



NEWSLETTER

JANUARY – JUNE 2024

BIOMEDICAL ENGINEERING DEPARTMENT



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BIOMEDICAL ENGINEERING DEPARTMENT



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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 well-prepared 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. Indravadan B. Dave
Head Of Department



Prof. Ghanshyam Parmar
Assistant Professor



Prof. Piyush V Patel
Assistant Professor



Dr. Mitul B Patel
Assistant Professor



Dr. Vijay P Dave
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





Prof. Manan M. Nanavati
Assistant Professor



Prof. Priyank K Shah
Assistant Professor



Prof. Navdeepsinh V Limbad
Assistant Professor



Prof. Mitul Khandhedia
Assistant Professor

Departmental Activities

Expert Talk on “The Neurodrill and it’s Applications”

The Department of Biomedical Engineering had organized an alumni meet cum Talk in Offline Mode for all batches on 16 March , 2024 at Biomedical Department. The Expert talk started at 11.30AM with a prayer and Introduction of Gathering by Prof. Rutu Nayak. Prof. Ghanshyam Parmar, 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 Mr. Jay Rana, Bioteknika Healthcare Pvt. Ltd., Ahmedabad. Total 51 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.

Biomedical Department, GEC Gandhinagar Organize ALUMNI EXPERT TALK

NeuroDrill and It's application During Surgery

Mr. Jay Rana
Application Engineer
Bioteknika Pvt. Ltd.

Date: 16th March 2024, Saturday
Time: 11.30-1.00PM
Venue: Lab: 2106, Biomedical Department

Patron: Dr. Sweta P. Dave,
Principal, GEC Gandhinagar

Dr. I.B. Dave
HOD, BM Department

Prof. M.R. Jani
Activity Head
Alumni cell, GEC, Gandhinagar

Faculty Co-ordinator:
Prof. Rutu Nayak



Mental Health Awareness Program

The Department of Biomedical Engineering recently held a special event dedicated to mental health awareness. This program aimed to promote understanding, well-being, and resilience within our college community. The event took place on Tuesday, March 5, 2024, at 11:30AM in C.V. Raman Hall, GEC Gandhinagar. It was a valuable session that saw the participation of students, faculty, and staff, all coming together to learn more about mental health and its importance. We were honored to have Dr. Kinjal Chauhan, distinguished psychiatrist, as our keynote speaker.

Dr. Chauhan shared her expertise on the importance of mental health, stress management techniques, and ways to support those facing mental health challenges. She provided practical strategies for managing stress in both academic and personal settings and offered insights into identifying and helping those with mental health issues. The event also featured an interactive Q&A session with Dr. Chauhan, allowing attendees to ask mental health-related questions.

Prof. Ghanshyam Parmar, the event's coordinator mentioned that this program was an excellent opportunity for everyone at Institute to deepen their understanding of mental health and wellness. The session emphasized the importance of mental health and aimed to create a supportive and informed community.



Expert Session on “Developing a Mindset for Success - Career Development Blueprint”

The Department of Biomedical Engineering hosted an impactful expert session titled "Developing a Mindset for Success - Career Development Blueprint," on June 26, 2024, at GEC Gandhinagar. The session was designed to enhance our students' preparation for their upcoming summer internships and set a solid foundation for their future careers in biomedical engineering.

We were privileged to have Ms. Tulika Rana, a renowned career development expert, as our keynote speaker. Ms. Tulika Rana delivered an engaging presentation on cultivating a success-oriented mindset, effective internship strategies, and building a robust career trajectory. The expert shared valuable insights into developing resilience, navigating professional challenges, and making the most of internship experiences. The event was well-attended by students, faculty, and staff, all of whom participated actively in the session. A key highlight was the interactive Q&A segment, where attendees had the opportunity to ask questions and gain personalized advice on career development and internship strategies.



Education Department, Government of Gujarat
**Government Engineering College,
Sector-28, Gandhinagar**

An Expert Session on
**Developing a Mindset for Success -
Career Development Blueprint**

Hon'ble
Tulika Rana

- Executive & Transformation Coach
- Facilitator & Trainer
- Diversity and POSH Trainer
- HR Consultant

VENUE
CLASS 2113

DATE
26 June, 2024

TIME
11:00 AM TO 12:30 PM

Patron
Dr. Shweta P. Dave
Principal, GEC, Gandhinagar

Convener
Prof. (Dr.) I. B. Dave
HOD, BM Dept.

Faculty Coordinator
Prof. Piyush Patel
AP, BM Dept.



