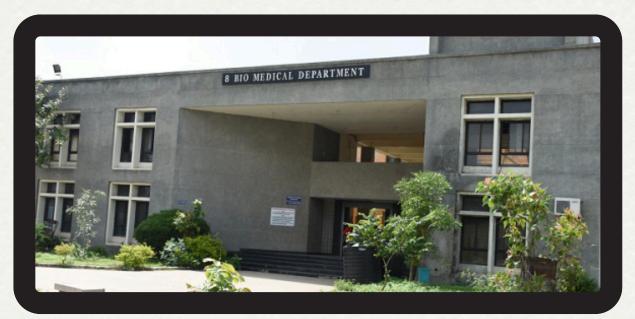


## NEWSLETTER JULY - DECEMBER 2024

## BIOMEDICAL ENGINEERING DEPARTMENT



PUBLISHED BY BIOMEDICAL ENGINEERING DEPARTMENT



# IN THIS ISSUE



# The Institute



Established in 2004, Government Engineering College, Gandhinagar (GEC-Gn) takes pride in its highly motivated students. Our students are life-long assets that help this institute to continuously evolve and work towards its Vision. Approved by AICTE. The College is administrated by Directorate of Technical Education, Gujarat State, Gandhinagar. GEC Gn is affiliated to Gujarat Technological University. GEC-Gn offers its students a wide range of courses to choose from. This helps them to become multi-skilled personalities who can handle the challenges that industry and society will pose before them as future engineers. Committed, to deliver excellence in everything that it does, our institute works towards reducing the gap between industry and education.

GEC-Gn endeavors to educate its students in a manner that offers them an opportunity not only to excel in academics but to be completely aware of their future industrial needs for professional expertise through innovative and flexible curriculum. This trains the students of this campus to reach their highest potential.

## **Biomedical Department**



The Department of Biomedical Engineering has been functional in the college since 2004. It offers Bachelor of Engineering as well as Master of Engineering degrees in Biomedical field at Undergraduate and Graduate levels. The department has excellent infrastructure with laboratories stocked with equipments for Therapeutic Instrumentation, Diagnostic Instrumentation, Biomedical Imaging, Biomedical Signal Processing, Life Science, Biomedical EMC, Digital Electronics and Biomedical Embedded. Students learn their skills in medical imaging; computational biology, bioinformatics, and imaging sciences; sensors, microsystems, and instrumentation; biomaterials, etc. Students are provided with a practical perspective in order to provide solutions to the most pressing medical challenges. Students are challenged to analyze and solve problems from both engineering and biological perspectives. Upon completion of the programme , students are wellprepared to enter the top graduate, medical and professional schools or begin a rewarding career in industry.

## Vision & Mission

### Vision

 To play a pivotal role in promoting human health through the best of current and future technologies from the field of engineering and medical science to bridge the gap between medicine and engineering.

### Mission

- To serve the fundamental principles of engineering to human health care and well-being for medical industries, health care providers, governmental agencies, and academic entities.
- To create a linkage between content generation, research in critical areas, and imparting education for integrating our knowledge with the advancements in Hospitals and Industries.
- To obtain and maintain the competitive edge in hospitals and industries, for identification and nurturing of talent and learning in academic entities.

## PEOs & PSOs

### Program Educational Outcomes(PEOs)

- To have mathematics, science, and engineering fundamentals expertise at the interface of engineering and the life sciences, enabling them to take leadership roles in the field of biomedical engineering.
- To have ability to use their problem solving skills and multidisciplinary perspectives to understand and advance scientific discoveries and technological innovations across professional and disciplinary boundaries with the highest professional and ethical standards.
- To possess technical and practical skills to identify, formulate, and solve open-ended problems with medical relevance, including the design of devices, systems, and processes to improve human health.
- To develop successful careers related to Biomedical Engineering like biomedical electronics, medical instrumentation, medical imaging, biomedical signal processing, rehabilitation engineering, and neuroengineering or another area of the student's choosing, through employment in industry or government, or through pursuit of graduate or professional degrees; and Successfully practice biomedical engineering to serve state and regional industries, hospitals, government agencies, or national and international industries.
- Work professionally in one or more of the following areas: biomedical electronics, medical instrumentation, biomedical signal processing, rehabilitation engineering, and neuroengineering.
- To enhance career skills through life-long learning.

### Program Specific Outcomes (PSOs)

- Operate and maintain Biomedical Instruments.
- Design and Develop Biomedical Instruments.
- Acquire and develop the ability for life-long learning needed for a successful professional career.

