



### **Avinashilingam Institute for Home Science and Higher Education for Women**

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A By MHRD)

Re-accredited with A++ Grade By NAAC. CGPA 3.65/4, Category I by UGC

**Coimbatore - 641043, Tamil Nadu, India**

**School of Engineering**

Approved by AICTE

Ayya Avinashilingam Nagar, ChinnaThadagam Post, Coimbatore - 641 108

### **Department of Biomedical Instrumentation Engineering**

#### **Events Organized (2023-2024)**

S. No	Type of Event	Title of the Event	No of Participants	Source of funding	Date	Name of the Speaker
1	Workshop	Troubleshooting and Calibration of Biomedical Equipment	45	BMIE	23.01.2023 – 24.01.2023	Mr. D. Mahavishnu, Managing Director, MAT Medical Systems, Mr. D. U. Vikas, Application Engineer, MAT Medical Systems, Mr. Arivazhagan Srinivasan, Service Engineer, MAT Medical Systems.
2	Seminar	Recent Trends in Biomedical Instrumentation	43	BMIE	14.08.2023	Mr. Mahavishnu D CEO at MAT Medical Systems Director at SPARKMED Life Science Pvt. Ltd
3	Seminar	Empowering the Future	48	BMIE	22.08.2023	Mrs.S.Nagalakshmi, M.Phil BEC Vantage certified. Professional Trainer, Coimbatore
4	Seminar	Early-Stage Entrepreneur	50	BMIE	30.08.2023	Mr. VimalRaj, Aries Biomed Technology Pvt. Ltd, Coimbatore



## **Avinashilingam Institute for Home Science and Higher Education for Women**

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD) Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category 1 by UGC Coimbatore – 641 043, Tamil Nadu, India.

### **School of Engineering**

(Approved by AICTE)

Ayya Avinashilingam Nagar, Varapalayam, Thadagam post, Coimbatore-641 108, Tamilnadu

### **REPORT OF TWO DAY WORKSHOP ON**

#### **“Troubleshooting and Calibration of Biomedical Equipment”**

**23.01.2023 to 24.01.2023 (Offline Mode)**

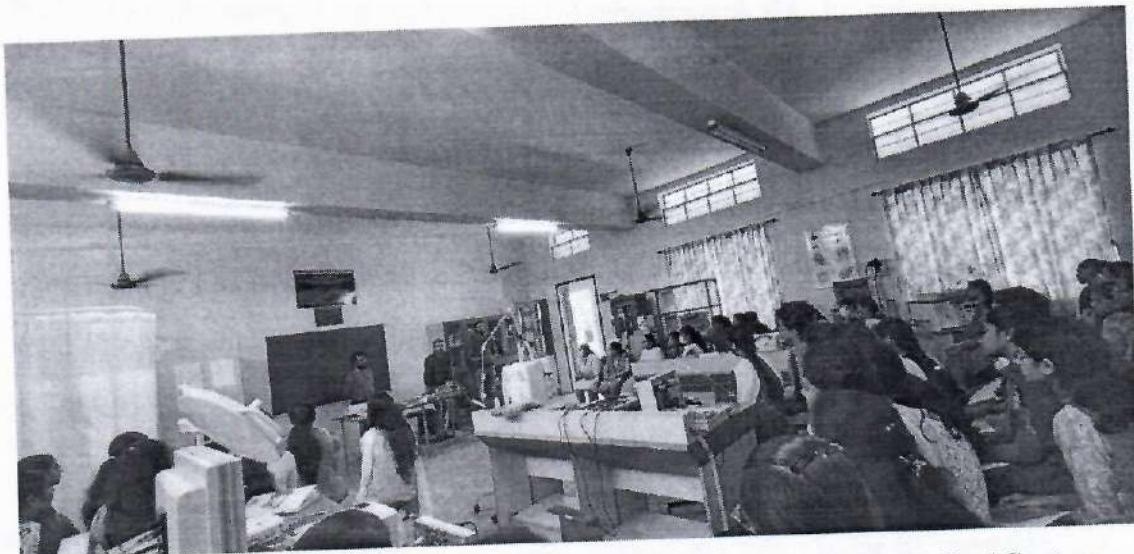
<b>Organizer</b>	:	Dr.(Mrs.) Judith Justin, Deputy Dean (R&D) and HoD/BMIE
<b>Resource Person</b>	:	Mr. D. Mahavishnu, Managing Director, MAT Medical Systems Mr.D.U.Vikas, Application Engineer, MAT Medical Systems Mr.Arivazhagan Srinivasan, Service Engineer, MAT Medical Systems
<b>Staff Coordinator</b>	:	Dr.E.Smily Jeya Jothi, Assistant Professor/BMIE Mrs.M.Nila Nandhini, Assistant Professor/BMIE Mrs.S.Gowri, Assistant Professor/BMIE
<b>Organizing Committee Members</b>	:	Dr.(Mrs.) R. Vanithamani, Professor/BMIE Dr.(Mrs.)R.Shijitha, Assistant Professor/BMIE Ms.K.Vaanmathi, Guest Faculty/B.Voc. Ms.R.Soundarya, Guest Faculty/B.Voc.

**Venue: Diagnostic and Therapeutic Laboratory, Department of Biomedical Instrumentation Engineering School of Engineering**

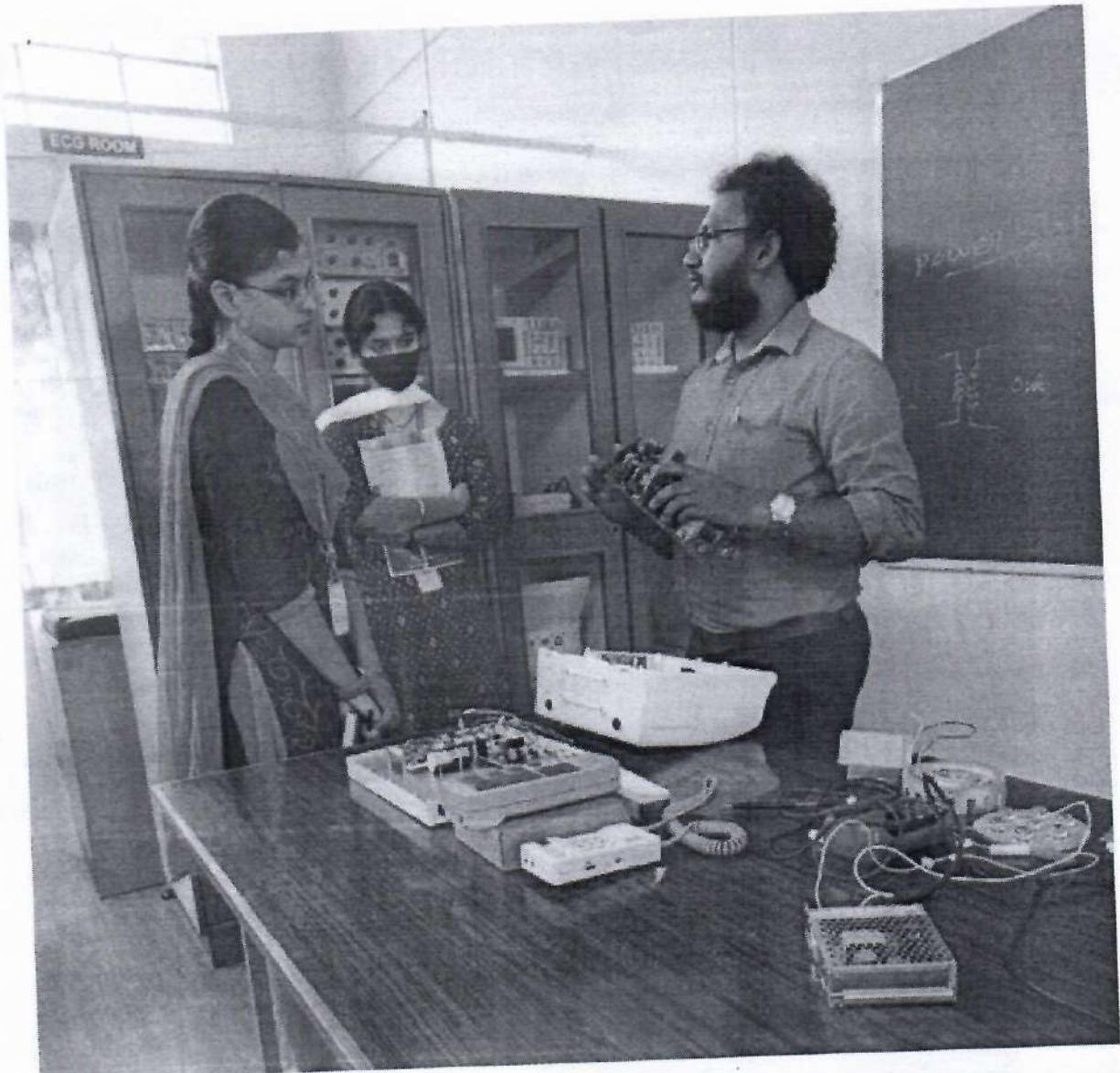
*Judith Justin*  
15/2/23

(HoD - BMIE)

The Department of Biomedical Instrumentation Engineering organised a two day workshop on "Troubleshooting and Calibration of Biomedical Equipment" in association with MAT Medical Systems, Coimbatore during 23.01.2023 and 24.01.2023, for the students of II, III and IV year B.E. Biomedical Instrumentation Engineering. The chief guest, Mr. D. MAHAVISHNU, Managing Director, MAT Medical Systems delivered a lecture on the "Logical Approach to Troubleshooting Medical Equipment" and emphasized the importance and benefits of troubleshooting. He insisted that troubleshooting is an essential skill that every biomedical engineer should develop. It doesn't mean simply fixing the issue but to identify the root cause of the problem and nullify it. He also encouraged the students to become entrepreneurs that would help them to become independent and channel their creativity into creating something of their own in this competitive world. Mr.D.U.Vikas, Technical Engineer, MAT Medical Systems detailed on all the possible equipment failures which are categorized into clinical, mechanical, electromechanical and electronic failures. Troubleshooting and repairing of twelve different medical devices viz., Endoscopy, Ventilator, Defibrillator, Blood gas analyzer, Invasive Arterial Blood Pressure, Heart Lung Machine, Operation Theatre light, Surgical Diathermy, Infusion Pump, Anaesthesia Machine, Multi-parameter Monitor were taught during the two days. A total of 45 students benefited from having enough time to speak with the technical professionals and learn about spotting and avoiding equipment breakdown. Students felt that the two day session was very informative and interactive, and has improved their fundamental career basis.



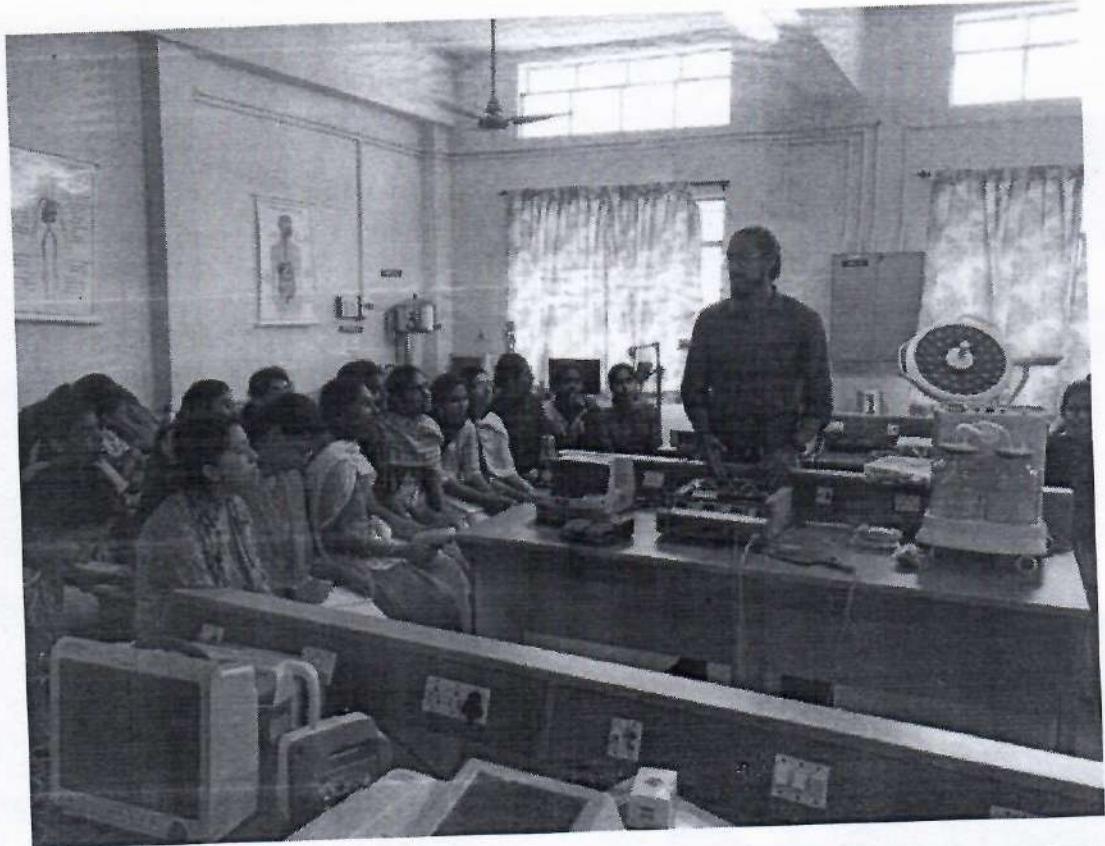
Lecture by Mr. D. MAHAVISHNU, Managing Director, MAT Medical Systems



