

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. Bio-Medical Engineering

Semester: I

Subject Name: **Medical Safety And Waste Management**
(Major Elective – I)

| Sr.No | Course content |
|-------|--|
| 1. | Electrical and radiation hazards. Electrical Shock and treatment and safety. high voltage and transient properties, patient safety, electrical shocks and hazards, leakage currents, types and measurement, protection against shocks, burn and explosion hazards, measurement of bioelectric fields, extra cellular fields. |
| 2. | Radiation detector system, counting radioactivity, biological effect of radiation, radiation dosimetry |
| 3. | Radiation waste disposal techniques, medical waste disposal, degradable and biodegradable wastes. |
| 4. | RF hazards and Microwave Hazards. |
| 5. | Clean room technology, Air filtration techniques, water systems for waste management |
| 6. | Recycle of medical waste products its advantages and disadvantages, Sterilization techniques. |

Reference Books:

1. Occupational Hazards And Safety Management In Hospitals D B Acharya Minerva Press India (2004)
2. Medical Waste Management and Disposal, V.J. Landrum William Andrew(1992)
3. Safety and health for engineers, By Roger L. Brauer, John Wiley & Sons(2006)