

Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)
(Vide Notification No. F.9-5/2000 - U.3, Ministry of Human Resource Development, Govt. of India, dated 4th July 2002)



Phone : 044-22290742 / 22290125 . Telefax : 044-22293886
Website : www.bharathuniv.ac.in

173, Agaram Road, Selaiyur, Tambaram.,
Chennai - 600 073. Tamil Nadu.

18.10.2019

From

The Head of the Department

Department of Biomedical Engineering

Bharath Institute of Higher Education and Research

Chennai.

To

The Dean Engineering

Bharath Institute of Higher Education and Research

Chennai.

Respected Sir,

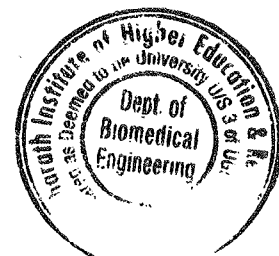
Sub: Requesting for Industrial Visit-Reg

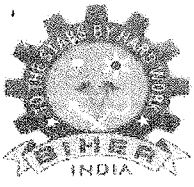
I would like to request to permit our II Year B.Tech Biomedical Engineering Students for Industrial Visit at Biovision Medical systems, Vadaperumpakkam, Chennai on 5.11.2019. Hereby I have enclosed students name list. We request you to approve the Industrial Visit in the Biovision Medical systems, Vadaperumpakkam, Chennai and do the necessary transportation facility for the benefit of students and staffs.

Thanking You

Yours Sincerely

(Dr.R.Vasuki)

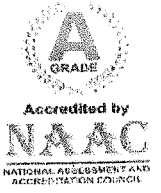




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Chennai - 600 073. Tamil Nadu.

Chennai

From

23.10.2019

Dr. Vasuki R.
Professor & Head of the Department
Dept. of Biomedical Engineering
BIHER.
To

Mr.K.Venkatraman
Managing Director – Technical Partner
Bio vision Medical System
Vadaperumbakkam
Chennai.
Respected Sir

Sub: Requisition for Industrial visit - Reg

Greeting from BIHER, We wish to undertake an industrial visit at your company on 5.11.2019 to acquire practical knowledge in Medical Equipments. Our academic curriculum focuses on engaging students in practical experiences to observe the implementation of what they are taught in Institute. We believe that your company will give our students relevant knowledge during this visit. The students of II Year B.Tech –Biomedical Engineering (Total 67 Students) and two faculty members intend to participate in this industrial visit. I request you to kindly acknowledge this official communication at the earliest. Please allow us to conduct an industrial visit to your company and meet your skilled employee.

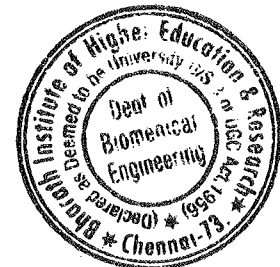
Thanking you

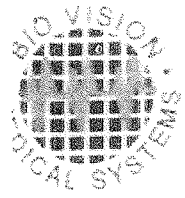
Email: hod.bme@bharathuniv.ac.in

Phone:9884943139

Yours Sincerely,

Dr.Vasuki R.





Biovision

Technology Envisioned

Chennai
25.10.2019

From

Mr.K.Venkatraman

Managing Director – Technical Partner

Bio vision Medical System

Vadaperumbakkam

Chennai.

To

Dr.Vasuki R.

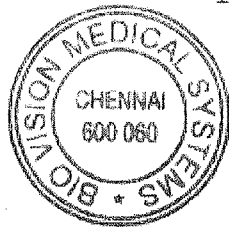
Professor & Head of the Department

Dept. of Biomedical Engineering

BIHER.

Dear Madam,

This is with reference to your request letter dated on 23.10.2019 regarding Industrial Visit to our company. We are pleased to inform you that, your request for industrial visit has been accepted and Biovision medical system hereby given permission for your students and faculty on 2.11.2019. During your visit we are supposed to teach your students regarding practical knowledge on medical equipments handling, trouble shooting.



Yours faithfully,
For Biovision Medical System

Venkat
Authorised Signatory

BIO VISION MEDICAL SYSTEMS

Second Floor, No: 49&50, Samuvel Nagar,

Vadaperumbakkam, Chennai - 600 060.

Tel: +91 44 4868 3042, www.biovisionchennai.com

E-mail: sales@biovisionchennai.com

Students Industrial Visit Report

The B.Tech II Year students of Biomedical Engineering had visited the various units and known about the following equipments working principle.

STETHOSCOPE

It's a medical instrument used to listen the sounds produced within the body, mainly heart and the lungs.

