

GANPAT UNIVERSITY									
FACULTY OF ARCHITECTURE DESIGN & PLANNING									
Programme		Bachelor of Architecture			Branch/Spec.		INSTITUTE OF ARCHITECTURE		
Semester		V			Version		2.0.0.0		
Effective from Academic Year			2021-22		Effective for the batch Admitted in			June 2019	
Subject code		2VA02BMC		Subject Name		Building Materials and Construction - V			
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	2	-	2	2	6	Theory	-	-	-
Hours	2	-	2	2	6	Practical	40	60	100
Objective:									
<ul style="list-style-type: none"> The main objective of this course is to impart the principles of designing different structural elements of a building based on their functions and applications. Students will develop application based understanding of different types of construction system. Understanding various building elements and its use in a building along with the techniques used in different forms of construction. 									
Learning Outcome:									
LO1: Understanding various types of foundations and its application in the building according to the appropriate selection criteria LO2: Understanding about various roofing system and its construction details LO3: Recognizing various types of forces acting on different types of water tanks/swimming pools and its construction techniques LO4: Understanding various treatments required in the building like – water proofing and termite proofing.									
CONTENT & TEACHING UNITS									
Unit	Content								HRS
1	Understanding Foundation System- types of foundations and factors affecting its selection. Introduction to Shallow and Deep foundation, underpinning, excavation support systems, spread footing, foundation walls, column footing, pile foundation, pile foundation, caissons foundation- their types, functions and method of construction/ installation etc.								12
2	Learning about Site development- Compound wall and Gates- their use and construction method using different materials								12
3	Studying Tensile and Long span structures, Shell structure, folded plate structure, Suspension Structure, tensile structure, space Frame- purpose, construction techniques with details and their use								12
4	Studying construction of Geodesic dome- purpose, construction technique and erection								24
5	Understanding underground, overhead/internal storage tanks and swimming pool- their use, capacity, loads and construction technique								24

6	Learning about water proofing and termite proofing treatments in a building	12
Text Books		
1	NA	
Reference Books		
1	A Text-Book of Building Construction - S. P. Arora and S. P. Bindra	
2	Building Construction Metric Vol.-I to IV- W.B.Mckay	
3	Construction Technology Vol.-I-Chudley	
4	Building Construction Illustrated-Fransis D.K. Ching.	
5	Fundamentals of Building Construction – Allen Edward	
6	Building Construction - B.C. Punmia; Ashok Kumar Jain; Arun Kumar Jain	

	SA - I'0 1	SA - I'0 2	SA I'0 3	SA I'0 4	SA I'0 5	SA I'0 6	SA I'0 7	SA I'0 8	SA I'0 9	SA I'S0 1	SA I'S0 2	SA I'S0 3
CD-1-H	2	3	2	3	1	3	2	2	2	3	2	1
CD-2-H	3	1	1	2	1	2	2	3	3	2	3	3
CD-3-H	2	3	3	2	3	2	1	3	2	2	2	2
CD-4-H	1	2	2	2	2	2	3	2	3	2	1	2
VABCD - CD11	3	2	3	2	1	2	2	2	3	3	3	2