

FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING

M.E. BIOMEDICAL ENGINEERING (R 2021)

SEMESTER – I

Course Code: BM4111 Course Title: Clinical Instrumentation and Design Laboratory		
Sl. No.	Description of Equipment	Required numbers (for batch of 25 students)
1.	Defibrillator Unit	1No.
2.	Pacemaker Simulator	1 No.
3.	Pulse Oximeter Design Components	2 set.
4.	HR Monitor Design Components	2 Set
5.	Respiratory rate measurement Design Components	2 Set
6.	Multiparameter (ECG, EMG, EEG) Simulator	2 No.
7.	Function generator, DSO, Regulated Power supplies, Bread boards	10 each
8.	IC LM 324, AD 620, INA series (126,128 etc.), 555 Timer	20 each
9.	Opto Isolator IC: MCT2E	1 No.
10.	Software tool for PCB design	1 No.
11.	2-D and 3-D Modelling software	1 No.
12.	3-D printer and Software	1 No.

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SEMESTER – I

Course Code: BM4161 Course Title: Bio Signal Processing Laboratory		
Sl. No.	Description of Equipment	Required numbers (for batch of 25 students)
1.	MATLAB Software or Equivalent (signal processing toolbox and simulink)	Five user
2.	Sensor Module- User Interface. (acquiring Biosignals like ECG, EEG, EMG)	Single Unit

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SEMESTER – II

BM4211 Medical Device Design Laboratory

Sl. No.	Description of Equipment	Required numbers (for batch of 25 students)
1.	Any one of these circuit simulation software (Multisim, LTspice, Logisim- evolution, Ngspice, Altium software,)	3 user
2.	DSP processor kit	3 numbers
3.	Accelerometer sensor	5 Nos
4.	Data Acquisition System (DAQ)	1 No