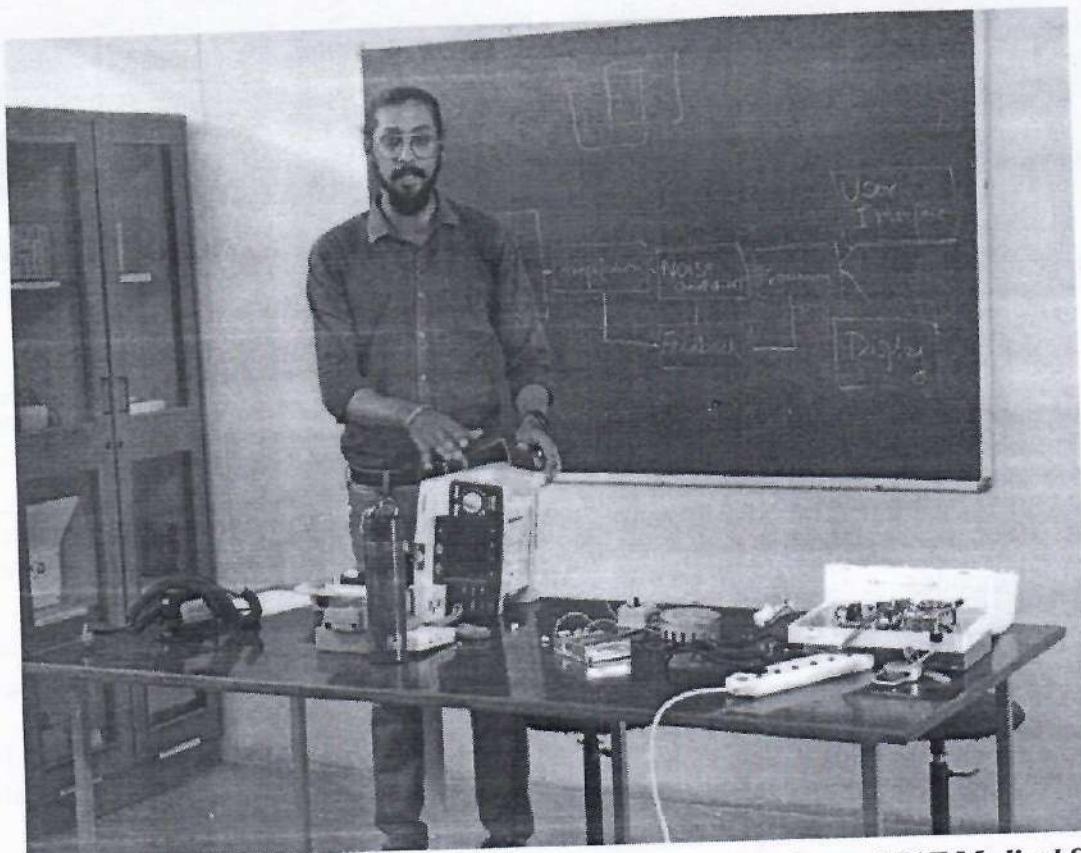
*Calibration of Medical Devices by Mr.Arivazhagan Srinivasan, Service Engineer, MAT Medical Systems*

**Troubleshooting procedures dealt for the major Biomedical Equipment**

S.No	Name of The Equipment	Troubleshooting Procedure
1	Multipara-monitor	<ul style="list-style-type: none"><li>• Check the Patient Cable for any visible damage, such as cracks or creases where the wires may be damaged under the protective coating.</li><li>• The Electrodes have a shelf life, and very often the individual packages should be used within 7-10 days of opening.</li><li>• Check the Blood Pressure Cuff &amp; Hose for leakage.</li><li>• Check the electrode clips to be sure they are attached firmly.</li><li>• Check SpO<sub>2</sub> sensors to be sure they are fitting the patients' finger correctly.</li></ul>



***Demonstration of Surgical Diathermy by Mr.D.U.Vikas, Technical Engineer, MAT Medical Systems***



***Troubleshooting of Ventillator by Mr.D.U.Vikas, Technical Engineer, MAT Medical Systems***

2	ECG Machine	<ul style="list-style-type: none"> <li>• Muscle movement - Patient movement can create artefact on an ECG trace.</li> <li>• Electrical continuity - Any break in the ECG signal path will stop the ECG signal from reaching the monitor.</li> <li>• Electrodes - Using fresh, high quality electrodes ensures good contact with the skin, providing reliable adhesion and conduction.</li> <li>• Cabling - Broken cables or lead wires can prevent the ECG signal from reaching the monitor.</li> <li>• Interference - Unwanted artefact on the ECG trace from nearby interfering sources.</li> <li>• Equipment - Your monitor settings can have significant impact on the trace quality and alarm accuracy.</li> </ul>
3	Defibrillator	<ul style="list-style-type: none"> <li>• Attach the external and internal paddles if the monitor reads “NO Paddles”</li> <li>• Check to ensure that the leads are securely attached if the monitor reads “No leads”</li> <li>• Connect the unit to AC power if the message reads, “low battery”</li> <li>• Verify that the energy select control settings are correct if the defibrillator does not charge.</li> <li>• Close the recorder</li> </ul>
4	Diathermy	<ul style="list-style-type: none"> <li>• Check the power cord and plug connections to ensure that the diathermy machine is properly connected to a functioning power source.</li> <li>• Check the fuses of the diathermy machine to make sure that they are intact and not blown</li> <li>• Check the diathermy machine for any loose connections and ensure that all cables and wires are properly connected.</li> <li>• Test the diathermy machine and make sure that it is functioning properly by conducting a simple test procedure.</li> <li>• Check the diathermy machine’s settings and make sure that they are correctly adjusted.</li> <li>• Check the electrodes and make sure that they are clean and in good condition.</li> <li>• Make sure that the diathermy machine is not being exposed to any sources of interference such as radio waves, cell phones, etc.</li> </ul>
5	Suction Apparatus	<ul style="list-style-type: none"> <li>• Check the power supply and make sure it is connected and functioning properly.</li> <li>• Check the suction tube and make sure it is not obstructed or clogged.</li> <li>• Make sure the suction tube is securely attached to the device.</li> <li>• Make sure the suction filter is clean and not blocked.</li> <li>• Check the pressure gauge to make sure the pressure is within the normal range.</li> <li>• Ensure the suction pressure is set correctly.</li> <li>• Check the vacuum motor and make sure it is working properly.</li> <li>• Make sure the suction valve is open and not blocked.</li> <li>• Clean the device and all its parts regularly.</li> <li>• Check the exhaust filter and make sure it is not blocked.</li> </ul>

6	Laparoscopy	<ul style="list-style-type: none"> <li>Check the laparoscope for any damage or blockage.</li> <li>Check the light source to make sure it is functioning properly.</li> <li>Check the monitor and video system to ensure they are working correctly.</li> <li>Ensure that the insufflation pressure is appropriate for the procedure.</li> <li>Inspect all connections and cables to make sure they are securely attached.</li> <li>Check the irrigation and suction devices to make sure they are functioning properly.</li> <li>Ensure that the instruments are functioning properly and that they are sharp.</li> <li>Make sure the surgical staff is well trained and familiar with the laparoscopy procedure.</li> </ul>
7	Ventilator	<ul style="list-style-type: none"> <li>Check for power to the ventilator.</li> <li>Inspect all wiring and connections for damage.</li> <li>Check for air leaks in the system.</li> <li>Make sure all settings are correct.</li> <li>Make sure the ventilator is receiving the correct pressure.</li> <li>Check for proper gas flow.</li> <li>Make sure the patient is properly connected to the ventilator.</li> <li>Check the ventilator alarm settings.</li> <li>Test the ventilator's response to patient breathing.</li> <li>Check for proper oxygen flow.</li> </ul>
8	Anaesthesia Machine	<ul style="list-style-type: none"> <li>Check for gas leaks: Check for any gas leaks in the machine, hoses, and connections.</li> <li>Check oxygen and aesthetic gas flow: Make sure the oxygen and aesthetic gas flow is adjusted properly.</li> <li>Check pressure settings: Check that the pressure settings are within the recommended range.</li> <li>Check fresh gas flow: Make sure the fresh gas flow is set to the correct volume.</li> <li>Check scavenging system: Make sure the scavenging system is functioning properly and that there are no blockages or obstructions.</li> <li>Check for proper ventilation: Make sure the patient is receiving adequate ventilation and oxygenation.</li> <li>Check for proper monitoring: Make sure the patient is being monitored properly, with the proper equipment.</li> <li>Inspect the machine: Inspect the machine for any signs of damage or wear and tear.</li> <li>Troubleshoot any alarms: Troubleshoot any alarms that may be present.</li> <li>Calibrate the machine: Calibrate the machine, if necessary, to ensure accurate readings.</li> </ul>

**Department of Biomedical Instrumentation Engineering**

**Two day Workshop on "Troubleshooting and Calibration of Biomedical Equipment"**

Date: 23<sup>rd</sup> and 24<sup>th</sup> January 2023

**ATTENDANCE SHEET**

S.No	Register No.	Name of the Student	23.01.2023		24.01.2023	
			FN	AN	FN	AN
1	21019UEB01	Christa Joju N	Christa	Christa	Christa	Christa
2	21024UEB02	Dharshitha K R	Dharshitha	Dharshitha	Dharshitha	Dharshitha
3	21040UEB04	Hemapriya M	Fenza	Fenza	Fenza	Fenza
4	21059UEB05	Kavya A	Kavya	Kavya	Kavya	Kavya
5	21085UEB06	Pavithra S	Pavithra	Pavithra	Pavithra	Pavithra
6	21096UEB07	Reefa R	Reefa R	Reefa R	Reefa R	Reefa R
7	21104UEB08	Samvardhika M	Samvardhika	Samvardhika	Samvardhika	Samvardhika
8	21111UEB09	Shriya A	Shriya A	Shriya A	Shriya A	Shriya A
9	21117UEB10	Sreenisha S P	Sreenisha	Sreenisha	Sreenisha	Sreenisha
10	20001UEB01	Aasic Sowganthika S	S.	S.	S.	S.
11	20012UEB02	Anupriya B	B.P	B.P	B.P	B.P
12	20017UEB03	Bertilla Madonna C P	B.P	B.P	B.P	B.P
13	20028UEB04	Divya K P	D.P	D.P	D.P	D.P
14	20035UEB05	Harini E	H.E	H.E	H.E	H.E
15	20047UEB06	Kavebharthi S	K.S	K.S	K.S	K.S
16	20049UEB07	Kavya S P	K.S.P	K.S.P	K.S.P	K.S.P
17	20068UEB08	Nisha R	Nisha R	Nisha R	Nisha R	Nisha R
18	20076UEB10	Preethi Shree L	preethi	preethi	preethi	preethi
19	20093UEB11	Savitha Natarajan	Savitha	Savitha	Savitha	Savitha

Anitha Joshi  
15/2/23

(HOD - BMIE)