## Faculty, BM Department





Dr. Ghanshyam Parmar Assistant Professor

### Prof. Piyush V Patel Assistant Professor





Dr. Mitul B Patel Assistant Professor



Assistant Professor



### Dr. Chintan P Shah Assistant Professor

### Prof. Maulindu P Patel Assistant Professor



## Prof. Hetal K Mehta

**Assistant Professor** 

### **Prof. Rutu Nayak** Assistant Professor





### Dr. Manan M. Nanavati Assistant Professor

**Prof. Priyank K Shah** Assistant Professor



### Prof. Navdeepsinh V Limbad Assistant Professor

### Prof. Mitul Khandhedia Assistant Professor



## **Departmental Activities**

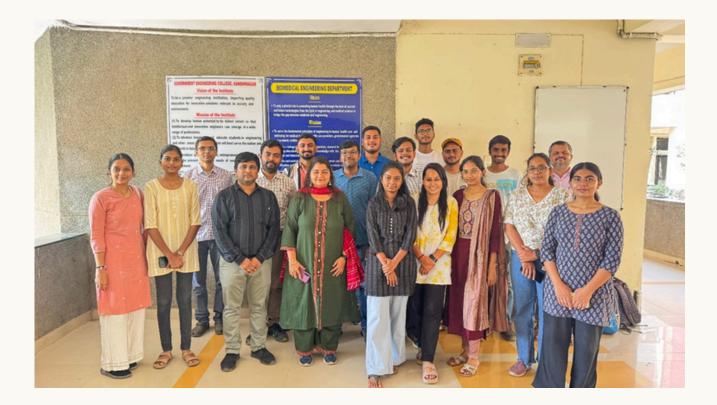
#### Alumni Meet/Expert Talk 2024

The Department of Biomedical Engineering had organized an alumni meet cum Talk in Offline Mode for all batches on 5th October 2024 at Biomedical Department The Expert talk started at 11.00AM with a prayer and Introduction of Gathering by Prof. Rutu Nayak. Prof. Piyush Patel, BM Department welcomed the gathering. He handed over session to Prof. Rutu Nayak. She compered the program.

Expert talk on mentioned Topic was delivered by alumni expert. Total 58 participants including alumni, current students and teachers participated in the event. Students and staff shared the memories, most of them volunteered to render services for the benefit of the current students of BM departments. The event was stimulating and enjoyable and simultaneously profitable as all insights came up.

At the end, Prof. Chintan Shaha sincerely expressed gratitude to the principal, Head of BM Department for their guidance and support to make this event a grand success and thanked to all Students, Faculties and Alumni for attending the meeting and contributing towards making it such an unforgettable day.





#### **Expert Lecture**

Biomedical Engineering Department Government Engineering College Sector-28, Gandhinagar

#### Webinar Series in Advancements in Biomedical Engineering

21-25 October 2024 21 22 23 24 25 Oct' 24 Oct' 24 Oct' 24 Oct' 24 Oct' 24 Medical Imaging Fechnique Implants & Application Expert: Prof. Yogita Par Expert: Prof. Maitri Dave (GP Gandhinagar) Series Coordinators: Time: 11:00 AM to 12:30 PM Dr. Ghanshyam Parmar & Prof. Mitul Khandhedia Venue: Hall No- 2101, Block No-2

A series of expert lectures was organized from October 21 to October 25, featuring renowned speakers discussing cutting-edge topics in healthcare and technology. The sessions covered a diverse range of subjects, including advancements in cardiovascular medicine, the role of artificial intelligence in healthcare, and the applications of deep learning in medical research and practice. This event provided an enriching platform for professionals, researchers, and enthusiasts to explore the latest developments and exchange insights in these rapidly evolving fields. A series of expert lectures was organized from October 21 to October 25, focusing on groundbreaking topics in healthcare and technology. The series commenced on October 21 with an enlightening lecture on the transformative role of artificial intelligence in healthcare. This session explored the integration of AI in medical diagnostics, personalized treatment, and healthcare management, showcasing its potential to improve efficiency, accuracy, and patient outcomes.



The second day, October 22, featured an in-depth session on cardiovascular implants and their applications. This lecture provided insights into the latest advancements in implant technology, innovations in materials, and the clinical implications of these devices in improving patient outcomes.



