

7th SEMESTER

AR713 **ADVANCED SERVICES** (3-0-0)

Objectives: To enable the students to understand the recent developments in building services in the area of vertical transportation system, building automation, waste disposal, adoption of energy efficient techniques etc.

Module 1:

- a. Mechanical accessibility system: Lift (working methods as per NBC and industry standards, capacity, parts of lift and location of these in the building, types of lifts, passenger, capsule, hospital goods), introduction to Escalator.
- b. General working of following specific services and provision to be made in building.
 - Telephones and EPABX
 - Security system like burglar alarm services and CCTV's, intruder alarms.
 - Cooking gas distribution for bulk cooking application and household as per NBC.
 - Elevated flooring for computer application

Module 2:

- a. Fire fighting, potable firefighting equipment and built in wet riser system and sprinkler system for fire fighting.
- b. Building automation: central control systems, user interface, lighting systems and controls, Air Conditioning plants, Air Handling Units (constant volume air-handling units, variable volume Air-handling units, VAV hybrid systems), central plant (chilled water system, hot water system), stand by generator, Lightning Conductor.

Module 3:

Application in any one type of building followed by group assignments:

- a. Residential
- b. Commercial: Hotel
- c. Health Institute: Hospital (waste management)
- d. Office building
- e. High rise building: service core, service floors, water storage, service elevators, communication system.