20	20095UEB12	Sharmila S	<u>Sharmila</u>	<u>Sharmila</u>	<u>Sharmila</u>	<u>Sharmila</u>
21	20105UEB13	Shruthika C	<u>Shruthika</u>	<u>Shruthika</u>	<u>Shruthika</u>	<u>Shruthika</u>
22	20111UEB14	Srinithy K	<u>Srinithy</u>	<u>Srinithy</u>	<u>Srinithy</u>	<u>Srinithy</u>
23	20112UEB15	SriyaRai	<u>Sriya</u>	<u>Sriya</u>	<u>Sriya</u>	<u>Sriya</u>
24	20116UEB16	Supraja P S	<u>P.S.Supraja</u>	<u>T.S.Supraja</u>	<u>T.S.Supraja</u>	<u>P.S.Supraja</u>
25	20118UEB17	Suvathi S	<u>Suvathi</u>	<u>Suvathi</u>	<u>Suvathi</u>	<u>Suvathi</u>
26	20130UEB18	Vasantha Varshini A	<u>Vasantha</u>	<u>Vasantha</u>	<u>Vasantha</u>	<u>Vasantha</u>
27	20131UEB19	Vikashini M	<u>Vikashini</u>	<u>Vikashini</u>	<u>Vikashini</u>	<u>Vikashini</u>
28	20134UEB20	Vijayashree B	<u>Vijayashree</u>	<u>Vijayashree</u>	<u>Vijayashree</u>	<u>Vijayashree</u>
29	19004UEB01	Agalya R	<u>Agalya R</u>	<u>Agalya R</u>	<u>Agalya R</u>	<u>Agalya R</u>
30	19005UEB02	Aiswarya T	<u>Aiswarya</u>	<u>Aiswarya</u>	<u>Aiswarya</u>	<u>Aiswarya</u>
31	19007UEB03	Amirthavarshini V	<u>Amirthavarshini</u>	<u>Amirthavarshini</u>	<u>Amirthavarshini</u>	<u>Amirthavarshini</u>
32	19017UEB06	Deepasindhu M	<u>Deepasindhu</u>	<u>Deepasindhu</u>	<u>Deepasindhu</u>	<u>Deepasindhu</u>
33	19018UEB07	Deepthi Mariam M	<u>Deepthi</u>	<u>Deepthi</u>	<u>Deepthi</u>	<u>Deepthi</u>
34	19021UEB08	Dhivya Srinidhi K	<u>Dhivya</u>	<u>Dhivya</u>	<u>Dhivya</u>	<u>Dhivya</u>
35	19031UEB09	Harsini C	<u>Harsini</u>	<u>Harsini</u>	<u>Harsini</u>	<u>Harsini</u>
36	19041UEB10	Kapila R	<u>Kapila R</u>	<u>Kapila R</u>	<u>Kapila R</u>	<u>Kapila R</u>
37	19043UEB11	Kausalya R	<u>Kausalya R</u>	<u>Kausalya R</u>	<u>Kausalya R</u>	<u>Kausalya R</u>
38	19044UEB12	Kavitha S	<u>Kavitha S</u>	<u>Kavitha S</u>	<u>Kavitha S</u>	<u>Kavitha S</u>
39	19047UEB13	Kavya S M	<u>Kavya S M</u>	<u>Kavya S M</u>	<u>Kavya S M</u>	<u>Kavya S M</u>
40	19050UEB14	Keerthi Abirami M	<u>Keerthi</u>	<u>Keerthi</u>	<u>Keerthi</u>	<u>Keerthi</u>
41	19073UEB15	Nowshika B	<u>Nowshika</u>	<u>Nowshika</u>	<u>Nowshika</u>	<u>Nowshika</u>
42	19080UEB16	Prathanya Sree C	<u>Prathanya C</u>	<u>Prathanya C</u>	<u>Prathanya C</u>	<u>Prathanya C</u>
43	19084UEB17	Priyadharshini R	<u>Priyadharshini</u>	<u>Priyadharshini</u>	<u>Priyadharshini</u>	<u>Priyadharshini</u>
44	19099UEB18	Shrisowndarya R P	<u>Shrisowndarya</u>	<u>Shrisowndarya</u>	<u>Shrisowndarya</u>	<u>Shrisowndarya</u>
45	19121UEB19	Usha Nandhini V	<u>Usha Nandhini</u>	<u>Usha Nandhini</u>	<u>Usha Nandhini</u>	<u>Usha Nandhini</u>

Andithi Andi  
15/2/23

(Hod) - BMIE



**Mahavishnu D**

**CEO at MAT Medical Systems**

**Director at SPARKMED Life Science Pvt Ltd**

## **PROFILE**

Over 20 years of experience in the field of medical equipment industry. MAT medical system is a 12 years old company. We supply and service various medical equipments to over 250 hospitals in Tamil Nadu. Our supply and services extend to Kerala, Andhra Pradesh and Karnataka. The major supply and services include ventilators, Laparoscopy devices and Defibrillators.

## **EDUCATION**

- Diploma in Early Childhood Care and Education (DECE), DDCSM Polytechnic College, Dharmapuri.
- Bachelor of Engineering in Government College of Engineering (Formerly IRTT), Erode.

## **ENGINEERING COLLEGE CLIENTS**

- Nandha Engineering College, Erode.
- Vellalar College of Engineering and Technology, Erode.



**Avinashilingam Institute for Home Science and Higher Education for Women**

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD)

Re-accredited with A ++ Grade by NAAC. CGPA 3.65/4, Category 1 by UGC

Coimbatore – 641043, Tamil Nadu, India.

**School of Engineering**

(Approved by AICTE)

Ayya Avinashilingam Nagar, Varapalayam, Thadagam post, Coimbatore-641 108,  
Tamil Nadu

**ASSOCIATION ACTIVITY REPORT**

Guest Lecture on

**“RECENT TRENDS IN BIOMEDICAL INSTRUMENTATION”**

Organized by

**Department of Biomedical Instrumentation Engineering**

On

**14.08.2023**

Organizer	: Dr.(Mrs.) Judith Justin, Deputy Dean (R&D) and HoD/ BMIE
Resource Person	: Mr.D.Mahavishnu CEO of Mat Medical System Coimbatore.
Staff Coordinator	: Mrs. M. Nila Nandhini, Assistant professor/BMIE
Organizing Committee Members	: Dr. (Mrs) R.Vanithamani, Professor/BMIE Dr. (Mrs) R.Shijitha, Assistant Professor/BMIE Mrs.S.Gowri, Assistant Professor/BMIE Ms.K.Vaanmathi, Guest Faculty/B.Voc Ms.R.Soundarya, Guest Faculty/B.Voc

The session on “RECENT TRENDS IN BIOMEDICAL INSTRUMENTATION” was held on 14th August 2023 in the conference hall of Avinashilingam Institute for Home Science and Higher Education for Women, School of Engineering.

The session was organized by Dr.(Mrs.) Judith Justin, Deputy Dean (R&D) and HoD of Biomedical Instrumentation Engineering and the staff coordinator behind the session was Mrs. M. Nila Nandhini, Assistant professor/BMIE.

Dr. (Mrs) R.Vanithamani, Professor/BMIE, Dr. (Mrs) R.Shijitha, Assistant Professor/BMIE, Mrs.S.Gowri, Assistant Professor/BMIE, Ms.K.Vaanmathi, Guest Faculty/B.Voc, Ms.R.Soundarya, Guest Faculty/B.Voc supported the session by being a part of the Organizing Committee Members.

Mr.D.Mahavishnu CEO of Mat Medical System, Coimbatore was cordially invited to be the resource person for the day

The session began at 2:00 pm, with a heartwarming welcome, the introduction of the guest and the prayer .The second, third and final years of biomedical instrumentation engineering students were the attentive audience listening and participating enthusiastically.

The resource person gave a brief explanation of most commonly used medical equipment in the hospitals with its functions, troubleshooting,working principle, method of use and the advancements that have been observed in the equipment up to date.The equipment that were discussed were, defibrillators, ventilators, OT lights, OT table, blood gas analyser, diathermy and many more.

## VENTILATORS

### SIEMENS 900C VENTILATOR (OLD GEN VENTILATORS)

The Siemens Servo 900C is a model of medical ventilator that was produced by Siemens Medical Solutions. It's a part of the Siemens Servo ventilator series, which includes various models designed to provide mechanical ventilation to patients in critical care settings. The Servo 900C, as an older generation ventilator, was utilized to assist patients



in breathing who were unable to do so adequately on their own.

### SIEMENS 300C VENTILATOR



## TURBINE BASED VENTILATOR



Turbine-based ventilators and portable ventilators are both types of medical devices used to provide mechanical ventilation to patients. However, they differ in terms of their mechanisms, capabilities, and use cases. Turbine-based ventilators are more complex and versatile devices used in intensive care and critical care settings, while portable ventilators prioritize mobility and are suitable for providing basic ventilation support in various settings, including during patient transport. The choice between the two depends on the specific patient needs and the clinical context.

## PORTABLE VENTILATOR



## DEFIBRILLATORS

The HP CodeMaster defibrillator is a medical device used for delivering electrical shocks to the heart in order to restore its normal rhythm during a cardiac arrest or life-threatening arrhythmias.

Here are some general features and information about defibrillators in general, which might apply to the HP CodeMaster defibrillator:

Defibrillators are used to administer controlled electrical shocks to the heart to interrupt abnormal rhythms (arrhythmias) and allow the heart to resume its normal beating pattern. Many defibrillators, including the HP CodeMaster, offer both manual and automated external defibrillator (AED) modes. In manual mode, a trained healthcare provider can analyze the heart rhythm and manually deliver shocks as needed. In AED mode, the device guides non-medical users through the process of delivering a shock. Defibrillators often include ECG monitoring capabilities, allowing medical professionals to continuously monitor the patient's heart rhythm. Defibrillators have adjustable energy levels for delivering shocks. Higher energy levels are typically used for more severe arrhythmias.

In manual mode, some defibrillators have a "sync" function that helps synchronize the shock with the patient's heartbeat, which can be important for treating specific types of arrhythmias.

Portable defibrillators like the HP CodeMaster are designed for ease of use and portability. They are equipped with rechargeable batteries and are often used in emergency situations, both within medical facilities and in the field.

AED modes of defibrillators usually include voice and visual prompts to guide users through the steps of proper usage. Some defibrillator models offer training versions that allow medical personnel to practice scenarios without delivering actual shocks.

HP Codemaster defibrillator





**PHILIPS HEARTSTART XL defibrillator**



**PHILIPS DFM100 Defibrillator**

## **VITAL SIGN MONITORS**

Vital sign monitors are medical devices used to measure and track various physiological parameters that provide essential information about a patient's health status. These parameters help healthcare providers assess a patient's overall condition, monitor changes, and make informed medical decisions. Vital sign monitors are commonly used in hospitals, clinics, ambulances, and other healthcare settings. Here are some of the key vital signs that are typically monitored:

1. Heart Rate (Pulse): This measures the number of heartbeats per minute and provides information about the heart's rhythm and overall cardiovascular health.
2. Blood Pressure: Blood pressure is the force exerted by blood against the walls of the arteries. It is typically measured using two values: systolic pressure (the higher value when the heart contracts) and diastolic pressure (the lower value when the heart relaxes).
3. Respiratory Rate: This measures the number of breaths a person takes per minute. It is important for assessing lung function and overall respiratory health.
4. Body Temperature: Body temperature indicates the body's internal heat level. It is a vital sign that can help detect fever or hypothermia.

5. Oxygen Saturation (SpO2): Oxygen saturation measures the percentage of hemoglobin in the blood that is carrying oxygen. It provides information about the oxygen levels in the body.

6. Capnography (EtCO2): Capnography measures the concentration of carbon dioxide (CO2) in exhaled breath. It is particularly important for monitoring a patient's respiratory status during anesthesia and critical care.

7. Pain Assessment: While not a direct physiological measurement, pain assessment is often included in vital sign monitoring. Patients' self-reported pain levels are important for managing their comfort and well-being.

8. Glucose Level: In some cases, glucose levels might also be monitored, especially for patients with diabetes.

Vital sign monitors can range from simple handheld devices to sophisticated, integrated systems that provide continuous monitoring and real-time data display. Here are some common types of vital sign monitors:

- Portable Vital Sign Monitors: These are handheld or small devices that can measure a few key vital signs, such as heart rate, blood pressure, and oxygen saturation. They are often used in clinical settings and during patient transport.

- Multi-Parameter Monitors: These monitors are more comprehensive and can measure multiple vital signs simultaneously. They often include ECG (electrocardiogram) monitoring, respiration rate, and more.

- Telemetry Monitors: These monitors are used for remote monitoring of patients' vital signs. They allow healthcare providers to keep track of patients' conditions from a central station.

- Bedside Monitors: These are typically found in hospital rooms and provide continuous monitoring of vital signs for patients in critical care units or during surgery recovery.

Vital sign monitors play a crucial role in patient care by enabling early detection of changes in health status and supporting timely interventions. As medical technology continues to advance, these monitors become increasingly sophisticated and integrated with electronic medical records and hospital information systems.



PHILIPS VITAL SIGN MONITOR

### ICU COT/BED

An ICU cot cum bed, often referred to as an ICU cot or an ICU bed, is a specialized medical bed designed for use in intensive care units (ICUs) and critical care settings. These beds are engineered to provide a comfortable and safe environment for patients requiring intensive medical monitoring and treatment. They are equipped with various features to accommodate the needs of critically ill patients and the medical staff caring for them.



MOTORIZED BED

### ABG (Arterial blood gas)

Arterial Blood Gas (ABG) analysis is a medical test that measures the levels of various gases and acid-base balance in a sample of blood taken from an artery. ABG testing provides important information about a patient's respiratory and metabolic status, helping healthcare professionals assess how well the lungs and kidneys are functioning. ABG samples are typically collected from the radial or femoral artery using a syringe and specialized equipment to ensure accuracy and minimize complications. After collection, the blood is immediately analyzed, as the gases in the sample can change if not analyzed promptly.

Interpreting ABG results requires an understanding of the relationships between pH, PaCO<sub>2</sub>, HCO<sub>3</sub>-, and other parameters. Healthcare professionals, particularly doctors, nurses, and respiratory therapists, use ABG results to make informed clinical decisions and develop treatment plans tailored to the patient's needs.



SIEMENS ABG EQUIPMENT

## SYRINGE PUMPS AND INFUSION PUMPS

A syringe pump is a medical device used to deliver fluids, medications, or nutrients to patients in a controlled and precise manner. It operates by pushing or pulling a plunger of a syringe at a controlled rate, allowing accurate delivery of small to moderate volumes of liquids.

An infusion pump is a medical device used to deliver fluids, medications, or nutrients to patients at a controlled and regulated rate. It provides continuous or intermittent infusion directly into the bloodstream.

