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	2IIIA05BS		Subject Name		Building Services-I			
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:

To Understand analyse and apply all basic Building services like Electrification, Lighting, communication, Vertical Transportation which enables the functions of the design in an active mode.

Learning Outcome:

LO1: Understand the network of electrification and components of wiring including to derive the electric load to be generated through the usage of equipment and appliances

LO2: Apply acquired knowledge to importance of natural and artificial lighting ,resources for the both types of lighting arrangement which are the most important requirement of the built environment

LO3: To adapt newer and latest technology and equipment's for modern and fundamental requirement of Information and communication

LO4: High tech applications and services to be implemented for all type of functional areas like residential, commercial, corporate and Industrial.

Theory syllabus

Unit	Content	Hrs
A	**Electrification** • Types of electricity, terminology, lighting accessories, protective devices • Electric power supply system from generation to customer, single phase, three phase. • Electrical distribution in a building from main distribution board to switch board.	8
B	**Lighting** Light and its sources, the visual field, day lighting and its types. • Day lighting criteria, • Artificial lighting, kind of lighting, illumination, • Calculations for lighting levels.	8
C	**Information and communication** • Various Modern application of communication and devices to be used in network • Wi-Fi facilities and provision of electricity and wiring network, specific various types of wires • Server and distribution area , junctions for modem and other devices	6
D	**Vertical transportation** • Lifts, grouping of lifts, return-travel time, design of lift well, carrying capacity, installation requirements. • Design of specialized lifts for heavy loads or for service • Concept of moving walks and escalators and their design concerns.	10

Practical content

Site visits & Case studies. Market surveys of Electrification, Vertical transportation , Lighting, IC

Text Books

1	Building Construction Illustrated - Ching
2	Building Construction H.B. -Chudley
3	Building Construction -Punmia
4	T.B. of Building Construction-Arora

Reference Books

1	Heating cooling, lighting - Norbert Lechner
2	Mechanical & Electrical Equipment for Building - William J. McGuiness & others
3	Operation & Maintenance of Electrical Equipment - B.V.S.Rao
4	The Vertical Transportation Handbook - George R. Strakosch
5	Building Construction Illustrated - Ching