On October 23, the spotlight shifted to deep learning, with a lecture exploring algorithms and their transformative potential in healthcare. This session delved into the development and optimization of deep learning models, their applications in medical imaging, diagnostics, and personalized medicine, and the challenges faced in implementing these technologies



The series continued on October 24 with a session dedicated to advanced technology for cardiac rhythm management. This lecture highlighted the latest innovations in diagnosing and treating arrhythmias, advancements in pacemaker technology, and the integration of cutting-edge tools to enhance patient outcomes.



The series concluded on October 25 with a lecture on medical imaging techniques, highlighting state-of-the-art technologies such as MRI, CT, and AI-driven imaging tools. This session delved into how these advancements are enhancing diagnostic precision and transforming clinical outcomes, rounding out a week of impactful knowledge-sharing and innovation.



From October 21 to October 25, a series of expert lectures focused on healthcare and technology was held, featuring renowned speakers who discussed cutting-edge topics. The sessions covered a wide range of subjects, including advancements in cardiovascular medicine, the impact of artificial intelligence on healthcare, and the use of deep learning in medical research and practice. This event provided a valuable platform for professionals, researchers, and enthusiasts to explore the latest developments and engage in discussions on the evolving intersection of healthcare and technology.

### PARTICIPATION IN STTP/SEMINAR/WORKSHOP

- Prof. Navdeepsinh V. Limbad successfully completed a 08 week training on "Sustainable Happiness" with Gold-Medal on Swayam (NPTEL) MOOC platform during Jul-Sept. 2024.
- Prof. Priyank K. Shah successfully completed a 08 week training on "Sustainable Happiness" on Swayam (NPTEL) MOOC platform during Jul-Sept. 2024.
- Dr. Ghanshyam Parmar successfully completed a 02 week Industrial Training at "Sahajanand Laser Technology Limited, Gandhinagar" during 08/07/2024 to 21/07/2024.
- Prof. Piyush Patel successfully completed a 02 week Industrial Training at "Sahajanand Laser Technology Limited, Gandhinagar" during 08/07/2024 to 21/07/2024.
- Dr. Vijay Dave successfully completed a 02 week Industrial Training at "Sahajanand Laser Technology Limited, Gandhinagar" during 08/07/2024 to 21/07/2024.
- Dr. Chintan Shah successfully completed a 02 week Industrial Training at "Sahajanand Laser Technology Limited, Gandhinagar" during 08/07/2024 to 21/07/2024.
- Prof. Hetal Mehta successfully completed a 02 week Industrial Training at "Sahajanand Laser Technology Limited, Gandhinagar" during 08/07/2024 to 21/07/2024.
- Prof. Rutu Nayak successfully completed a 02 week Industrial Training at "Sahajanand Laser Technology Limited, Gandhinagar" during 08/07/2024 to 21/07/2024.
- Dr. Manan Nanavati successfully completed a 02 week Industrial Training at "Sahajanand Laser Technology Limited, Gandhinagar" during 08/07/2024 to 21/07/2024.
- Prof. Priyank Shah successfully completed a 02 week Industrial Training at "Sahajanand Laser Technology Limited, Gandhinagar" during 08/07/2024 to 21/07/2024.
- Prof. Navdeepsinh Limbad successfully completed a 02 week Industrial Training at "Sahajanand Laser Technology Limited, Gandhinagar" during 08/07/2024 to 21/07/2024.
- Dr. Ghanshyam Parmar successfully completed a 02 week Industrial Training at "Sigma Surgical private Limited, Ahmedabad" during 18/11/2024 to 30/11/2024.
- Prof. Piyush Patel successfully completed a 02 week Industrial Training at "Sigma Surgical private Limited, Ahmedabad" during 18/11/2024 to 30/11/2024.
- Dr. Vijay Dave successfully completed a 02 week Industrial Training at "Sigma Surgical private Limited, Ahmedabad" during 18/11/2024 to 30/11/2024.

- Dr. Chintan Shah successfully completed a 02 week Industrial Training at "Sigma Surgical private Limited, Ahmedabad" during 18/11/2024 to 30/11/2024.
- Prof. Navdeepsinh Limbad successfully completed a 02 week Industrial Training at "Sigma Surgical private Limited, Ahmedabad" during 18/11/2024 to 30/11/2024.
- Prof. Rutu Nayak successfully completed a 02 week Industrial Training at "Sigma Surgical private Limited, Ahmedabad" during 18/11/2024 to 30/11/2024.