Both syringe pumps and infusion pumps are crucial tools in medical care, each with its own advantages and applications. The choice between them depends on factors such as the volume of fluid to be delivered, the required infusion rate, the patient's condition, and the clinical setting. Healthcare professionals are trained to select the appropriate device and infusion method based on these considerations.



AKAS INFUMAX Syringe pump and Infusion pump

## OT LIGHTS

Operating room (OR) lights, also known as surgical lights or OT lights, are specialized lighting systems used in surgical and medical procedures. They provide bright and focused illumination to enhance visibility and precision during surgery. These lights are designed to minimize shadows and provide a clear view of the surgical field, ensuring optimal conditions for medical professionals to perform procedures accurately and safely. OR lights play a critical role in maintaining a sterile environment and facilitating successful surgical outcomes.



OT Lights

## OT TABLE

An operating table, also referred to as an OT table or surgical table, is a specialized medical furniture designed for surgical procedures. It provides a stable, adjustable, and comfortable platform for patients during surgery. These tables come equipped with various features to accommodate different surgical specialties and ensure optimal positioning of the patient. Operating tables are essential for maintaining patient safety, surgeon comfort, and overall surgical efficiency.

### Manual OT Table:

A manual operating table is operated by hand through mechanical adjustments. It requires manual effort to change positions and adjust height. While it may lack the convenience of automated controls, it is often cost-effective and reliable for basic surgical procedures.

### Electric OT Table:

An electric operating table is equipped with motorized mechanisms for adjusting height, tilt, and positioning. It allows precise and effortless adjustments using control panels. Electric tables offer flexibility, speed, and accurate positioning, enhancing surgical convenience and reducing strain on medical staff.



Manual and Electric OT Table

## Boyle's anesthesia equipment

Boyle's anesthesia equipment is a vital component in modern medical settings, used for administering anesthesia to patients during surgical procedures. Named after the British anesthetist Henry Boyle, this equipment ensures controlled delivery of anesthetic gases and oxygen while monitoring patients' respiratory and circulatory parameters. It consists of components like a flowmeter, vaporizer, breathing circuit, and scavenging system. Boyle's anesthesia equipment plays a crucial role in maintaining patient comfort, safety, and stable physiological conditions throughout surgery.



Boyle's anesthesia machine

Many other equipments and instruments were also discussed in the session. They were explained with the help of detailed pictures and crisp descriptions for each of them.

The resource person also shared his personal experience of working in the biomedical field with its benefits and the problems faced to give awareness to the future biomedical engineers.

The students were also given an inspiring speech by the instructor and were encouraged to pursue biomedical engineering as their career. The session ended with doubt clearing and vote of thanks to the supporting staff, the chief guests and the attentive audience.



## Session on Ventilators



## Session on Defibrillators



## Session on Defibrillators and OT table

# Guest Lecture on "Recent Advancements in Biomedical Technology"

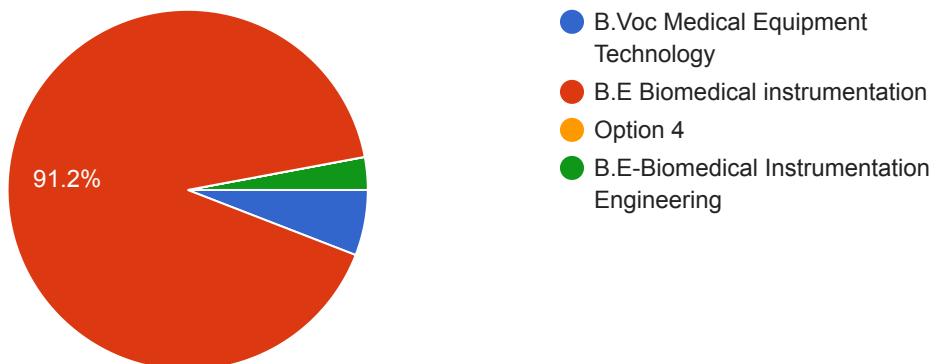
34 responses

[Publish analytics](#)

B.E biomedical instrumentation

 Copy

34 responses



- B.Voc Medical Equipment Technology
- B.E Biomedical instrumentation
- Option 4
- B.E-Biomedical Instrumentation Engineering

9 responses

20130UEB18

22uvm006

V Lavanya

20116UEB16

20049ueb07

20047ueb06

-

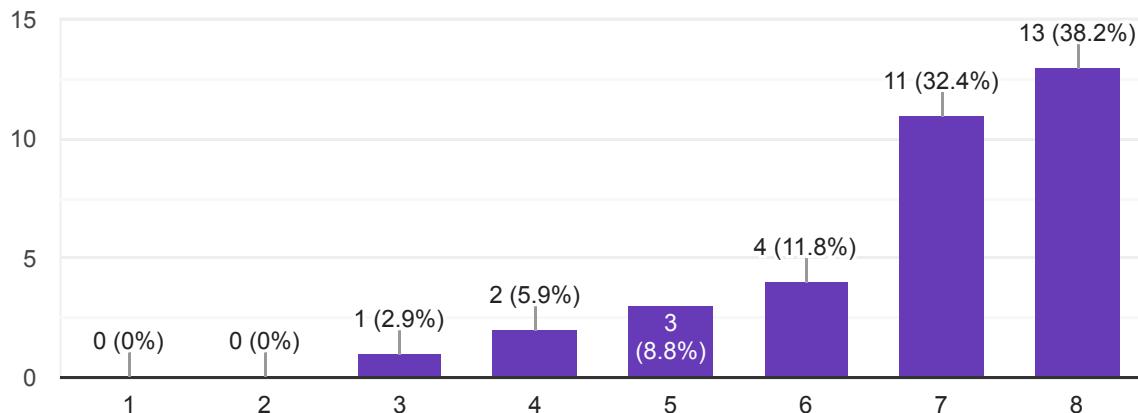
Suvathi S (20118ueb17)

BE Biomedical instrumentation



Does session matched its objective  
strongly agree

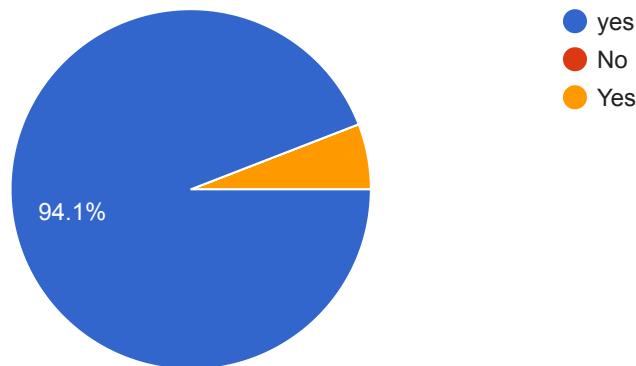
34 responses

 Copy


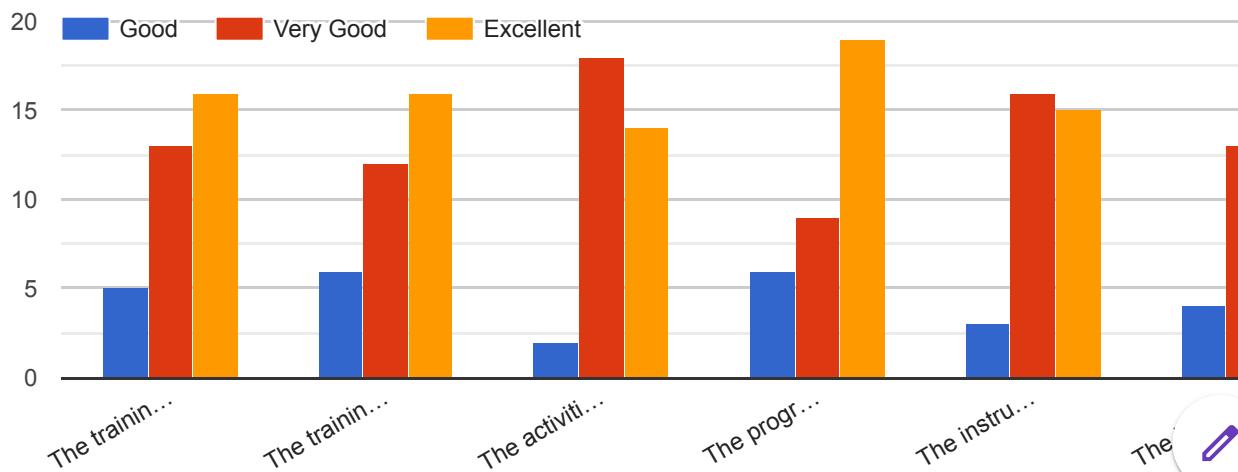
Was the lecture delivered by the resource person fulfilled your expectation level on the topic?

yes

34 responses

 Copy


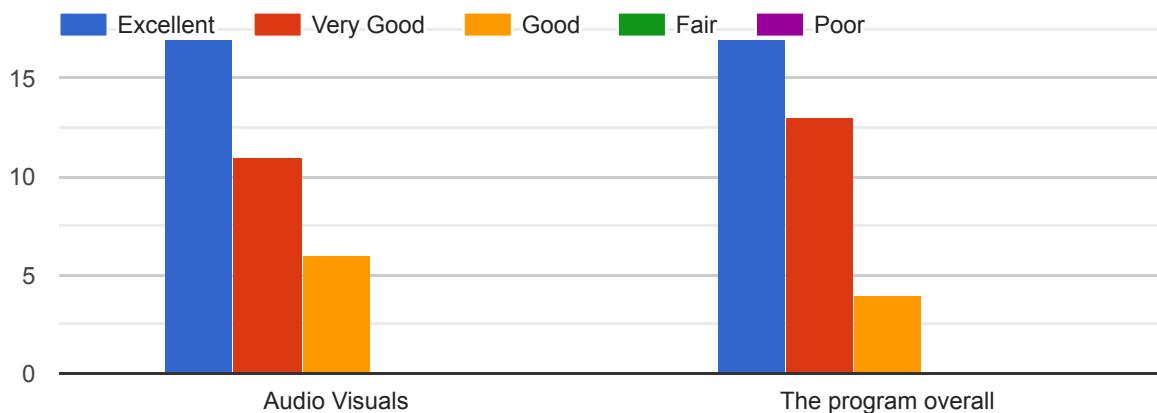
We would appreciate if you could take a few minutes to share your opinions with us so we can serve you better.

 Copy


Please rate the following:

excellent

 Copy



What did you most appreciate/enjoy/think was best about the lecture?

it was really interesting session

34 responses

-

The machine's company name were clearly explained

Appreciate

Good

Nil

usefull

way of explaining

explanation about advancement of biomedical technology

the session was really interesting and useful

Very informative

The was very interesting and interactive

It was a really interesting session.

It was really interesting session

It was interesting

good explaianing

Everything

it was really interesting session

We knew about some medical instrument

It was useful

Yes, it is interesting

Yes it was really enjoy



Ppt

Interesting session

Yes

communication

Ideas and knowledge about recent advancements

Was interesting

This program was very useful

It was interested

The interactive session was really interesting

It is useful to my Carrier

The topic

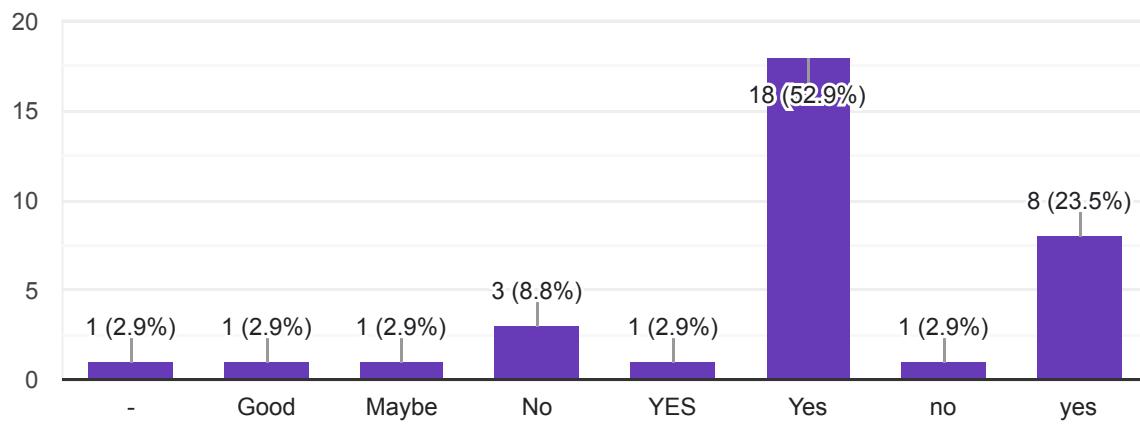
Good

Would you like to participate in our future programs

 Copy

yes

34 responses

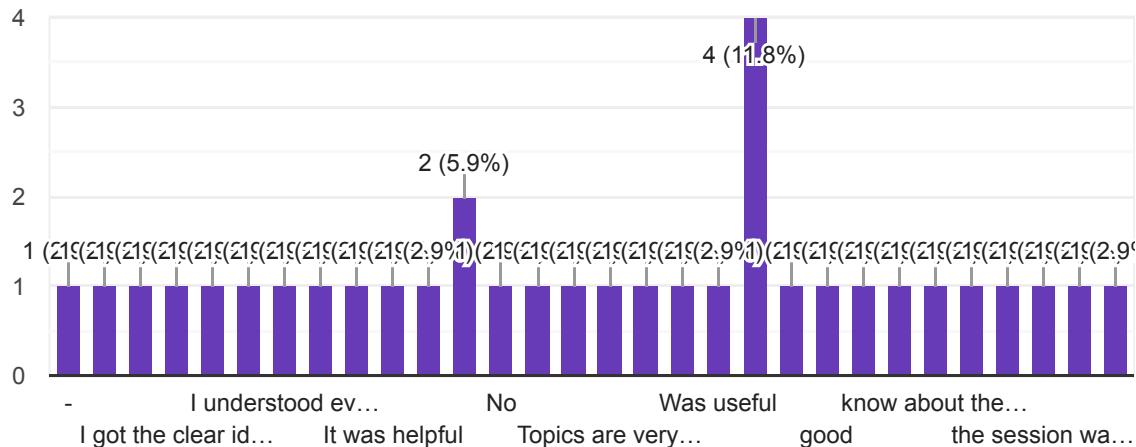


## Outcome

 Copy

i understood every recent advancement of the biotech session

34 responses



This content is neither created nor endorsed by Google. [Report Abuse](#) - [Terms of Service](#) - [Privacy Policy](#)



14.8.2023

Thanks for opportunity gave chance to explain about some of our medical equipments. I hope students got some knowledge & points learned from our presentation.

