

Department of Biomedical Engineering
KPR Institute of Engineering and Technology



KPR Institute of Engineering and Technology

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"We are Engineers for Doctors"

Biomedical Engineering is one of the premier Engineering disciplines among technocrats since it merges Healthcare Technology with Electronics and Software technologies including Artificial Intelligence, Machine Learning, Robotics in Medicine, Bioinformatics, Prosthetic Engineering etc. to serve better to the human community with advance and continuously upgrading technologies. In KPRIET, we nourish our students with advance laboratories like Bio-signal processing, Diagnostics and Therapeutic Equipment, Human Anatomy and Physiology, Biomedical Instrumentation to learn by practicing. Hospital training and internship are arranged with leading multispecialty hospitals and biomedical industries to facilitate the students for better career. Research activities are vibrant with publications and patents in the recent trends.

Dr. K. S. Tamilselvan HoD/BME

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Quarterly Newsletter: Department of Biomedical Engineering

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About KPRIET

KPR Institute of Engineering and Technology (KPRIET), founded by Dr. K. P. Ramasamy, is one of the leading institutions of academic excellence by imparting technical, intellectual and professional skills to students. The Institution is ranked 100-150 band by NIRF. The institute, with its diverse and energetic community of students offers a distinguishing blend of some of the premium graduate, undergraduate and research programs, talented faculty, world class amenities and a residential campus set on a sprawling 150 acres of lush green campus.

While students at KPRIET immerse themselves in academics, the institute has a lot in store for them outside the classroom. Student life includes participation in sports, co-curricular activities and cultural. In short, at KPRIET, students will find an academic and social environment where everyone- from faculty members to peer's support shape their future. KPRIET is a home to artistically designed buildings with state of the-art computer and internet facilities, modern workshops, seminar halls, auditoriums and well stocked libraries, sports and games fields in addition to an indoor badminton court and gymnasium.

KPRIET has a faculty strength of 265 with a faculty student ratio of 1:15. Out of the total, 139 faculty members PhDs. and 95 are in the process of completing their PhDs. As an exemplary institution of learning, KPRIET follows an admission policy that strongly favours merit, even as it enables access to education for students from all strata of society through appropriate scholarships. The Institution boasts of a strong alumni network with alumni events held every year serving as a platform for past students to give back to KPRIET and share their experiences with its present fellow students.

About the Department

The Department of Biomedical Engineering of KPR Institute of Engineering and Technology, Coimbatore was established in the year 2017 with an annual intake of 60 students. The Department has highly qualified faculty members with Ph. D. and M.E. / M. Tech / M.S. under various specialize such as Biomedical Signal and Image Processing, Medical Electronics, Healthcare Data Analytics, Biomaterials, Regenerative medicine and Nanoscience. The total strength of the faculty members in the Department is thirteen. Out of which, 60% of the faculty Members (8 Faculty members) have completed their PhD and three faculty members are pursuing their PhD. The Department is accredited with Tier-1 NBA on July 03, 2024 for three years.

The faculty members contribute to academic development by publishing books / journals, products, patent filing and presenting papers in International and National Conferences. The Department of Biomedical Engineering signed MoUs with the reputed industries like Silicon systems, Royal Care Super Speciality Hospital, Aravind Eye Care Hospital, GEM Hospitals, Masonic Medical Centre for children and ALERT (NGO) to bridge the gap between theory and field practices.

The Department also provides an opportunity for students in improving practical knowledge in the field of Biomedical Engineering and Software skills like MATLAB, LabVIEW, Wokwi simulation through Centre of Excellence, in addition to Communication and Presentation skills. The students have to undergo Industrial Training and Industrial Visit to facilitate them to take up industrial live projects to understand the industry needs. The Students from Biomedical Engineering as well as faculty members has membership in various Professional Societies like BMESI and IEEE (EMBS) to gain knowledge through various programs conducted by these bodies across the Nation.

Vision of the Department

To be the **centre of excellence** for **dissemination of knowledge, research and development** in biomedical engineering to serve **society with moral values**.

Mission of the Department

The **Mission** of the Department is to

- Impart **value-based education** in biomedical engineering using **modern equipment and tools**.
- Build an **integrated team** of biomedical engineers to foster technologies through **research, development and innovation**.
- Provide **healthcare industries** with solutions imbibed **through lifelong learning** with **ethics and moral values**

Program Specific Outcomes

- PSO 1: Design and evaluate medical solutions using **biosensors, biomaterials, biomechanics, and diagnostic and therapeutic equipment** for the healthcare industries.
- PSO 2: Identify, analyze, solve and develop algorithms for addressing **healthcare** problems using the software skills acquired through **bio-signal and image** processing advancements.