Faculties along with students has visited VibrantGujrat Event



PARTICIPATION IN STTP/SEMINAR/WORKSHOP

- Prof. Piyush V. Patel attended a 12-week NPTEL course on "Education for Sustainable Development" during January-April 2024 and successfully completed with 100% score and Elite Gold Medal.
- Prof. Chintan P. Shah attended a 12-week NPTEL course on "Education for Sustainable Development" during January-April 2024 and successfully completed with 100% score and Elite Gold Medal.
- Prof. Mitul B. Patel attended a 12-week NPTEL course on "Education for Sustainable Development" during January-April 2024 and successfully completed with 99% score and Elite Gold Medal.
- Prof. Priyank K. Shah attended a 12-week NPTEL course on "Education for Sustainable Development" during January-April 2024 and successfully completed with 99% score and Elite Gold Medal.
- Prof. Rutu P. Nayak attended a 12-week NPTEL course on "Education for Sustainable Development" during January-April 2024 and successfully completed with 97% score and Elite Gold Medal.



Faculty's Training

SR.No	Start Date of Training	End Date of Training	Name of Faculty	Name of Training	Type	Organizing institute /Venue
1	22-01-2024	12-04-2024	Mitul R. Khandhedia	Education for Sustainable Development	Online MOOC	SWAYAM NPTEL
2			Prof. Piyush V. Patel			
3			Prof. Mitul B. Patel			
4			Prof. Ghanshyam D. Parmar			
5			Prof. Chintan P. Shah			
6			Prof. Priyank K. Shah			
7			Prof. Rutu P. Nayak			

Faculty's Publication

Dr. Chintan P. Shah

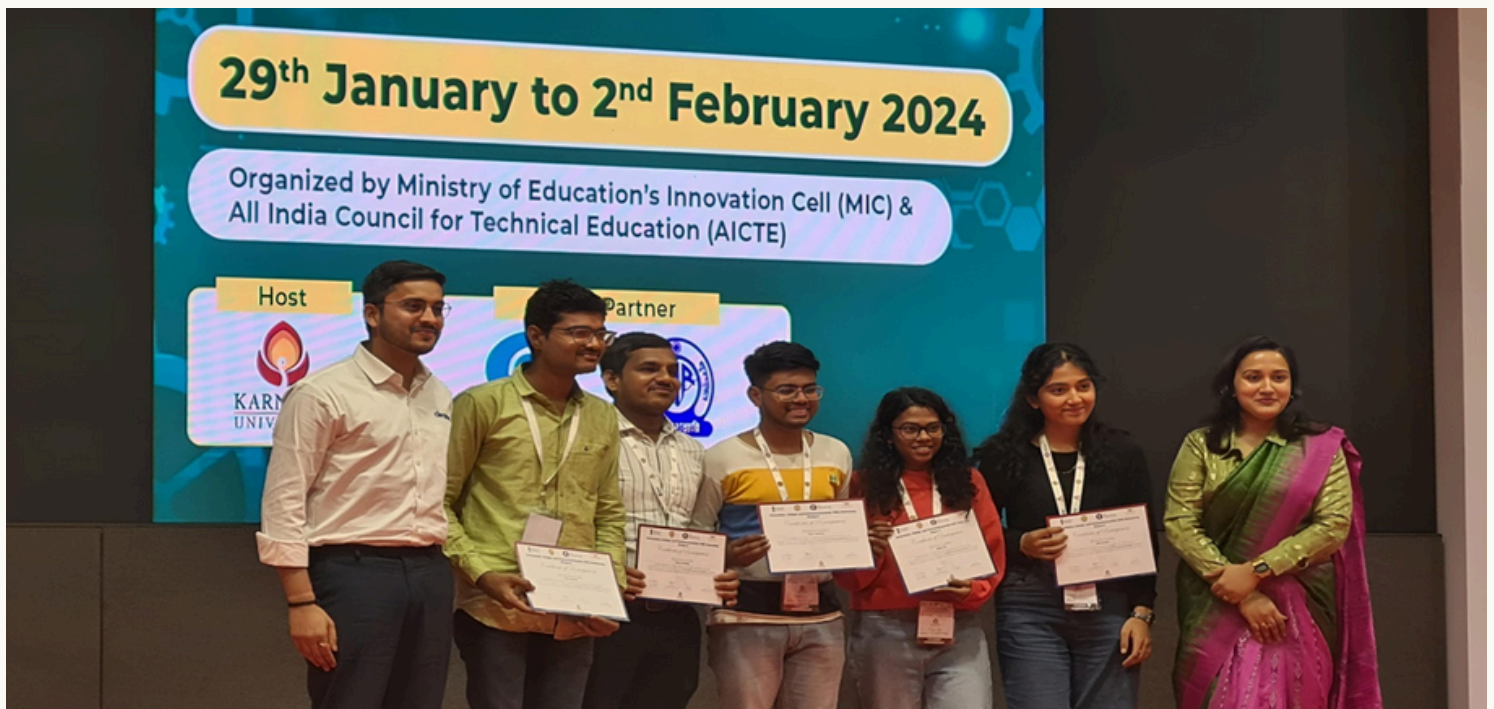
- **Paper:** Lightweight Multi-Channel Gated Recurrent Deep Neural Network for Automatic Modulation Recognition in Spatial Cognitive Radio
- **Published in:** Applications of Modelling and Simulation
- **Summary:** Develops a lightweight deep neural network for improving modulation recognition in cognitive radio systems.