D. Mahavishnu

14/08/23



## Guest Lecture on "Recent Advancements in Biomedical Technology"

Mr. Mahavishnu. D  
CEO

MAT Medical Systems,  
Coimbatore.

Time: 11am to 12.30pm  
Date : 14.8.2023



Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD  
Re-accredited with 'A++' Grade by NAAC.CGPA 3.65/4, Category I by UGC  
Coimbatore-641 043, Tamil Nadu, India



## School of Engineering



Department of Biomedical Instrumentation Engineering

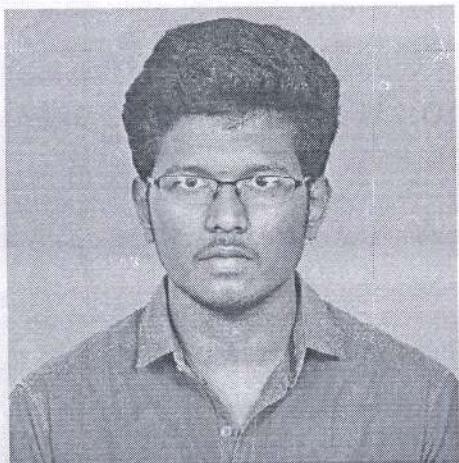
Organises

*Seminar on*  
"Early Stage Entrepreneur"

**Time: 10.30 am to 12.30 pm**

**Venue: Conference Hall**

**Date: 30.08.2023**



**Mr. VIMALRAJ J**

Aries Biomed  
Technology Pvt Ltd,

**Staff Co-ordinators:**

**Dr. Shijitha R,**  
**Assistant Professor/BMIE**  
**Mrs. Nila Nandhini M,**  
**Assistant Professor/BMIE**

**Student Coordinators:**

**Ms. Savitha Natarajan, IV BMIE**  
**Ms. A Shriya, III BMIE**  
**Ms. M. Vaishna, II BMIE**

*Shijitha R*  
28/8/23  
( HOD - BMIE )

**Mr.VIMALRAJ J**

Phone: +91- 8220000565 / +91- 8248725007

Email: [shreesai2830@gmail.com](mailto:shreesai2830@gmail.com)

Aries Biomed Technology Pvt Ltd



Manager in Aries Biomed Technology Pvt Ltd. specializes in the development, manufacturing and marketing of products for Respiratory Care and Biomedical Test gadgets. Offer's advanced technology products that provide the best solution for point of care and validation. Six Months experience as Business Development Associate with expertise as Educationalist Analyst in sales, operations & management functions in Think and Learn Pvt Ltd, Bangalore. Hands on experience in Sales and Management Operations with High End as well as Low End Products in India's Largest Ed- Tech Company. Hands on Exposure in Business to Customer Domain. 26 Months experience as Supervisor - Operations, 24 months of experience as Manager- Operations & 13 months of experience as General Manager – Operations in Aries Biomed Technology Pvt Ltd, Coimbatore Hands on Exposure in Bringing government projects/fund, Online Marketing, Maintaining Distributors. Proficient problem-solver who envisions business and technical perspectives to develop workable solutions with direct contact to Customer and focused around making students love learning, get addicted to learning .Good Experience in direct and indirect business expansion via B2B as well as B2C. Good team worker and self-starter for coordinating different campaigns. A diligent individual with good interpersonal skills and ability to meet time lines. Strong analytical skills. Strong leadership qualities. Strong in Communication, Organisational, Decision Making & Training and Development. High capacity for learning, pick up new skills and ideas quickly. Enthusiasm and creativity give me an edge on difficult projects. Adept in communicating with technical and non-technical audiences.



**Avinashilingam Institute for Home Science and Higher Education for Women**  
(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD)  
Re-accredited with A ++ Grade by NAAC. CGPA 3.65/4, Category 1 by UGC  
Coimbatore – 641043, Tamil Nadu, India.

**School of Engineering**  
(Approved by AICTE)

Ayya Avinashilingam Nagar, Varapalayam, Thadagam post, Coimbatore-641 108,  
Tamil Nadu

## **ASSOCIATION ACTIVITY REPORT**

Guest Lecture on  
**“EARLY STAGE ENTREPRENEUR”**

Organized by  
**Department of Biomedical Instrumentation Engineering**  
on  
**30.08.2023**

Organizer	: Dr.(Mrs.) Judith Justin, Deputy Dean (R&D) and HoD/ BMIE
Resource Person	: Mr.VimalRaj Jaganadhan, GM-Operations, Aries Biomed Technology Pvt Ltd, Coimbatore.
Staff Coordinator	: Dr. (Mrs) R.Shijitha, Assistant Professor/BMIE
Organizing Committee Members	: Dr. (Mrs) R.Vanithamani, Professor/BMIE Mrs. M. Nila Nandhini, Assistant professor/BMIE Dr. (Mrs) R.Shijitha, Assistant Professor/BMIE Mrs.S.Gowri, Assistant Professor/BMIE Mrs.S.Pavithra, Assistant Professor/BMIE Ms.K.Vaanmathi, Guest Faculty/B.Voc Ms.R.Soundarya, Guest Faculty/B.Voc

**Number of Participants:** 50 Students

## **Objectives:**

To inspire and prepare students for a successful journey into entrepreneurship by providing them with essential knowledge, skills, and motivation to thrive in the early stages of their entrepreneurial endeavors.

## **About the Session:**

On August 30, 2023, the session titled "EARLY STAGE ENTREPRENEUR" took place at Avinashilingam Institute for Home Science and Higher Education for Women, School of Engineering. Dr. (Mrs.) Judith Justin, Deputy Dean (R&D) and HoD of Biomedical Instrumentation Engineering, organized the session, with Dr. (Mrs.) R.Shijitha, Assistant Professor/BMIE, as the staff coordinator. The organizing committee included Dr. (Mrs) R.Vanithamani, Mrs. M. Nila Nandhini, Mrs.S.Gowri, Mrs.S.Pavithra,Ms.K.Vaanmathi, and Ms.R.Soundarya.

The guest resource person for the day was Mr. VimalRaj Jaganadhan, GM-Operations at Aries Biomed Technology Pvt Ltd, Coimbatore. The session commenced at 10:30 am, featuring a prayer song by Ms. Christa Joju III BMIE, a warm welcome by Ms.C Prathaya Sree I M.E Medical Electronics, and the introduction of the guest.



**Figure 1 Session by Mr.Vimalraj Jaganadhan**

The audience included second, third, and final-year Biomedical Instrumentation Engineering students, first and second-year M.E Medical Electronics students, and B.Voc Medical Equipment Technology Students who actively participated and engaged in the session.

The session revolved around the experiences of early-stage entrepreneur Mr. Vimalraj Jaganadhan, who introduced Aries Biomed Technology, a company founded in 2015 specializing in Indigenous design, development, and manufacturing of high-quality critical care products. He shared insights into the company's development, challenges faced, and the founder's resolve in dealing with disputes.

Mr. Jaganadhan discussed several unique products developed by Aries Biomed, including oxygen monitors, biomedical testing gadgets, O<sub>2</sub> conservation devices, war field ventilators, respiratory monitors, and ventilator flow analyzers. The seminar highlighted the importance of entrepreneurial skills, covering areas such as identifying market needs, securing funding, resource management, team building, and navigating business challenges. Successful entrepreneurs were noted for their determination, creativity, adaptability, and strong leadership skills.



Figure 2 Querries by Savitha Natarajan IV B.E BMIE

The versatility of entrepreneurship was emphasized, spanning small businesses, tech startups, and social enterprises addressing societal issues, contributing significantly to economic growth and innovation. Mr. VimalRaj Jaganadhan outlined key steps for aspiring entrepreneurs, including goal setting, market analysis, collaboration, legal compliance, customer focus, and prioritizing mental health.

He also shared his own startup, ASTERISM EVOLVICS, established in February 2023 and registered in Salem, specializing in IoT-integrated O<sub>2</sub> monitors. The session concluded with a Q&A session to address students' queries about entrepreneurship, followed by a vote of thanks delivered by Ms. Shruthika.C from the final year BMIE.



**Figure 3 Vote of Thanks by Shruthika C, IV B.E BMIE**

### **Summary:**

The seminar showcased Mr. Vimalraj Jaganadhan's journey as an early-stage entrepreneur with Aries Biomed Technology, highlighting product development and entrepreneurship's vital skills. It underscored the diversity of entrepreneurial endeavors, emphasizing qualities like determination and adaptability.



**Figure 4 Group Photo**

# Seminar on"Early Stage Entrepreneur"

47 responses

[Publish analytics](#)



## Email

47 responses

20130ueb18@avinuty.ac.in

22ueb004@avinuty.ac.in

22ueb008@avinuty.ac.in

22ueb013@avinuty.ac.in

22ueb030@avinuty.ac.in

22uvm010@avinuty.ac.in

20076ueb10@avinuty.ac.in

20093ueb11@avinuty.ac.in

20118ueb17@avinuty.ac.in

20105ueb13@avinuty.ac.in

20001ueb01@avinuty.ac.in

20131ueb19@avinuty.ac.in

20134ueb20@avinuty.ac.in

20112ueb15@avinuty.ac.in

20028ueb04@avinuty.ac.in

20017ueb03@avinuty.ac.in

20035ueb05@avinuty.ac.in

22ueb010@avinuty.ac.in

20095ueb12@avinuty.ac.in

20047ueb06@avinuty.ac.in

20012UEB02@avinuty.ac.in

20049ueb07

22uvm007@avinuty.ac.in

22ueb018@avinuty.ac.in

22ueb029@avinuty.ac.in

20068ueb08@avinuty.ac.in



22ueb002@avinuty.ac.in

22uvm004@avinuty.ac.in

22uvm006

22uvm009@avinuty.ac.in

22ueb016@avinuty.ac.in.

