

GUJARAT TECHNOLOGICAL UNIVERSITY
BRANCH NAME: B. Arch
SUBJECT NAME: Computer Applications in Architecture
SUBJECT CODE: 2X95013
5th Year: Semester-IX

Pre requisite: Students enrolled in Computer Applications take subjects and do research in theory and applications of computation and computer technology including computer graphics, digital modeling and rendering, generative design etc.

Rationale: This course encourages inquiries into methods and representations for design, the development of design tools, applications of digital technologies to design practice, the impacts of these technologies on the built environment and their social and cultural implications.

Teaching and Assessment Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks	University Exam Type
Field work	Lectures	Studio	C	External Exam		Internal Exam		100	VIVA
1	2	1	04	(ESE) Theory	(ESE) Viva	(PA) Theory	(PA) Viva		
				00	50	00	50		

Content:

SR No	Content	Total Hours	Weight age
1	Introduction to Digital design: It is an emerging area in Architecture and it prepares students to get familiar in this area which has a high potential in future architectural career. Concepts from computation and contemporary sciences and their impact in the domain of architecture and urban design.	16	25%
2	Digital Design Studio: Basic concept formulation, non-linear geometry and parametric thinking • Sustainable design concepts and design based on data streaming.	16	25%
3	Introduction to Parametric: Developing design projects/ partial designs using relative soft wares, and information mapping.	16	25%
4	Visualization and animation – advance 3D software and programming • Advance building construction concepts through digital fabrication and automated design • Building Information Modelling – simulation and analytical methods using software • Management Information Systems – Management at all stages from design development to execution	16	25%

*: indicative

References:

1. Internet resources, blogs, and learning resources on the web of popular 3D modelling software and NURBS modelling,
2. Vector/Graphics/Image editing software

List of Projects/Assignments*:

Lectures/Tutorial work shall consist of presentations on various topics of the subject. AV projects may

be introduced to students for documenting best practices and advances through case studies. A group discussion or forum may be organized for discussion on various aspects of the subject.

*- this is suggestive for common purpose. Faculty may decide on this, considering student group and institution philosophy.