- Dr. Mitul B. Patel successfully completed a 02 week Industrial Training at "GCS Medical College, Hospital & Research Centre, Ahmedabad" during 15/07/2024 to 28/07/2024.
- Prof. Maulindu Patel successfully completed a 02 week Industrial Training at "GCS Medical College, Hospital & Research Centre, Ahmedabad" during 15/07/2024 to 28/07/2024.
- Prof. Navdeepsinh Limbad has attended the online webinar on "Empowering Educators in AI and IoT" dated 13/11/2024, under the initiative TEERTH organized by Knowledge Consortium of Gujarat, Education Department, Government of Gujarat.
- Prof. Navdeepsinh Limbad has attended the online webinar on "Stress Management and Work Life Balance" dated 18/12/2024, under the initiative TEERTH organized by Knowledge Consortium of Gujarat, Education Department, Government of Gujarat.
- Prof. Hetal Mehta has attended the online webinar on "Migratory Birds of Gujarat" dated 20/11/2024, under the initiative TEERTH organized by Knowledge Consortium of Gujarat, Education Department, Government of Gujarat.
- Prof. Hetal Mehta has attended the online webinar on "Scenario Development for Climate Change" dated 04/12/2024, under the initiative TEERTH organized by Knowledge Consortium of Gujarat, Education Department, Government of Gujarat.

## **Faculty's Achievement**

- Prof. Ghanshyam Parmar completed his PhD in Biomedical Engineering from Gujarat Technological University in 2024.
- Prof. Manan Nanavati completed his PhD in Biomedical Engineering from Gujarat Technological University in July 2024.
- ·Dr. Chintan P. Shah is associated as reviewer in Scopus indexed journal "Journal of Integrated Science and Technology".
- Prof. G. D. Parmar, Prof. M. B. Patel, Prof. P. V. Patel and Prof. V. P. Dave worked as a part of organizing committee in "Train the Trainer Programme" on Effective Implementation of NEP 2020 in Technical & Professional Institutes of Gujarat organized by GTERS Commissionerate of Technical Education (CTE), in association withNational Institute of Technical Teachers Training & Research (NITTTR), Chandigarh during 14-18 October, 2024 at Vidya Samiksha Kendra, Gandhinagar.



 Prof. G. D. Parmar, Prof. M. B. Patel, Prof. P. V. Patel and Prof. V. P. Dave participated in "Train the Trainer Programme" on Effective Implementation of NEP 2020 in Technical & Protessional Institutes of Gujarat organized by GTERS Commissionerate of Technical Education (CTE), in association with National Institute of Technical Teachers Training & Research (NITTTR), Chandigarh during 14-18 October, 2024 at Vidya Samiksha Kendra, Gandhinagar.  • Prof. Navdeepsinh V. Limbad successfully completed a 08 week training on "Sustainable Happiness" with Gold-Medal on Swayam (NPTEL) MOOC platform during Jul-Sept. 2024.



## **Faculty's Publication**

- Prof. Dr. Vijay P. Dave published a research paper titled "A review on applications of near infrared spectroscopy technique for neonatal monitors" in a journal "International Journal of Medical Engineering and Informatics" in July-2024.
- Prof. Navdeepsinh Limbad and Prof. Manan Nanavati published a paper titled "Implementation and comparative analysis of various Pyramid-based Image Fusion techniques for Multimodal MRI images of brain" in a journal "Journal of Integrated Science and Technology" in Sept.-2024.
- Prof. Dr. Mitul B. Patel published a research paper titled "Evaluating the feasibility of Fall Detection using Single-channel EEG" in a journal "Journal of Integrated Science and Technology" Nov.-2024.

## **Student's Achievement**

Parth Jethva, who became the founder, along with co-founders Stuti Parmar and Ganga Reji, successfully led their startup to achieve a significant milestone. Their students, who had developed an innovative startup idea, were granted funding under the Student Startup Innovation Policy. The startup team had the opportunity to pitch their idea in front of a distinguished panel, including IAS officers, government officials, and industry experts. Out of over 1000 established startups, their startup was selected for its outstanding potential, marking a major achievement for the founders and their team.





Parth Jethva successfully participated in the HackarCode Hackathon alongside students Meera and Mehak from Jammu and Kashmir. The event, held at IIIT Delhi, provided an excellent platform for participants to showcase their technical skills and innovative ideas. Parth, along with Meera and Mehak, contributed significantly to the team's efforts, demonstrating their commitment to fostering talent and collaboration across regions. Their participation in this prestigious hackathon further strengthened their role in the growing tech ecosystem.



