

**Short Term Courses – NIELIT**  
**Advanced Diploma in Repair & Maintenance of Medical Equipment**

**Objective of the Course:**

This course is intended for the maintenance of medical electronic equipments that ensures reliability of equipments.

**Learning Outcomes:**

Having undergone the course the candidates will be able to repair and maintain medical electronic equipments.

**Expected Job Roles:**

Service Engineer

**Duration of the Course (in hours)**      360 hrs

**Apr. Fees (INR):**                      Rs.35,000/-

**Minimum Eligibility Criteria and pre-requisites, if any**                      B Sc Degree in Science, Diploma in Electronics, Instrumentation

**Outline of Course**

| S. No  | Topic                                       | Minimum No. of Hours |
|--|---|----------------------|
| 1.   | Fundamentals of Medical Instrumentation     | 8 hrs                |
| 2.   | Bio electronic signal & electrodes          | 6 hrs                |
| 3.   | Physiological Transducers, Recording system | 8 hrs                |
| 4.   | X-Ray, X-Ray computed Tomography            | 16 hrs               |
| 5.   | MRI, USG, ECG,EEG, Biomedical recorders     | 16 hrs               |
| 6.   | Pulse ox meter, patient monitoring system   | 16 hrs               |
| 7.   | Heart lung machine, BP measurement          | 12 hrs               |
| 8.   | Cardiac defibrillator                       | 12 hrs               |
| 9.   | Surgical & short wave diathermy             | 16 hrs               |
| 10.  | Haemodialysis machine & lithotripter        | 16 hrs               |
| 11.  | Aesthesia machine                           | 4 hrs                |
| 12.  | Ventilators                                 | 12 hrs               |
| 13.  | Radiotherapy equipment                      | 6 hrs                |
| 14.  | Hearing aids                                | 6 hrs                |
| 15.  | Patient safety                              | 6 hrs                |
| <b>Theory / Lecture Hours:</b>               |   | 160 hrs              |
| <b>Practical / Tutorial / Lecture Hours:</b> |   | 200 hrs              |
| <b>Total Hours:</b>                          |   | 360 hrs              |

**Books recommended for reference and reading:**                      DEVICE Bulletin, Medical Device & equipment Management Repair & Maintenance Provision.  
 Biomedical Instrumentation by R.S. Khandpur

**Group Code:**      HRMT                      **Group Name:**      Hardware Repair and Maintenance  
**Course Code:**      AD01                      **Course Name:**      Advanced Diploma in Repair & Maintenance of Medical Equipment