22ueb022@avinuty.ac.in

22tueb003@avinuty.ac.in

22ueb021@avinuty.ac.in

21uvm005@avinuty.ac.in

20116ueb16@avinuty.ac.in

21uvm007@avinuty.ac.in

22ueb027@avinuty.ac.in

22ueb017@avinuty.ac.in

21117ueb10@avinuty.ac.in

21111ueb09@avinuty.ac.in

21085ueb06@avinuty.ac.in

21040ueb04@avinuty.ac.in

21034ueb03@avinuty.ac.in

21059ueb05@avinuty.ac.in

21104ueb08@avinuty.ac.in

21096ueb07@avinuty.ac.in



## Name

47 responses

VASANTHA VARSHINI A

ASHIFAH H

Deepika.R

Jai Padhra.R.R

harsini

S.Vennila

Preethi shree L

Savitha Natarajan

Suvathi S

Shruthika C

Aasic sowganthika S

Vikashini M

B vijayashree

Sriya Rai

Divya KP

Bertilla Madonna C P

Harini

DIVYAMALA.M

Sharmila S

Kavebharthi S

Anupriya. B

Kavya S P

V. Lavanya

G. Lathika

SANJANA DHAKSHAYENY.G

Nisha.R



Ancy Divinna J.S

Anandhi.M

Keerthiga.S

L. Rithika

Kowsika.S R

Rithika.B

Elvina Charles

N.Praveena bharathi

Karthika C

Supraja.P.S

Nathiya M

Subha.P

S.Laavanya Shri

SREENISHA S P

Shriya.A

S.PAVITHIRA

Hemapriya.M

Harine N

Kavya.A

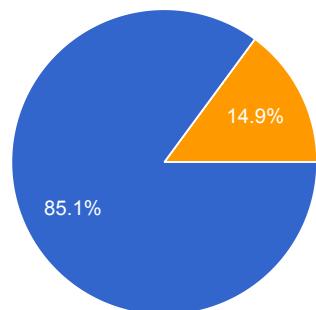
samvardhika M

REEFA R

### Degree

47 responses

 Copy



- B.E-Biomedical Instrumentation Engineering
- M.E Medical Electronics
- B.Voc Medical Equipment Technology

## Roll No

47 responses

20130UEB18

22UEB004

22UEB008

22UEB013

22ueb030

22uvm010

20076ueb10

20093ueb11

20118ueb17

20105UEB13

20001ueb01

20131UEB19

20134ueb20

20112ueb15

20028ueb04

20017ueb03

20035ueb05

22ueb010

20095ueb12

20047ueb06

20012UEB02

20049ueb07

22uvm007

22ueb018

22UEB029

20068ueb08



22UEB002

22Uvm004

22uvm006

22uvm009

22ueb016

22UEB022

22ueb011

22ueb021

21uvm005

20116UEB16

21uvm007

22UEB027

22UEB017

21117UEB10

21111ueb09

21085UEB06

21040UEB04

21034ueb03

21059UEB05

21104ueb08

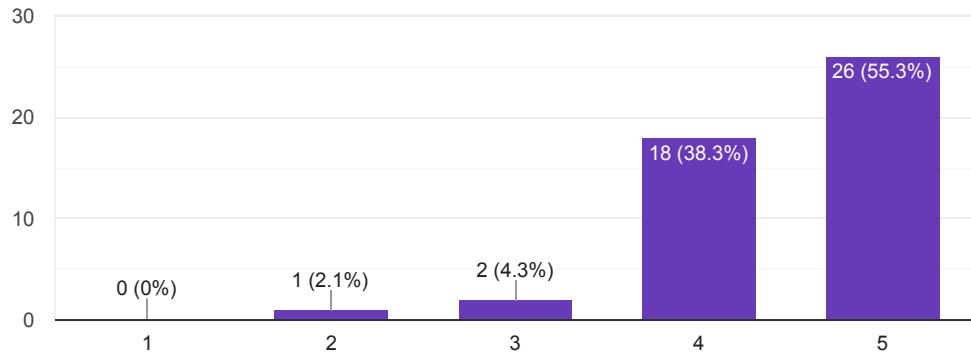
21096UEB07



## Does session matched its objective?

 Copy

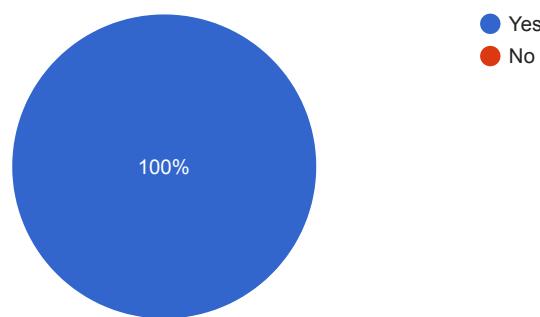
47 responses



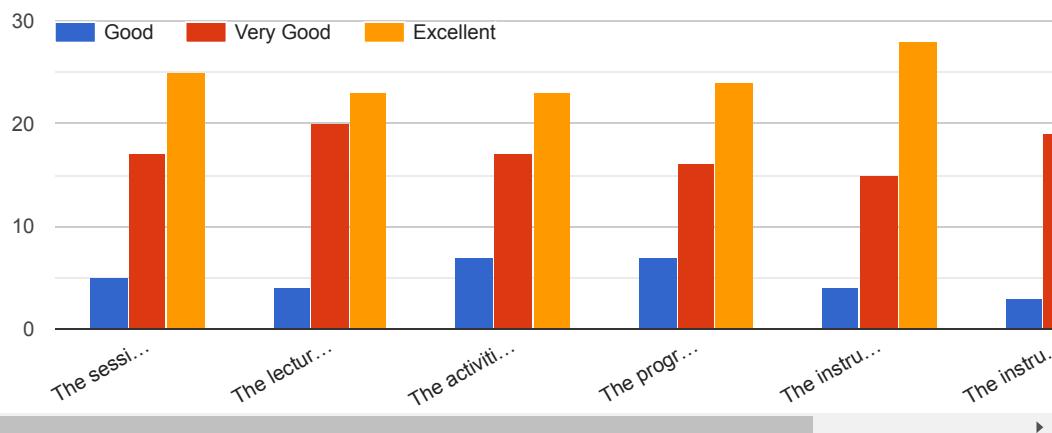
## Was the lecture delivered by the resource person fulfilled your expectation level on the topic?

 Copy

47 responses

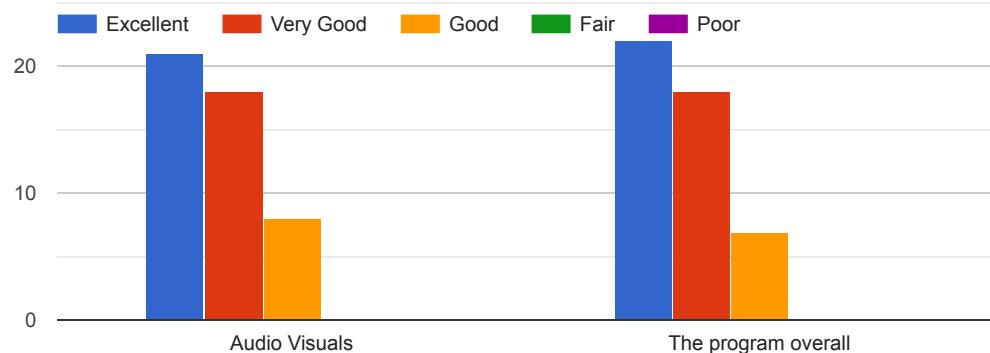


## We would appreciate if you could take a few minutes to share your opinions with us so we can serve you better.

 Copy

Please rate the following:

Copy



What did you most appreciate/enjoy/think was best about the seminar?

47 responses

Enjoy

I came to know about the entrepreneurship

FABULOUS

NO

Got knowledge about entrepreneurship

everything

The communication is so good

-

The interactiveness and liveliness

.

I think the seminar gave us clear idea about how to be an successful entrepreneur. very useful for us.

One of the best session

Very well explained to how to become a entrepreneur

Explaining way

it was inspiring

Learnt new things

How to rise from the fall !

The way of taking the seminar and it convey students to understand easily.

Idea about business

Gained knowledge about entrepreneur

Knowledgeable

It is use full for our career. So it is knowledgeable.

The session was lively

Good

Useful



all was good

Nil

Got ideas to become a young entrepreneur

Think

Enjoy

Appreciate

topic

Topic

Interesting

The best part was when the speaker said about the struggles of a new entrepreneur in the industry and how they overcome it was awesome

The way of delivering the messages and content to the spectators

Topic

To put their more effort to become a ent

THE SPEAKER IS WELL KNOWLEDGEABLE AND BE FRIENDLY TO US TO GET MORE INFORMATION ABOUT THE TOPIC

topic and over all the session was really interesting

Overall session was more informative.

we learnt many things about it and very use full to as

the seminar was so intresting and interactive

OVERALL SESSION WAS VERY EXCELLENT

it was informative to me .

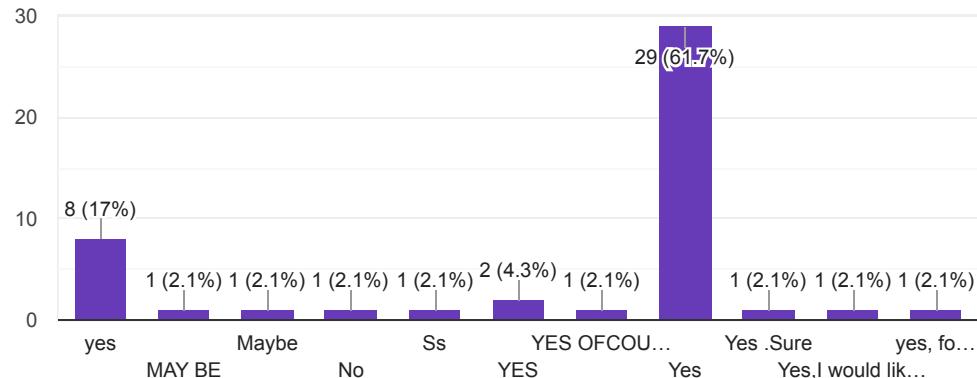
It will be helpfull to me.



## Would you like to participate in our future programs

 Copy

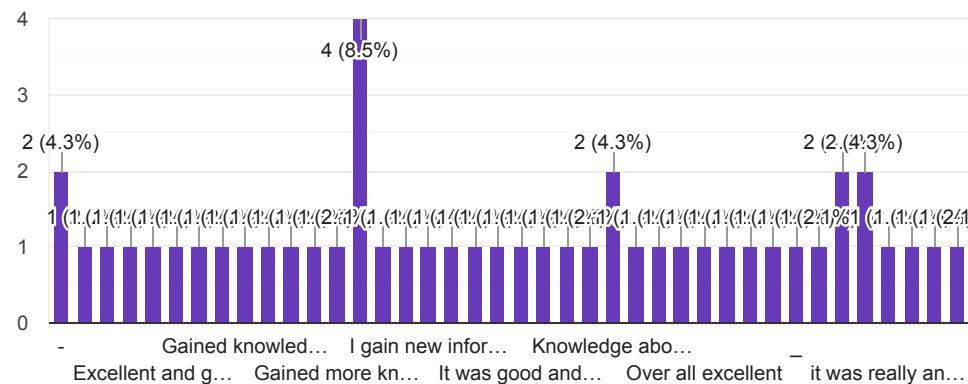
47 responses



## Outcome

 Copy

47 responses



This content is neither created nor endorsed by Google. [Report Abuse](#) - [Terms of Service](#) - [Privacy Policy](#)






30.8.2023

I really thank the department of Biomedical Tech for giving this opportunity. It was really happy to see young people (Students) who are interested in becoming entrepreneurs. I wish all the students for this great career in future.

Regards

Vimalraj Jagannathan  
GM - Operations

Aries Biomed Technology Pvt. Ltd.  
CBE.

Ph: 8248725007.

## Seminar on "Early Stage Entrepreneur"

Mr. Vimalraj. J

Aries Biomed Technology Pvt. Ltd.,

Time: 10.30 am to 12.30 pm

venue: Conference Hall

Date: 30.08.2023



## **Avinashilingam Institute for Home Science and Higher Education for Women**

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD

Re-accredited with 'A++' Grade by NAAC.CGPA 3.65/4, Category I by UGC

Coimbatore-641 043, Tamil Nadu, India

### **School of Engineering**

### **Department of Biomedical Instrumentation Engineering**

Cordially invite you for the  
Guest Lecture  
on

**“Empowering the Future”**

by

**Mrs.S.Nagalakshmi, M.Phil**  
BEC Vantage certified  
Professional Trainer,  
Coimbatore  
on

22.08.2023

**Venue : Conference Hall,  
School of Engineering.**

## PROFILE OF THE RESOURCE PERSON

<https://www.careerzone.in/team.php>

**Mrs.S.Nagalakshmi,**

BEC Vantage certified



Mrs.S.Nagalakshmi, M.Phil (English Literature) - BEC Vantage certified Fondly called Naga, she is a Professional Trainer with vast experience in Competitive Testing and Language Training. She is a trainer with passion and purpose, highspirited and has a never ending approach towards innovation. Being charismatic and dynamic coupled with her expertise in literary skills facilitate her as a fullydedicated trainer. She provides deep insight on the testing and assessment for IELTS, TOEFL, PTE, GRE, GMAT and SAT. Over the years she has personally trained over80,000 students, equipping them with key skills in areas of leadership, linguistic and reasoning ability.Her 16 years of training experience is spread over various leading educational institutions handling company specific training for TCS, INFOSYS, ACCENTURE, HCL,DELOITTE, IBM and L&T. She has earned several professional accolades and a Certified Trainer by British Council.



[www.careerzone.in](http://www.careerzone.in)

**CAREER ZONE**

Synonym for Global Education

## **I. CAREER ZONE Consulting [P] Ltd. – Introduction**

**CAREER ZONE Consulting Pvt. Ltd.** is a Knowledge Consulting Company. We assist students in pursuing Overseas Education in universities in USA, UK, Australia, New Zealand, Canada, Switzerland, Germany, France, Sweden, Ireland, Singapore, Dubai & other European and Eastern European Countries. CAREER ZONE is a solution oriented company, which specializes in tailoring career pathways to suit individual profiles within the constraints that may prevail in each case. The constraints may be educational, financial or personal. **Established in the year 1997**, CAREER ZONE has counseled and trained over **15000 students**. In **GRE** our best score has been **334 out of 340** and in **IELTS** many of our students have **scored 8.5 overall and 9.0 in Individual bands**. The Highest band awarded in IELTS **9.0**. CAREER ZONE has grown organically over the last **20** years. As a part of CAREER ZONE's services to Institutions, we propose to provide Global Skills Training within your campus.

