integrated-land-use-transportation-planning-california>)
- Free or open source home design software (<http://superuser.com/questions/64338/free-or-opensource-home-design-software>)