

GANPAT UNIVERSITY									
FACULTY OF ARCHITECTURE DEISGN & PLANNING									
Programme	Bachelor of Architecture				Branch/Spec.	INSTITUTE OF ARCHITECTURE			
Semester	III				Version	2.0.0.0			
Effective from Academic Year	2020-21				Effective for the batch Admitted in	June 2019			
Subject code	2IIIA07CL		Subject Name		Climate and Architecture				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	2	-	-	-	2	Theory	40	60	100
Hours	2	-	-	-	2	Practical	-	-	-
Objective:									
<ul style="list-style-type: none"> <li>• Sense the Natural elements and climate which on a large scale impacts the built environment created through the design.</li> <li>• Apply various methods to inculcate the practices and approach which promotes the use of conventional ideas using climatic conditions which ultimately mitigate the distortion of natural resources.</li> </ul>									
Learning Outcome:									
LO1:Observe and sense the natural elements and effects on livelihood of human being LO2: Understand and analyse various patterns of climate and its impact on different region LO3:Incorporate methods of using natural elements in to actual design LO4: Analyse the climatic conditions and develop various architectural and construction elements to mitigate challenges.									
Theory syllabus									
Unit	Content								Hrs
A	<b>Climate</b> Constituent elements, Classification of tropical climatic zones. Micro & Macro climate. Thermal comfort & principles of Thermal Design.								8
B	<b>Ventilation</b> <ul style="list-style-type: none"> <li>• Need of Ventilation</li> <li>• Types of Ventilation</li> <li>• Air movement &amp; penetration</li> <li>• Solar orientation, Sun path pattern &amp; shading devices.</li> </ul>								10
C	<b>Orientation of site layout and building components</b> <ul style="list-style-type: none"> <li>• Traditional House Form &amp; Settlement pattern in various tropical climates.</li> <li>• Design Tools – Mahoney Tables, Sun Path diagrams, etc.</li> <li>• Day lighting – components, architectural methods of borrowing day light; control of glare.</li> </ul>								8
D	<b>Time problem to prepare a design and model entirely produced on climatic conditions for specific regions of Indian territory</b>								6

Text Books	
1	
Reference Books	
1	Manual Of Tropical Housing -by Otto.Koenigsberger 04. 06.
2	City & Wind : Climate As an Architectural Instrument- Krautheim
3	. Design Primer for Hot Climate by Allan Konya
4	Design With Climate : Bioclimatic Approach To Architectural Regionalism- Olgyay
5	Climatic Building Design by Donald Watson
6	Man, Climate & Architecture by B.Givoni
7	Building in Hot Climates Building Research Establishment