### **Strengths of CZCPL:**

- We offer FREE admission and visa counseling to Indian students, for the Institutions that we represent.
- We have state-of-the-art facilities for counseling and training.
- We have experienced and dedicated Counselors & staff members for administrative services.
- We are Members of **AAAOE [Association of Accredited Advisors on Overseas Education]**
- CZCPL Directors have been awarded the '**Education UK Certificate for Agents**' Programme offered by British Council and British Deputy High Commission
- We have been awarded with the **Singapore Education Specialist award**
- We are **British Council IELTS Registration Centre** with Gold Membership
- We have an extensive library with information on programs of most universities.
- We assist students in availing Education Loans.
- Our travel division assist in Visas, FOREX, Air Ticketing, Travel insurance and Accomodation.
- Our website [www.careerzone.in](http://www.careerzone.in) provides a wealth of information on education options in major countries.

## Global Skills Training

We offer preparatory training programs in **IELTS, TOEFL, GRE, GMAT** and **SAT**. Students will learn the techniques to approaching the tests, and tips, advice and secrets to ensure success in these tests. Our course focuses on a comprehensive overview of the test components and will help candidates to develop the skills needed to obtain a credible score in exams. Our knowledge facilitators update the training materials on regular basis. Each module is designed according to the standard and needs of students.

**Knowledge Facilitators** - Knowledge facilitators' with different levels of experience and expertise most effectively provide value when serving the needs of the different levels of trainees. All facilitators pass stringent internal guidelines of domain knowledge and training capability. Facilitators possess 7 to 10 years of teaching experience with passion to groom people and develop their skills. We conduct regular evaluation of our facilitators and continuous improvement is a key element of the CAREER ZONE culture.

**Training Methodology** - One cannot acquire skills by sitting in the classroom and just listening to the instructor. Our training sessions depend on, and indeed demand participation from the trainees. Questions and opinions are solicited and trainees are encouraged to explore how they can apply the concepts in their own work environment.

**Personalized study plan** - We use an adaptive learning strategy that personalizes students' course plan once the diagnostic test is taken. Diagnostic test helps individual to focus time and energy in learning specific skills.

**Self-Paced Training** - The collection of online lessons takes student step-by- step through key concepts and practice questions. Self-Paced Training allows students' to review training materials at their own pace.

**One-to-One** - Trainer and student work on a one-to-one basis, fostering an encouraging learning environment to promote success. It focuses entirely customizable approach to training, adaptable in content and to the student's preferred learning style.

**Personalized reporting** - To know the progress of a student, individual performance report is maintained. Based on the test performance trainer's redirect students' efforts to improve the test performance and establish learning goals.

**Simulations** - We rely heavily on experiential learning as a method of imparting new skills and concepts. CAREER ZONE provides trainees with a strong conceptual foundation and requires that they actively participate in exercises and simulations so as to reinforce the concepts and utilize the skills that they have just learned.

## Our Trainers

We engage instructors with different levels of experience and expertise to most effectively provide value when serving the needs of the different levels of trainees. All trainers are expected to pass stringent internal guidelines of domain knowledge and training capability. Trainers have at least 5 to 8 years experience in industry knowledge or teaching/training experience. They are further trained in the CZCPL approach to training. Our trainers are passionate about helping people develop their skills.



### **Avinashilingam Institute for Home Science and Higher Education for Women**

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD)

Re-accredited with A ++ Grade by NAAC. CGPA 3.65/4, Category 1 by UGC

Coimbatore – 641043, Tamil Nadu, India.

### **School of Engineering**

(Approved by AICTE)

Ayya Avinashilingam Nagar, Varapalayam , Thadagam post, Coimbatore-641 108,  
Tamil Nadu

## **ASSOCIATION ACTIVITY REPORT**

### **Guest Lecture on “EMPOWERING THE FUTURE”**

Organized by

**Department of Biomedical Instrumentation Engineering**

On

**22.08.2023**

Organizer	: Dr.(Mrs.) Judith Justin, Deputy Dean (R&D) and HoD/ BMIE
Resource Person	: Mrs.S.Nagalakshmi, BEC Vantage certified Professional Trainer, Coimbatore.
Staff Coordinator	: Dr. (Mrs) R.Shijitha, Assistant Professor/BMIE
Organizing Committee Members	: Dr. (Mrs) R.Vanithamani, Professor/BMIE Mrs. M. Nila Nandhini, Assistant professor/BMIE Dr. (Mrs) R.Shijitha, Assistant Professor/BMIE Mrs.S.Gowri, Assistant Professor/BMIE Ms.K.Vaanmathi, Guest Faculty/B.Voc Ms.R.Soundarya, Guest Faculty/B.Voc

**Number of Participants:** 48 Students

## **Objectives:**

This report aims to present a thorough analysis of studying biomedical instrumentation engineering abroad, highlighting its advantages, challenges, and the evolving landscape of the field, to assist Indian students in making informed decisions about their educational and career paths.

## **About the Session:**

The session on “EMPOWERING THE FUTURE” was held on 22nd August 2023 in the conference hall of Avinashilingam Institute for Home Science and Higher Education for Women, School of Engineering.

The session was organized by Dr.(Mrs.) Judith Justin, Deputy Dean (R&D) and HoD of Biomedical Instrumentation Engineering and the staff coordinator behind the session was Dr. (Mrs) R.Shijitha, Assistant professor/BMIE.

Dr. (Mrs) R.Vanithamani, Professor/BMIE, Mrs. M. Nila Nandhini, Assistant Professor/BMIE, Mrs.S.Gowri, Assistant Professor/BMIE, Ms.K.Vaanmathi, Guest Faculty/B.Voc, Ms.R.Soundarya, Guest Faculty/B.Voc supported the session by being a part of the Organizing Committee Members.

Mrs.S.Nagalakshmi, BEC Vantage certified Professional Trainer, Coimbatore was cordially invited to be the resource person for the day

The session began at 2:30 pm, with a heart warming welcome, the introduction of the guest and the prayer .The second, third and final years of biomedical instrumentation engineering students were the attentive audience listening and participating enthusiastically.

The session was based on career opportunities in biomedical instrumentation engineering at global universities for Indian students. Biomedical science is a multifaceted field that plays a crucial role in advancing healthcare, disease understanding, and medical innovation. Pursuing biomedical education and research abroad offers numerous advantages, including exposure to cutting-edge technologies, diverse perspectives, and opportunities for collaboration. This report delves into the benefits, challenges, and opportunities associated with studying and conducting research in biomedical science abroad.

They have provided information about the general admission process, the scholarships provided for the student, and the process of selecting the right university. And also, we gained knowledge about the career guidance in the biomedical field, which guided us in preparing for the exams required to study abroad.

Furthermore, the field of biomedical science is continually evolving, driven by technological advancements, emerging healthcare trends, and global challenges such as precision medicine and telehealth.

## **Outcomes:**

The event on empowering the future at global universities for Indian students yielded several positive outcomes:

**Enhanced Awareness:** Participants gained a deeper understanding of the diverse career pathways available in the field of biomedical instrumentation engineering on a global scale. They became aware of the wide range of opportunities to contribute to healthcare advancement and innovation.

**Global Perspective:** Attendees were exposed to the significance of biomedical science in a global context. They acquired insights into how various cultures and regions contribute to shaping the field and its applications.

**Informed Decision-making:** The information shared about admission processes, scholarships, and university selection empowered participants to make well-informed decisions about pursuing their education abroad. This knowledge will guide them in selecting the most suitable academic paths and institutions.

**Preparation Guidance:** The session on career guidance provided valuable insights into the necessary steps and preparation required to excel in the biomedical field. Participants gained insights into exam strategies and skill development needed for success.

**Networking and Collaboration:** The event facilitated networking opportunities among participants, speakers, and professionals in the biomedical industry. This networking may lead to future collaborations, research partnerships, and a broader professional network.

**Awareness of Technological Trends:** Participants were informed about the dynamic nature of the field, driven by technological advancements and global health challenges. This awareness will enable them to stay updated on the latest trends and developments in biomedical science.

**Motivation and Inspiration:** The event likely inspired attendees by showcasing the significant impact that their contributions could have on healthcare and society. Learning about successful individuals in the field could motivate participants to pursue their academic and professional aspirations vigorously.

**Engagement with Experts:** Participants had the opportunity to interact with experts in the biomedical field, allowing them to ask questions, seek advice, and gain valuable insights from professionals with extensive experience.

**Long-term Planning:** The event encouraged attendees to think beyond immediate academic goals, fostering a mindset of long-term planning and career development within the biomedical field.

### **Summary:**

In summary, the event successfully increased awareness, provided crucial information, and inspired participants to consider global opportunities in biomedical instrumentation engineering, ultimately empowering them to make informed decisions and pursue successful careers in the field.



Figure 1 Session by Mrs Jansi Paul



Figure 2 Interaction between students and the speaker



Figure 3 Session by Ms Preetha about educational outreach



Figure 4 Session about TOEFL and IELTS Exams



Figure 5 Group Photo with Speakers

# Guest Lecture on, " Empowering the Future "

45 responses

[Publish analytics](#)



