

## BUILDING TECHNOLOGY

<b>VII Semester: CE</b>								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
ACE807	Skill	L	T	P	C	CIA	SEE	Total
		-	-	-	-	-	-	-
<b>Contact Classes: Nil</b>	<b>Tutorial Classes: Nil</b>	<b>Practical Classes: Nil</b>			<b>Total Classes: Nil</b>			
<b>OBJECTIVES:</b>								
<b>The course should enable the students to:</b>								
I. Understand the basic building materials, properties and their applications.								
II. Analyze the knowledge of planning of buildings.								
III. Understand the concepts of fire safety, ventilation and plumbing services provided for a building.								
IV. Explain principles of acoustics in building and plumbing.								
<b>UNIT-I</b>	<b>STONES, BRICKS, CEMENT AND CONCRETE</b>							
Uses of stones as building materials, Characteristics of good building stones. Types of stones and their significance. Characteristics of good building bricks, Types of bricks and their significance. Ingredients of cement, types of cement, properties and uses of cement, overview on concrete.								
<b>UNIT-II</b>	<b>BUILDING AND VENTILATION</b>							
Basic definitions, Types, components, economy and design, principles of planning of buildings and their importance, building bye-laws. Definitions and importance of circulation; Lighting and ventilation; how to consider these aspects during planning of building.								
<b>UNIT-III</b>	<b>REPAIRS IN BUILDINGS</b>							
Inspection, control measures and precautions for various construction defects, General principles of design of openings. Different types of fire protection measures to be considered while planning a building.								
<b>UNIT-IV</b>	<b>PREFABRICATION SYSTEMS AND AIR CONDITIONING</b>							
Prefabrication systems in residential buildings, walls, openings, cupboards, shelves, planning and modules and sizes of components in prefabrication. Process and classification of air conditioning, Dehumidification. Systems of air conditioning, ventilation, functional requirements of ventilation.								
<b>UNIT-V</b>	<b>ACOUSTICS AND PLUMBING SERVICES</b>							
Acoustics, effect of noise, properties of noise and its measurements, Principles of acoustics of building. Sound insulation – Importance and measures, Water supply system, maintenance of building pipe line, Sanitary fittings, principles governing design of building drainage.								
<b>Text Books:</b>								
1. Building Materials, P.C. Varghese, Prentice Hal India Learning Pvt. Ltd., 2015.								
2. Building Construction, B.C.Punmia, Er. Ashok Kumar Jain and Dr. Arun Kumar Jain, Laxmi Publications, 2016.								

**Reference Books:**

1. Building Materials, S.K. Duggal, New Age, 2016.
2. Building Materials, S.S. Bhavikatti, Vikas Publishers, 2016.
3. Engineering Materials and Building Construction, Rangwala, Charotar Publishing House, 2015.

**Web References:**

1. <https://ocw.mit.edu/courses/architecture/4-461-building-technology-i-materials-and-construction-fall-2004/lecture-notes/>