SPHYGMOMANOMETER

Also known as Blood pressure gauge, is a device used to measure blood pressure, composed of an inflatable cuff. It has 3 types, mercury, aneroid, and digital.

X-ray machine:

All they are kept in separate labs, the lab conditions are very strict and has to be calibrated daily morning the lab has to be maintained 21°C temperature, hence because all the machines are operated in very high voltage, as they can produce heavy heat, that should be dissipated using A.C. apron of lead is used for the lab technicians are used.

Image plate is fixed, patient are allowed in two positions, are

- Supine position
- Standing position

By adjusting kilovolt (kv), the X-ray is taken as per the need.

Anaesthesia – making UN consciousness

Done in two methods are

- General
- Regional

General method involves in whole body unconscious. Spontaneous method involves in half conscious stage. Regional method involves in exact part of the body.

The basic and major instrument used in anaesthetic department are, Boyle's apparatus, which can give vital information like ECG, BP, Monitoring.

The ventilator consists of oxygen, nitrogen air, which is given through tracheal tract to make artificial pumping of lungs and heart.

Inspiratory air and expiratory air are separated in two separate channels. During the process, monitoring the patient is done by bed side monitor.

Fibre optic flexible scope is used. The warmer machine is used to chill control during anaesthesia. Bis monitor is used to measure the depth of anaesthesia.

Bedside patient monitoring:

- Spo2
- NIBP
- Heart rate
- ECG

Using spirit calibrated machines are cleaned.

Hearing aids

Hearing aids are given for hearing problems.

Diagnosis of patients are very important. By analysing the report the frequency of HA is set.

The diagnosis process involves in two stages are

- i) PURETONE AUDIOMETRY
- ii) Timponometry

In audiometry, lowest level of hearing is called threshold.

A frequency of minimum 250 Hz to highest of 8KHz is given to check thus the problem is with air conduction root or bone conduction root thus in these two methods, the threshold frequency is noted and degree of hearing also been reported.

Audiometer is used in diagnosis. Hearing aids may differ on their size, capacity and performance.

The conductive root problems may arise due to some infections which can be cured by surgery or medical treatment.

The hearing aids are kept inside the ear, thus it has a mic, amplifier, speaker.

PULSE OXIMETER

A device used to measure the oxygen saturation in the blood and the pulse rate i.e the heart rate. It's a non-invasive device placed at the tip of the finger.

THERMOMETER

Used to measure the human body temperature. It is of 3 types- mercury, digital, and the Infrared.

PHYSIO ULTRASOUND

Sound wave is passed to the material, which will cause oscillations of the material's particles.

Types- Thermal and Non-thermal ultrasound.

HAMMER MASSAGER

It's a massager that provides 3350 pulses per minute, and the speed can be customized. It has a powerful motor that runs the instrument.

MANIPOL MASSAGER

Device that provides impulses to soothe the muscle cramps. Has 4 types of heads, wave, rolling, scrabing, and frosting.

NEBULIZER

Nebulizer turns liquid into a mist to help treat asthma. They come in electric or battery run versions. Types- Jet, Mesh, Ultrasonic.

DEFIBRILATOR

Provides electrical impulse to dead heart to re-initiate.

SUCTION PUMP

Used during and after the surgery to remove surgical fluids, gases and bodily fluids.

INFUSION PUMP

Delivers fluid such as nutrients, medicines into the patient's body in controlled amounts.

SYRINGE PUMP

Delivers medicines in a low amount in a controlled manner.

IV POLE

Pole that holds the syringe pump, infusion pump, and the saline water.

IV CANULA

Delivers medicine into the patient's veins.

HUMIDIFIER

Provides aromatherapy, and purifies the air and increases the humidity in the surrounding.

GLUCOMETER

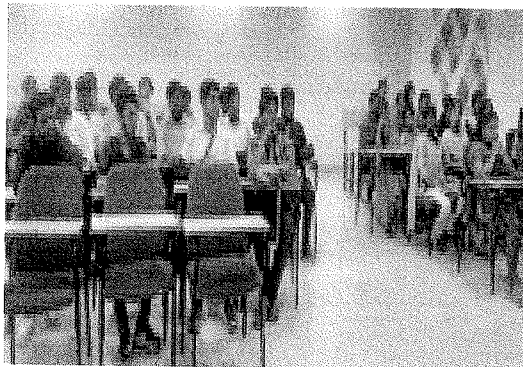
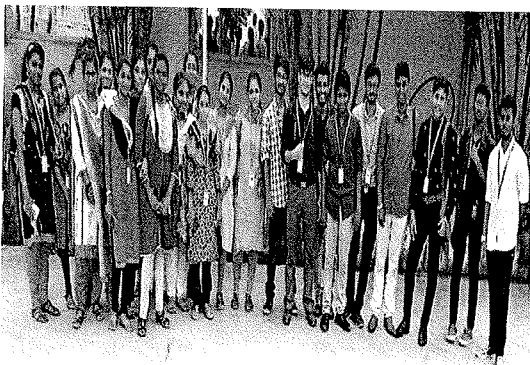
Measures the blood glucose level.

