

## Operation of ECG & ICCU Instruments (Level 1)

<b>Name of the Module</b>	<b>: Operation of ECG &amp; ICCU Instruments (Level 1)</b>
<b>Sector</b>	<b>: Electronics</b>
<b>Code:</b>	<b>: ELC113</b>
<b>Duration</b>	<b>: 120 Hrs</b>
<b>Entry qualification</b>	<b>: 8<sup>th</sup> std pass with age at least 14 years.</b> <i>Should be able to read and write English</i>
<b>Terminal competency</b>	<b>: Should be able to Operate the ECG &amp; ICCU Instruments</b>

### **Contents**

<b>Practical Competencies</b>	<b>Underpinning Knowledge (Theory)</b>
a. Practice procedures for safety and health hazards measures b. Practice procedures for safety and health hazards measures c. Operate Single-Channel ECG recorder & Multi-Channel ECG Recorder. d. Test the ECG recorder e. Operate Cardiac Monitor, Defibrillator, Pulse Oximeter & NIBP Machine.	Programme Contents: <ul style="list-style-type: none"> <li>• Electrical and personal safety, dangers and preventions</li> <li>• Electrical and personal safety, dangers and preventions</li> <li>• Human anatomy (Basics), list out the different bioelectric signals &amp; physiological parameters, Physiology of heart, ECG signal and its component, Electrode placement, ECG Leads</li> <li>• ECG Recorder – use, types:- single channel &amp; multi-channel, manual and automatic // Technical specifications of ECG Recorders, working principle of ECG Recorders, Operation of ECG Recorder. Front Panel controls, Patient Cable, Electrode types, Programmable features of multi-channel recorder, calibration – using of 1mV control , Care and maintenance of ECG Recorders</li> <li>• ECG Monitor:- Specifications Front Panel controls , Patient Cable, Electrodes used, electrode placement, working principle, Operation, care and maintenance</li> <li>• Pulse oximetry</li> <li>• Pulse oximeter:- Specifications Front Panel controls , Patient Cable, Electrodes used, working principle, Operation, care and maintenance</li> <li>• Blood pressure measurement. - invasive and non-invasive, NIBP measurement methods</li> <li>• NIBP Machine:- Specifications, Front Panel controls , Patient Cable, cuff placement ,</li> </ul>

Practical Competencies	Underpinning Knowledge (Theory)
	<p>working principle, Operation, care and maintenance .</p> <ul style="list-style-type: none"> <li>• Defibrillator:- Specifications Front Panel control, Patient Cable, Electrodes used, working principle, Operation, care and maintenance</li> <li>• Precautions and prevention of transmission of diseases, minimizing infections</li> </ul>

***List of Equipment :***

1. ECG recorder – single channel (Manual)
2. ECG recorder – single channel (Automatic)
3. ECG recorder – multi channel
4. ECG Monitor
5. Pulse Oximeter
6. NIBP Machine
7. Defibrillator