Muskan Bhardwaj successfully completed a one-month internship at Octopus Medical Technology. During this internship, she gained valuable hands-on experience and exposure to the latest advancements in medical technology, contributing to her professional development in the field. This achievement highlights her dedication to learning and growing within the rapidly evolving healthcare technology industry.

and the second	
Contopus Medical	Octopus Medical Technologies Pyr. Ltd. Million 44, Bast Indential Hemisteria Data Medical Bart Manual Annual Data Medical Bart Manual Annual Manual Medical Data Manual Annual Manual Medical Data Manual Manual Annual Manual Medical Data Manual Manual Manual Manual Manual Medical Data Manual Manua
Date: 314 May, 2023	
INTERNSHIP C	ERTIFICATE
This is to certify that Ms. Muskan I Intern' from 4 <sup>th</sup> April, 2022 to 14 <sup>th</sup> Md During this tenure of around 1 mont uporosci during the tenure. Here also Biomedical Department for her day-to She is leaving her internship only on project further study We wish her all the best in her future of Sincerely Tor Octopus Medical Technologies P Hardra Herta Mg: - Acct. & Adm.	y, 2025 hs under internship, she remains equipment's and shown sincere is reporting to Technical Head – day work. her own decision for completing endeavor.
An 15O 13485-2016 C	certified Company

	U	Parul <sup>®</sup> Iniversity	
	Biomedical Engineer Faculty of Engineering		
	CERTIF OF ME	ERIT —	
	This is to cer Muskan Bh		
from	PIT, Biomedical		participated
	n in National Level Competition	of " Trash to Treasure - war " o	
and secured <u>2</u> <sup>ND</sup> position	n in National Level Competition	of " Trash to Treasure – andar " o	organized by Biomedica
and secured <u>2</u> <sup>ND</sup> position Engineering Department,	n in National Level Competition Faculty of Engineering and Techr	of " Trash to Treasure – ander " o hology (Parul Institute of Techno	organized by Biomedica
and secured <u>2</u> <sup>ND</sup> position Engineering Department,	n in National Level Competition	of " Trash to Treasure – ander " o hology (Parul Institute of Techno	organized by Biomedical
and secured <u>2</u> NP positio Engineering Department, Technical Events Cell, Parul	n in National Level Competition Faculty of Engineering and Techr	of " Trash to Treasure – ander " o hology (Parul Institute of Techno	organized by Biomedica
and secured <u>2</u> <sup>ND</sup> position Engineering Department,	n in National Level Competition Faculty of Engineering and Techr	of " Trash to Treasure – ander " o hology (Parul Institute of Techno	organized by Biomedica

## Student's Creativity

#### Prasun Adroja 2230133103001







### Palak Prajapati 210130103033





### Prem Tajpariya 210130103022



## The Placement

			-				
Sr. No.	Enrollment Number	Full Name	Gender	Pre Placed Company Name	Designation	Annual Salary	Passing Year
1	210130103023	Nirzari Sanjay Kulkarni	F	NSV TECHNOLOGIES PVT LTD	Clinical Applications Trainee	320000	2025
2	210130103017	Vora Jay Jignashu	м	Synergy Healthcare	Sales Specialist	204000	2025
3	210130103028	PATEL ANSH KISHORBHAI	м	Synergy Healthcare	Sales Specialist	204000	2025
4	220133103018	Mansi maheta	F	Silicon Meditech	Sales Executive and Service Engineeer	180000	2025
5	220133103001	Antala Piyush c.	м	Silicon Meditech	Service Engineer	180000	2025
6	220133103053	VASAVA SNEHALBEN MANILAL	F	Silicon Meditech	Operational Executive	180000	2025
7	220133103002	BARHATE LEENA RAJENDRA	F	DRC Meditech	Internship+Placement	Awaited	2025
8	220133103005	BORICHA PAREEJAT KISHORKUMAR	м	DRC Meditech	Internship+Placement	Awaited	2025
9	210130103039	GANVIT ANKITABEN AMRATBHAI	F	Sahajanand Laser Technology	IPQC Intern	0	2025
10	210130103034	PATEL VISHWABEN JIGNESHKUMAR	F	Sahajanand Laser Technology	QC Intern	0	2025
11	210130103045	Srampickel Ganga Reji	F	Sahajanand Laser Technology	R&D Intern	0	2025
12	210130103019	Desai Pujan Hasitbhai	м	Sahajanand Laser Technology	Production Intern	0	2025
13	210130103047	Parth PankajbhaiJethva	м	Life Line Biz	Intern	0	2025
14	210130103033	Palak Rajeshsinh Prajapati	F	Life Line Biz	Intern	0	2025
15	210130103029	Pal Madhu Ramveer	F	Life Line Biz	Intern	0	2025
16	210130103013	Ramchandani Himanshu Rajkumar	м	Life Line Biz	Intern	0	2025
17	210130103026	SHIVAM JITENDRA GARASIA	м	Jajal Healthcare	Intern	10000	2025
		•					<i></i>