## Email

45 responses

22ueb013@avinuty.ac.in

22ueb004@avinuty.ac.in

22ueb008@avinuty.ac.in

22ueb022@avinuty.ac.in

22ueb011@avinuty.ac.in

22ueb024@avinuty.ac.in

22ueb018@avinuty.ac.in

ananthiabi303@gmail.com

22ueb016@avinuty.ac.in

22ueb009@avinuty.ac.in

22ueb021@avinuty.ac.in

22ueb002@avinuty.ac.in

22tueb024@avinuty.ac.in

22ueb001@avinuty.ac.in

22ueb030@avinuty.ac.in

22ueb028@avinuty.ac.in

22ueb010@avinuty.ac.in

22ueb027@avinuty.ac.in

22ueb017@avinuty.ac.in

22ueb015@avinuty.ac.in

22ueb005@avinuty.ac.in

22ueb023@avinuty.ac.in



20130ueb18@avinuty.ac.in

22uvm010@ avinuty.ac.in

20076ueb10@avinuty.ac.in

20093ueb11@avinuty.ac.in

20001ueb01@avinuty.ac.in

20105ueb13@avinuty.ac.in

20118ueb17@avinuty.ac.in

20131ueb19@avinuty.ac.in

20134ueb2p@avinuty.ac.in

20112ueb15@avinuty.ac.in

20028ueb04@avinuty.ac.in

20017ueb03@avinuty.ac.in

20035ueb05@avinuty.ac.in

20095ueb12@avinuty.ac.in

20047ueb06@avinuty.ac.in

20012UEB02@avinuty.ac.in

20049ueb07@avinuty.ac.in

22uvm008@avinuty.ac.in

20068ueb08@avinuty.ac.in

22uvm004@avinuty.ac.in

22uvm006@avinuty.ac.in

21uvm005@avinuty.ac.in

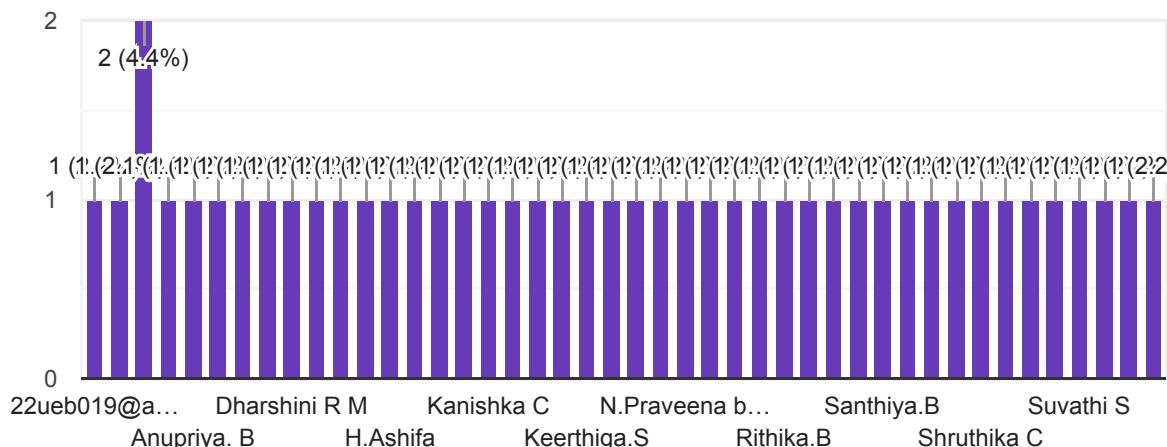
20116ueb16@avinuty.ac.in



## Name

 Copy

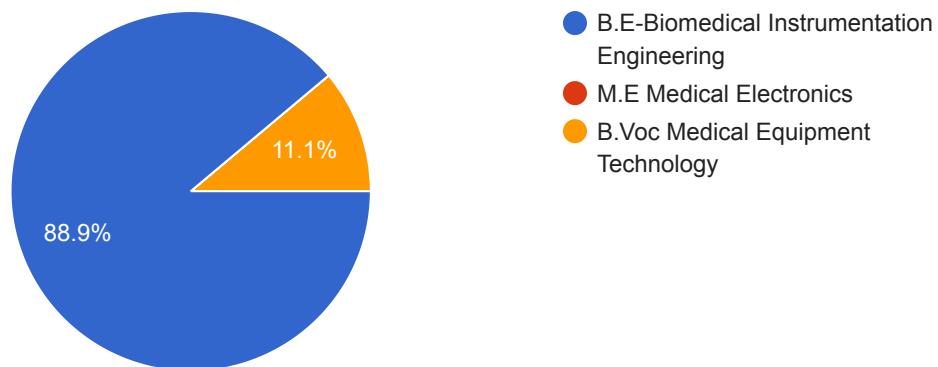
45 responses



## Degree

 Copy

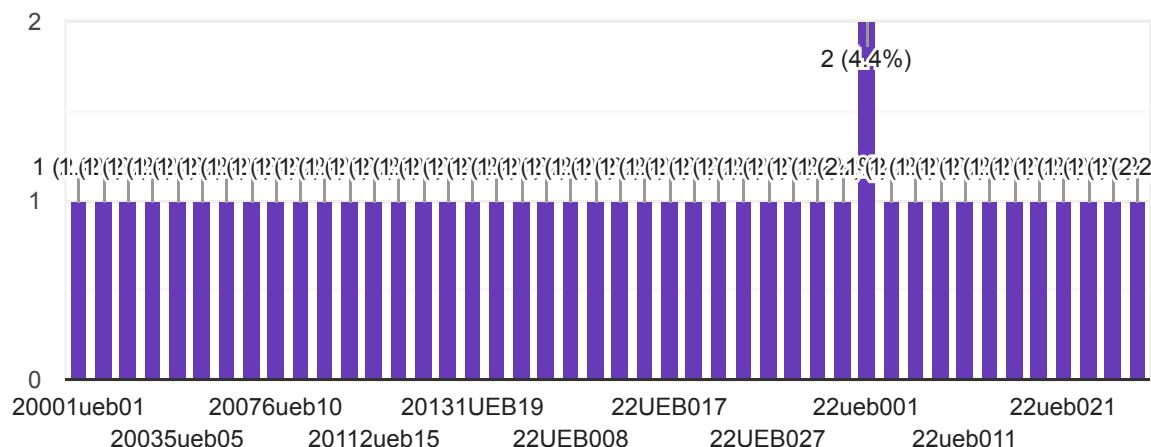
45 responses



## Roll No

 Copy

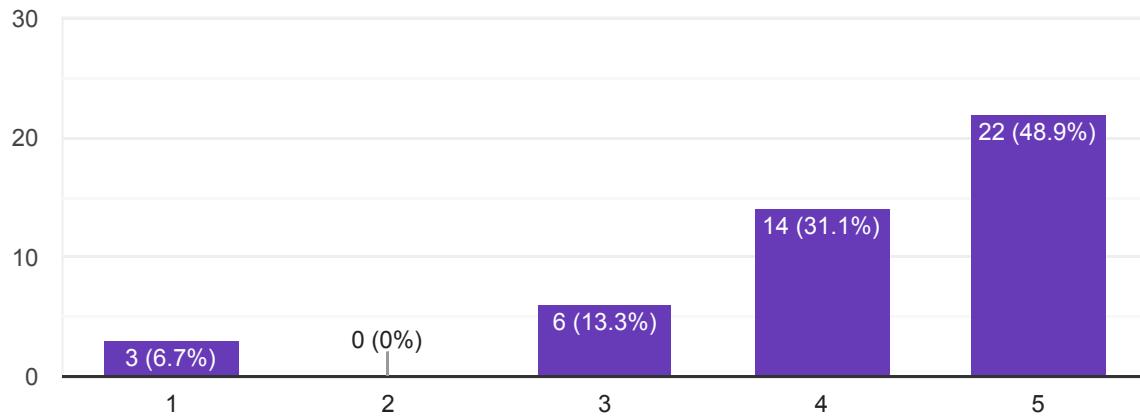
45 responses



## Does session matched its objective?

 Copy

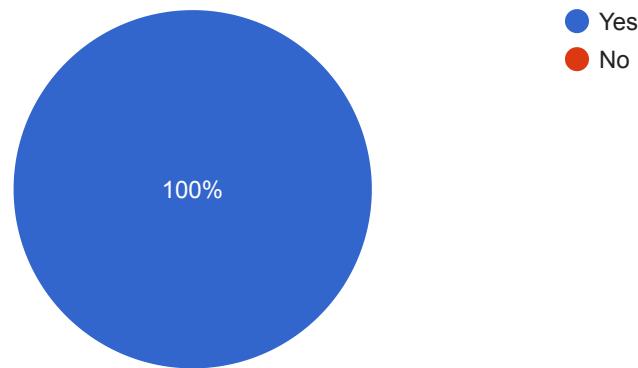
45 responses



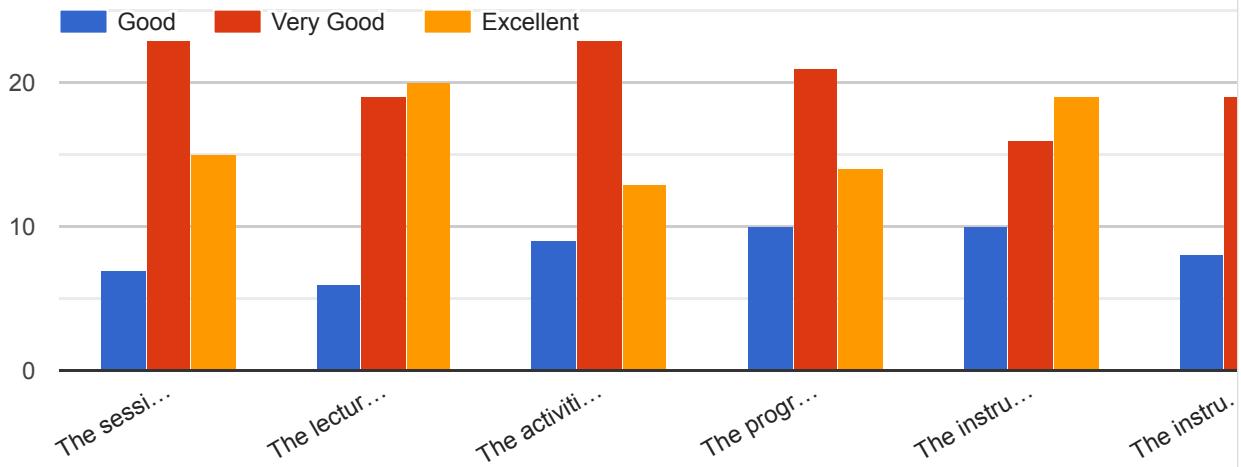
## Was the lecture delivered by the resource person fulfilled your expectation level on the topic?

 Copy

45 responses

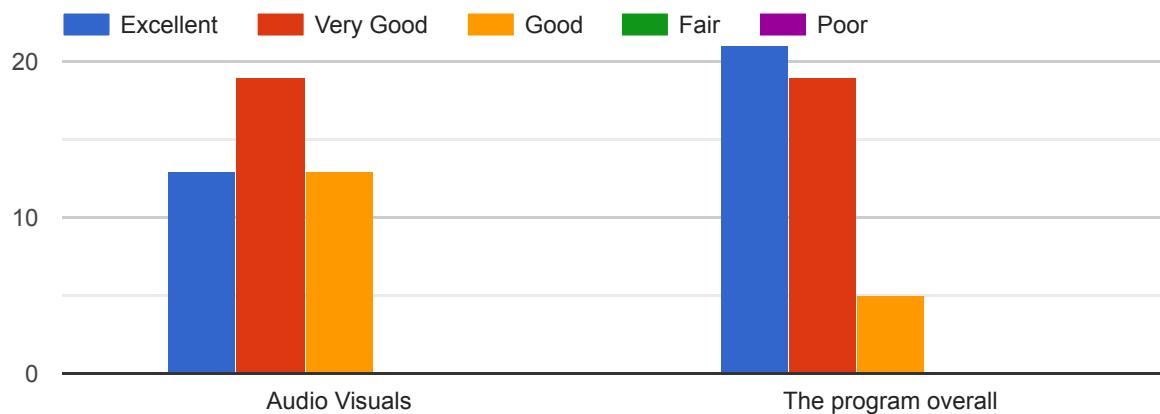


We would appreciate if you could take a few minutes to share your opinions with us so we can serve you better.

 Copy

Please rate the following:

 Copy



## What did you most appreciate/enjoy/think was best about the seminar?

45 responses

Got clarity about abroad studies

Nothing

Enjoy

The program was over all good

Learn more

Concept

Concept

The program was good overall

Session was interesting

The overall session was good

It's interesting

It helped to make decisions for higher studies and the further career , it was a good career guidance.

The program was overall good

Informative session

The way of conveying best information

more informative

Informative

very useful

The objective

Learning

The program overall is good



It gave me clear idea

The communication good

This session is very useful and much interactive. Overall I enjoyed this seminar

The session in general and the awarness

-

I think the seminar was very motivating.

.

The most best part in the seminar is about the advantage and the use of studying in abroad

Way of explaining

It was eye opening session

Knowledgeable

Motivational speech about higher studies

The way of teaching.

It was very encouraging

Overall

The session was interactive and not boring. He spoke about the entrepreneurship and it was really interesting.

Appreciate

Nil

Enjoy and think

Nice

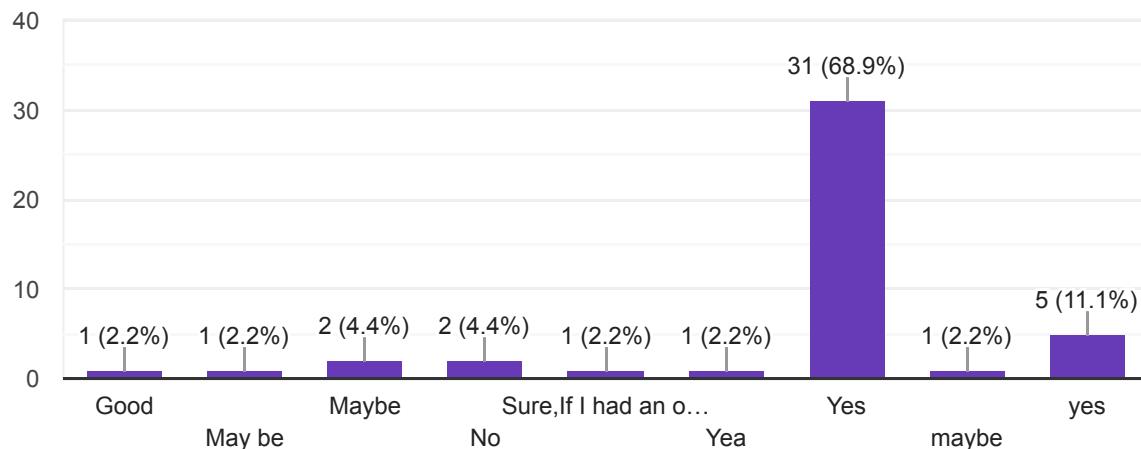
I appreciate how the speaker gave ideas about studying in abroad and the benefits about having an another degree



## Would you like to participate in our future programs

 Copy

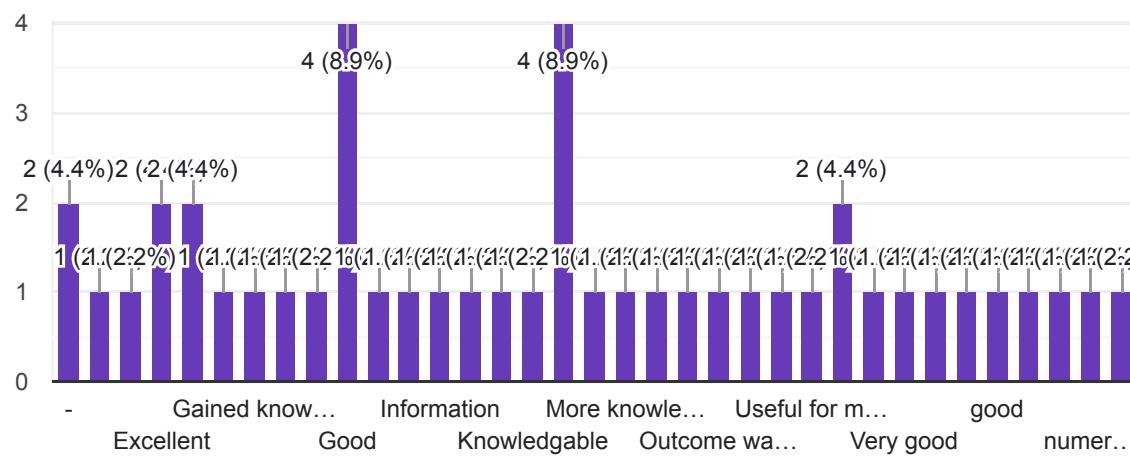
45 responses



## Outcome

 Copy

45 responses



This content is neither created nor endorsed by Google. [Report Abuse](#) - [Terms of Service](#) - [Privacy Policy](#)



22/08/2029

Thanks for the chance given. A really inspiring  
set of students. They are a batch who  
are really interested in pursuing a  
better career.

### Mr. / CAREER ZONE

Guest Lecture on "Empowering the Future"

Mrs. S. Nagalakshmi, M.Phil,  
BEC Vantage Certified,  
Professional Trainer

Time: 2.30 pm to 4.30 pm

Venue: Conference Hall

Date: 22.8.2023