

## **MBPC4021 HOSPITAL WASTE MANAGEMENT (3-0-0)**

### **Course Objective:**

- Understand the types and sources of biomedical, radioactive & chemical waste
- Learn the legal and regulatory framework surrounding healthcare waste
- Develop skills to plan, implement, and monitor waste management systems in hospitals
- Promote sustainability and safety in healthcare environments

### **Module-1**

Introduction to Hospital Waste Management: Definition & types of hospital waste, Sources and categories (Biomedical, Radioactive, Chemical, etc.), Management & methods of disinfection, Modern technology for handling BMW (Biomedical Waste management), Management of radioactive waste in hospitals, Management of chemical in hospitals. Global and local perspectives on waste issues.

### **Module-2**

Segregation, Collection and Storage: Color-coded waste bins and classification, On-site waste handling practices, Labeling, transport and temporary storage systems  
Treatment & Disposal Techniques: Incineration, autoclaving, microwaving, deep burial, chemical disinfection, shredding, Advantages, disadvantages & environmental impact  
Training and Awareness: Staff training programs, Infection control and occupational safety

### **Module-3**

Regulatory Framework: Biomedical Waste Management Rules (India, 2016 & Amendments), International guidelines (WHO, UNEP), Institutional responsibilities and compliance protocols  
Sustainable Practices: Waste minimization strategies, Recycling and reuse in healthcare, Innovation in eco-friendly hospital designs

### **Course Outcome:**

- CO1: Understand the classification and types of biomedical, radioactive & chemical waste generated in healthcare facilities
- CO2: Analyze the legal and regulatory frameworks governing hospital waste disposal
- CO3: Design and implement waste segregation protocols and disposal systems in compliance with environmental standards
- CO4: Recommend innovative technologies and policies for safe and cost-effective waste treatment

### **Text Books:**

1. Hospital Administration & Management — C.M. Francis & D'Souza
2. HOSPITAL WASTE MANAGEMENT AND ITS MONITORING, Madhuri Sharma, Jaypee
3. Hospital Waste Management, 3rd Edition, AG Chandorkar, BS Nagoba