## Media Coverage

#### ::: 🗢 78





7:32

દહેગામ અભ્યાસ માટે કાર અંતર્ગત નિમિત્તે : અને વાલ

i ચાલી ાયોજન બહેનો યોગીક દાતા તરફથી તમામ ભૂલકાઓને પાણીની બોટલ ગપવામાં આવી હતી અને શુભેચ્છા પાઠવી હતી.

### કોલેજમાં જ્ઞાન વિનિમય કાર્યક્રમ

#### આંતર



ચૈતન્ય સ્ક્ હોલમાં : ખોજ સ્પ ઇવેન્ટમાં ભાગ લી સેલ્કલ



સેક્ટર- ૨૮ ખાતે આવેલી સરકારી ઇજનેરી કોલેજમાં બાયોમેડિકલ ઇજનેરી વિભાગ દ્વારા જ્ઞાન વિનિમય કાર્યક્રમનું આયોજન કરવામાં આવ્યું હતું. જે અંતર્ગત તાલીમ યોજાઈ હતી જેમાં ઉપસ્થિત રહેલા નિષ્ણાતો દ્વારા વ્યાખ્યાન રજૂ કરવામાં આવ્યું હતું. ૧૫૦થી વધુ વિદ્યાર્થીઓએ ભાગ લીધો હતો.





બાચોમડિકલ એન્જિ.ના છાત્રો સિવિલની મુલાકાતે



સરકારી ઈજનેરી કોલેજ સેક્ટર- ૨૮ ના બાચોમેડીકલ એન્જિનિચરિંગ વિભાગના વિદ્યાર્થીઓના અભ્યાસના ભાગ રૂપે સિવિલ હોસ્પિટલ ગાંધીનગરની મુલાકાતનું આયોજન કરવામાં આવ્યું હતું. જેમાં સિવિલ હોસ્પિટલના બાચોમેડીકલ એન્જિનિચર જીગ્નેશ પરમાર, સોનિચા ઝાલા તથા અભી પટેલ દ્વારા હોસ્પિટલમાં બાચોમેડીકલ એન્જિનિચરિંગનું મહત્વ તથા હોસ્પિટલના જુદા જુદા મેડીકલના સાધનોનું ખૂબ જ સારી રીતે માર્ગદર્શન આપવામાં આવ્યું હતું.



ોજન

શાળામાં

ચું હતું.

રા ધ્યાન

ોનારમાં

સંદેશ મંગળવાર, 22 ઓક્ટોબર 2024, આસો વદ સાતમ

4

### સરકારી ઇજનેરી કોલેજમાં જ્ઞાન-વિનિમય કાર્યક્રમ



સરકારી ઈજનેરી કોલેજ સેક્ટર - ૨૮ના બાયોમેડીકલ ઈજનેરી વિભાગ દ્વારા સંસ્થા ખાતે એક નવીનતમ જ્ઞાન વિનિમય કાર્યક્રમનું આયોજન કરવામાં આવ્યું હતું. જેમાં બાયોમેડીકલ વિભાગ, એલ.ડી.ઈજનેરી કોલેજ, અમદાવાદના ચોથા વર્ષના વિદ્યાર્થીઓ માટે વર્ચ્યુઅલ ઈન્સ્ટ્રુમેન્ટેશન વિષય અંતર્ગત એક-દિવસીય તાલીમ તેમજ સરકારી ઇજનેરી કોલેજના ત્રીજા વર્ષના વિદ્યાર્થીઓ માટે બાયોમટીરીયલ વિષય અંતર્ગત નિષ્ણાત વ્યાખ્યાનનું આયોજન કરવામાં આવ્યું હતું. જ્ઞાન વિનિમય કાર્યક્રમમાં બંને સંસ્થાના કુલ ૧૫૦ વિદ્યાર્થીઓએ ભાગ લીધો હતો.

## Head of the Department



Dr. Indravadan B. Dave Head Of Department

## Media-cell Convener



Prof. Piyush V. Patel

**Assistant Professor** 

## **Newsletter Coordinator**

## Prof. Navdeepsinh V Limbad

**Assistant Professor** 



### **Newsletter Editors**



**Parth Jethva** EN No.210130103047