ACCUPEN

Provides impulses at the particular points on the body.

FETAL DOPPLER

Measures baby's heartbeat.

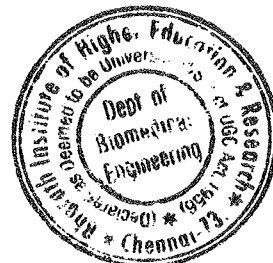




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DEPARTMENT OF BIOMEDICAL ENGINEERING
Students Name List

S.No.	Register No.	Name
1	U18BM001	NITHISH GOPI G
2	U18BM002	PAVITHRA R
3	U18BM003	GOPINATH R
4	U18BM004	SELVAGANAPATHY V
5	U18BM005	PAVEESH M
6	U18BM006	PREETHI G
7	U18BM007	HARIPREETHA V
8	U18BM008	BHAVYA M
9	U18BM009	MOHAMED NIHAL MOHAMED ALTHOB
10	U18BM010	AFTAB AHMED ANSARI
11	U18BM011	RESHILOBETH M
12	U18BM012	DHANUSHKUMAR V
13	U18BM013	AARTHIKA A
14	U18BM014	SAIRASHWANTH S K
15	U18BM015	HALITH K
16	U18BM016	DHANALAKSHMI B
17	U18BM018	YUSHAAQ HUSSAIN Z
18	U18BM019	KOTA LAKSHMI NARAYANA
19	U18BM020	SOMA SOUJANYA
20	U18BM021	NAYAKUDIGARI TEJASWINI
21	U18BM022	GUNDAM SRI HARSHINI
22	U18BM023	SIDDAVATAM MOUNIKA
23	U18BM024	SHAIK DADA MASTAN
24	U18BM025	MUTHU KUMAR K
25	U18BM026	NAKKA SAI HARSHITH
26	U18BM027	BHAVANI M
27	U18BM028	ARISSETTI PRAVALIKA
28	U18BM029	ANDI K DEEPIKA
29	U18BM030	KONDA SURESH KUMAR
30	U18BM031	JAJULA PRAHNITHA
31	U18BM032	PILLI KEERTHANA
32	U18BM033	SANDI KAVYA
33	U18BM034	PARKAVAN P
34	U18BM035	JONNAGADLA HARIKA
35	U18BM036	PRODDUTURU PRAVEEN ACHARY
36	U18BM037	GANAPATHY KARTHICK M
37	U18BM038	JAYASHREE S
38	U18BM039	GULAM ALI MALA
39	U18BM040	MADARABOINA DHANUSHA
40	U18BM041	THUNGALI MANIVIKHYATH
41	U18BM042	JENESHA BLESSEY JACOB. N
42	U18BM043	GOTTIPARTHI VAISHNAVI
43	U18BM044	GADDIPATI TEJASREE
44	U18BM045	ANIMELLA VYSHNAVI



45	U18BM047	ROHINI M
46	U18BM048	RAJESH M
47	U18BM049	CHAVVA SOWBHAGYA LAKSHMI
48	U18BM051	DEVAGIRI LAKSHMI TULASI
49	U18BM052	KATARI SUMITHRA
50	U18BM053	SIRIKONDA SAI ANIL KUMAR
51	U18BM054	KILARI PADMA
52	U18BM055	SHYAM KANNAN R
53	U18BM056	HARITHA P
54	U18BM057	PALUKURU GAYATRI
55	U18BM061	BONTHU BHAVANI
56	U18BM062	PADARTHI AKHIL
57	U18BM064	Nennuru Keerthana
58	U18BM065	RAJARAJAN V
59	U18BM066	VYKUNTAM CHANDINI
60	U18BM067	BATCHALA GAYATRI
61	U18BM068	SYLAJA V
62	U18BM069	MANDEM SUMANASREE
63	U18BM070	SRIKANTH M
64	U18BM071	BASODE VEERANNA
65	U18BM701	THODINDALA MADHAN KUMAR
66	U18BM702	MURAM REDDY SREEDHAR REDDY
67	U18BM703	YANATI VARUN

