

Course Name: HOTEL ENGINEERING

Course Code:

Course Objectives: At the end of the semester the students would be able to-

Learn to perform routine and preventative maintenance to protect the assets of a hotel and to keep the hotel running smoothly. The hotel engineer keeps up with the wear and tear that guests put on the facilities of a hotel. His job is to ensure a safe, quality hotel experience that improves guest satisfaction.

Module I: HOSPITALITY INDUSTRY AND ENGINEERING SYSTEMS

- Introduction
- Engineering Systems in Hospitality Industry
 - o Facilities under the Scope of Civil Engineering
 - o Facilities under the Scope of Mechanical Engineering
 - o Facilities under the Scope of Electrical and Electronics Engineering
- Conclusion

Module II: 6. HARDNESS OF WATER AND ITS REMOVAL

- Introduction
- Hardness of water
 - o Different Type
 - o Cause and Effect
 - o Comparison of the Characteristics of Hard Water and Soft Water
 - o Hardness
 - o Causes of Hardness
 - o Types of Hardness
- Removal of Hardness and Water Softening
 - o Method of Removing Temporary Hardness or Carbonate Hardness
 - o Methods of Removing Permanent Hardness
- Water and Cooking
- Conclusion

Module III: WATER DISTRIBUTION SYSTEM

- Introduction
- Cold Water—Supply, Storage, and Distribution
 - o Treated Water Supply from Municipal Corporation Source
 - o Storage Cistern
 - o Swimming Pool
- Hot Water Generation and Distribution
 - o Central Hot-water Generation and Distribution System
 - o Localized Hot-water Generation and Distribution System
- Piping Materials for Conveying Water

- Fittings in Water Distribution Line
 - Valves, Taps, and Cocks
 - Tees, Sockets, Nipples, and Bends
 - Flushing Cisterns
 - Water Regulatory Board
- Conclusion

Module IV: SANITATION, WASTE DISPOSAL, AND POLLUTION

- Introduction
- Sanitation and Sanitary System
 - Sewage and Waste Collection and Drainage System
 - Sanitary System and Sewage Draining in Hotels
 - A Few Common Sanitary Fittings
- Treatment and Disposal of Sewage
 - Disposal of Sewage
 - Sewage Treatment
 - Sewage treatment plant
 - Measure of the Toxicity of Wastewater and Sewage
- Solid Waste and its Disposal
 - Solid Waste Management in Hotels and Restaurants
- Regulations and Norms for Solid Waste Management
- Pollution and the Hotel Industry
 - Sources of Pollution
- Pollution Control Boards and Pollution Norms
- Conclusion

Module V: SAFETY AND SECURITY

- Introduction
- Safety in Hotels and its Management
 - Typical Activities and Possible Accidents in Hospitality Industry
- Fire Safety
- A Few Safety Issues in Hotels
 - Guest Bathroom
 - Kitchen Safety
 - Accidents Common in Machine/Boiler Room

Module VI: CARE AND MAINTENANCE

- Introduction
- Refrigeration System
 - Care and Maintenance
 - Troubleshooting in Refrigeration System
- Air-Conditioning and Ventilation System
 - Central Air Conditioner
 - Unit or Package Conditioner

- Cooking Stoves and Ranges
- Microwave Oven
- Washing Machines
- Clothes Dryer
- Dishwasher
- Pumps
- Conclusion