Dr. Vijay P. Dave

- **Paper 1:** Polarity-Specific Changes in the E-field and Focality in Mild Cognitive Impairment Patients for HD-tDCS and Reverse HD-tDCS
- **Published in:** Biomedical Research and Therapy
- **Summary:** Investigates the effects of HD-tDCS and reverse HD-tDCS on mild cognitive impairment patients.
- **Paper 2:** Mathematical Modeling of Ryanodine Receptor for Alzheimer's Disease
- **Published in:** Journal of Integrated Science & Technology
- **Summary:** Develops a model to study the role of Ryanodine receptors in Alzheimer's disease.

Student's Achievement

- Harsiddhi Pathak has got GATE Score card with AIR 34.
- Harsiddhi Pathak has got admission at IIT Kharagpur (Medical Imaging and Informatics)
- Akshaya Warriar has got selected for Internship at Human Space Flight Center, Bengaluru
- Ayushi Pandya has got admission at Masters of Science in Biomedical Engineering at School of Engineering and Applied Sciences at the University at Buffalo (UB), State University of New York for the Fall 2024 admission
- Sohaliya Abhishek has got admission in Master of Science Biomedical Engineering University of Texas Arlington, USA



We are thrilled to share that our department has successfully completed the Ideboot Camp 2024, organized by the All India Council for Technical Education (AICTE) and the Management and Innovation Committee (MIC), specifically for the finalized teams of the Smart India Hackathon. This has been an incredible opportunity for us to showcase our innovative ideas, collaborate with experts, and enhance our problem-solving skills.

The camp proved to be an enriching learning experience, and we would like to take this opportunity to express our gratitude to the key individuals who made this journey so rewarding:

- Dr. Ruchi Gautam Pant, whose expert guidance and mentorship were invaluable. Her profound insights and support have played a key role in shaping our learning experience and professional growth.
- Our fantastic team leader, Parth Jethva, and team members Ganga Reji, Vikas Chamtha, Stuti Parmar, and Prem Tajpariya, whose dedication, teamwork, and collaboration ensured that we made the most of this opportunity.



The Placement

Enrollment Number	Full Name	Gender	Pre Placed Company Name	Designation	Annual Salary
200130103003	Panchal Janavi Rajubhai	F	Vision Medinst care	Application Engineer	156000
210130103522	Mishra Aakansha Ashutosh	F	Abbott India	Clinical Specialist Associate	370000
210130103537	Marvaniya Heppykumari Prafulb	F	Optimedics LLP	Production specialist	204000
210130103582	Godhani Prakruti Bharatbhai	F	BAPS yogiji Nagaraj hospital	Junior biomedical engineer	180000
200130103016	Srishti Sinha	F	Uteshiya Medicare Pvt Ltd	Sr. Executive Regulatory	240000
210130103572	Binal Sanjaybhai Prajapati	F	Sahajanand laser technology Ltd.	Jr. Executive	120000
210130103557	Kharadi Pragnaben Amrabhai	F	DRC Meditech System Private Limited	Jr. Executive	175000
200130103026	Pavar Neel Santoshkumar	M	Western Trading Company	Area Sales Executive	300000
210130103530	Apurva Devendrapratap Singh	F	Uteshiya Medicare Pvt. Ltd.	Sr. Executive - International B	240000
200130103007	Patel Parthkumar Ashokbhai	M	UTESHIYA MEDICARE PVT LTD	Sr. Executive Business develo	240000
210130103540	Kava Dency	F	B.T Savani hospital Rajkot	Biomedical engineer	240000
210130103507	Rushikesh Amitkumar Parekh	M	Vision medinsst	Service and application er.	230000
200130103006	Mitali Halvadiya	F	Proactive health Inc.	Biomedical Engineer	198000
210130103601	Naik Jash	M	Silicon meditech pvt ltd	Service engineer	132000
200130103018	Maharshi Jayeshbhai Patel	M	Silicon Meditech Pvt Ltd	Service Engineer	132000
200130103022	Rishita Harshadbhai Patel	F	Agile Diagnostics	Techno Sales Executive	180000

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

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Thank
you!