GUJARAT TECHNOLOGICAL UNIVERSITY

COMPUTER AIDED DESIGN (CAD)
SUBJECT CODE: 1035504
B.PLAN 3RDSEMESTER

Prerequisite: NA

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks
L	Field work(T)	P	C	Theory Marks		Practical Marks		
				ESE(E)	PA (M)	PA (V)	PA(I)	
1	0	2	3	-	-	40	60	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	% Weightag
Unit - 1	**Drafting in CAD** Need for Computer Applications in Planning; Need for automated design and drafting; Tools for automated designs and drafting; Elements of spatial data in CAD Arcs, lines, rectangles, poly-lines, points, circles, donuts, layers, grids, snaps and object snaps, etc.	6	20 %
Unit - 2	**Editing and Controlling Display in CAD** Move, scale, copy, offset, change, trim, extend, mirror, divide, measure, array, break, hatch, block, zoom, regen, view, pan, fonts, etc.	12	25 %
Unit - 3	**Case Studies of Lay-out Plans** Paper maps, digital layout maps, on screen digitization; 2D and 3D conversion, perspective view, walk through of layout and paper based scaling	12	20 %
Unit - 4	**Case Study of a Regional Plan** Base map evaluation, scanning the maps, digitization, scale conversion, symbolization, layer control, plotting.	12	20 %
Unit - 5	**Limitations** Limitations of Computer Aided Design and Drafting in Planning; Non-	6	15 %

	linking of spatial and attribute data; Need for GIS packages for handling spatial and attribute data.		

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks				
R Level	U Level	A Level	N Level	E Level
20	**20**	**40**	**10**	**10**

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate and above Levels (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

S. No.	Name of Authors	Titles of the Book	Edition	Name of the Publisher
1.	Richard M. Luepton	Graphics Concepts for CAD	2nd, 2007	Prentice Hall
2.	P.N. Rao	CAD / CAM Principles and Applications	2002	Tata McGraw Hill
3.	Solmon Rod	Computer Graphic System and Concepts	1989	Addison Wesley Publishing Co.
4.	Suining Ding	Modelling and Visualization with AutoCAD	2009	--
5.	Linda Holtzschne, Edward Norjega	Design Fundamentals for Digital Age	1st, 1997	Wiley
6.	CAD D Centre	Foundation Course	--	CADD Centre

Course Outcome:

List of Exercises / Practicals:

1 Visit to Office of Senior Planning Professional and Submit Report.

List of Assignments/Tests:

1 Test on Unit 1 and Unit 2.

2 Case Study based Assignment on Unit 3 or Unit 4.