

GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for M. Arch - 2019
THIRD SEMESTER
Subject: Advanced Building services

Course Code: X36105

Credits: 3

Course Objective: Understanding service requirements for hi tech/hi rise buildings

Course Contents:

Introduction to Energy Efficient HVAC systems, Plumbing Design, Lighting, Mechanical and Electrical Utilities. Operations and Maintenance of Buildings for energy efficiency Introduction to Energy Conservation Building Codes and Energy Audits.

Fundamental principles of fire safety engineering. Fire safety in large modern buildings, fire detection and suppression systems. Design of manual and automatic water based systems to warn / extinguish fires. Alternatives to conventional prescriptive design.

References:

1. Principles of Air conditioning-By V.Paul Lang
2. Refrigeration and Air conditioning by Sarao, Gaabi and Singh
3. Water supply and Sanitary Engineering(Environmental Engineering)-by Rangwala
4. Plumbing Services and Design Guide –Compiled and published by Institute of Plumbing
5. Building Services and Equipment (Part I & Part II)-by F Hall
6. Mechanical and Electrical Systems in Construction and Architecture-by Frank R Dagostino
7. Advances in Tall Buildings-by Lynn S Beedle(Council of tall buildings and urban habitat)
8. Heating, Cooling and lighting design methods for architecture. By Lechor Worbert