Program Educational Objectives

Graduates of Biomedical Engineering, four years after graduation, will;

- PEO 1: Apply the knowledge gained from **biomedical engineering** to help solve the **technological problems in industries**
- PEO 2: Design and develop **healthcare products** and processes through continuous **skill upgradation and research**
- PEO 3: Demonstrate **professional and ethical standards** of behavior and commit to **lifelong learning** to meet the needs of society

Industry visits by the Department during July to September 2025

S. No.	Date of Visit	Name of the Industry visited by the faculty member(s)
1.	07.07.2025	Prashan Medical Technologies, Coimbatore
2.	08.07.2025	Pioneer Circuits, Coimbatore
3.	25.07.2025	Medsby Healthcare, Coimbatore
4.	12.08.2025	Mindray Sabari Health Care Systems, Coimbatore
5.		Sankara Eye Hospital, Coimbatore
6.	18.08.2025	ESIC Hospital, Coimbatore
7.	20.08.2025	Aravind Eye Hospital, Coimbatore
8.	22.08.2025	Fastpill Healthcare, Coimbatore
9.	25.08.2025	NG Hospital & Research Centre, Coimbatore
10.	04.09.2025	Erode Govt. Medical College & Hospital, Erode
11.	12.09.2025	BPL Medical Technologies, Palakkad
12.	16.09.2025	ALERT NGO, Coimbatore
13.	18.09.2025	CEM Electromech Pvt Ltd., Bihar, Pune
14.		NMTRONICS, Bangalore
15.		Discrete Circuits Private Limited, Surat, Gujaraj
16.	19.09.2025	URSC – ISRO, Bangalore
17.		AMD India Pvt Ltd., Bangalore
18.	22.09.2025	Peruradigalar Hospital, Ganesapuram, Kovilpalayam

EVENT – 1

Free Medical Camp

A free medical camp will be organized on 26th July 2025 in association with KGM Hospitals, Coimbatore. The camp aims to provide general health check-ups, specialist consultations, and basic diagnostic services. It is open to the public and focuses on promoting health awareness. Experienced doctors and medical staff from KGM Hospitals will be available for consultations. All are welcome to benefit from this initiative towards a healthier community.



EVENT – 2

Core Business Concepts

To foster entrepreneurial thinking and real-world acumen among undergraduate students, the Center for Innovation conducted an immersive workshop on Core Business Concepts. This initiative aimed to bridge academic learning with practical business strategies by introducing students to the foundational pillars of modern enterprise.



EVENT – 3**Molecular Mechanisms in Inflammation and Cancer**

The Department of Biomedical Engineering is organizing an Expert Talk on "Molecular Mechanisms in Inflammation and Cancer" for the final year Biomedical Engineering students. The session aims to provide in-depth insights into the cellular and molecular pathways linking inflammation to cancer progression, highlighting current research trends and potential therapeutic strategies. This expert interaction is designed to enhance the students' understanding of translational biomedical research and its clinical implications. BMESI Inauguration.

**EVENT – 4****GATEway to Excellence: Roadmap to Postgraduate Opportunities**

The Department of Biomedical Engineering, in association with the Career Advancement Cell, is organising an orientation titled: "GATEway to Excellence: Roadmap to Postgraduate Opportunities". This session is designed to provide Biomedical Engineering students with a clear understanding of the Graduate Aptitude Test in Engineering (GATE) and its role in shaping future academic and career trajectories. The session will offer expert insights into the exam pattern, core subject focus, preparation strategies, and the wide array of opportunities that GATE unlocks — including admissions to top-tier institutions (IITs, NITs, IISc), scholarships, and placements in Public Sector Undertakings (PSUs).



Event-5

BMESI Inauguration

The BMESI Inauguration marks the launch of our student chapter under the professional body Biomedical Engineering Society of India (BMESI), dedicated to promoting excellence in biomedical engineering. The event signifies a platform for students and faculty to engage in academic, research, and professional development activities.



EVENT – 6

ISR activity - “Carrer Opportunities in Biomedical Engineering

A total of 210 third-year Diploma Computer Science students from Sankara Polytechnic College, Saravanampatti, Coimbatore, actively participated in the event. The session was organized by the BME Admissions team of KPRIET to create awareness about opportunities in Biomedical Engineering. The program provided valuable insights into interdisciplinary career paths and emerging technologies. It also encouraged students to explore higher education and innovation in the biomedical domain.



EVENT – 7**Student Association Inauguration**

The Student Association Inauguration (Event No. BM/2025/008) was successfully conducted on 12th August 2025 at Ragam Hall. Organized by the BMESI under the Department of Biomedical Engineering, the event witnessed the participation of 230 students. The session was graced by the Chief Guest, Mr. Boopathi Sakthivel, Founder & CEO of Prashan Medical Technologies, who shared valuable insights on innovation and industry trends in biomedical engineering. The program aligned with SDGs 4, 9, and 17, encouraging quality education, industry collaboration, and professional growth among students.

**EVENT – 8****Dental Campaign**

The Department of Biomedical Engineering BMESI Association successfully organized a Dental Camp on 29th August 2025 from 10:00 AM onwards in association with Dr. Nobelika's Multispeciality Dental Clinic. The camp was graced by Dr. A. Alice Nobelika, who served as the Chief Guest, along with two senior doctors from her team. The program began with a brief inaugural session followed by free dental check-ups, oral health consultations, and awareness talks for students, faculty, and staff members. The camp created awareness about the importance of oral hygiene, preventive care, and early detection of dental issues. A large number of participants actively benefited from the initiative, making the event a meaningful step towards promoting health and well-being on campus.



EVENT-9

Value Added Course on Building Biomedical Device - Design to Prototype

The Value Added Course (Event No. BM/2025/011) on “*Building Biomedical Device – Design to Prototype*” was conducted on 24th September 2025 at the II BME classroom. Organized at the institute level by the Department of Biomedical Engineering, the program engaged 77 students in a comprehensive hands-on learning experience. Coordinated by Mr. R. Krishna Kumar, with sessions delivered by Dr. A. Allwyn Gnanadas, Mr. R. Krishna Kumar, and Dr. P. Arunkumar, the course focused on bridging theoretical knowledge with practical device development. Participants gained exposure to 3D printing technologies, basic electronics, circuit design, and biomedical prototyping, along with design thinking and business model development. The program aligned with SDGs 3, 4, 8, and 12, fostering innovation, sustainable practices, and industry-relevant skills among students.



EVENT – 10

IEEE Sponsored Calibration of critical care devices

The IEEE-sponsored workshop (Event No. BM/2025/012) on “*Calibration of Critical Care Devices*” was conducted on 26th September 2025 at the BMI Lab. Organized by the Department of Biomedical Engineering at a national level, the event engaged 30 external student participants in an intensive hands-on training session. The workshop was convened by Dr. A. Allwyn Gnanadas, with Mr. R. Krishna Kumar as Co-convenor and Ms. S. Kiruthika as Coordinator.

Participants gained practical exposure to calibrating critical care devices such as defibrillators, ventilators, infusion and syringe pumps, nebulizers, and patient monitors, along with electrical safety testing. The session enhanced technical competency and industry readiness, aligning with SDGs 4 and 9 by promoting quality education and innovation in healthcare technology.



EVENT – 11**International quiz series - world hepatitis day**

On the occasion of World Hepatitis Day, IEEE KPRIET EMBS SBC organized an International Quiz Series on 28th July 2025 through an online platform to raise awareness about Hepatitis. The event saw enthusiastic participation from over 100 students and was conducted simultaneously via two Google Meet sessions for effective coordination. The quiz sessions were interactive, featuring live leaderboards that kept participants engaged and motivated throughout. The event concluded successfully with positive feedback, highlighting the efforts of the organizing team and the impact of collaborative digital learning.

**EVENT – 12****Value Added Course on Smart Healthcare Systems and IoT in Biomedicine**

The Value Added Course (Event No. BM/2025/032) on “Smart Healthcare Systems and IoT in Biomedicine” was conducted on 24th September 2025 at the III BM Lecture Hall. Organized by the Department of Biomedical Engineering, the program witnessed the participation of 71 students and a faculty member. The session was convened by Dr. P. Arunkumar, with resource persons Dr. P. Arunkumar and Dr. K. Rajasekaran delivering expert insights. The course focused on IoT-enabled healthcare technologies, wearable devices, real-time patient monitoring, and data analytics. Through hands-on sessions and interactive discussions, participants gained practical experience in designing smart healthcare solutions, along with understanding system integration, cybersecurity, and ethical considerations. The program successfully enhanced students’ knowledge in emerging biomedical technologies, aligning with SDG 4 – Quality Education.



Students' Achievements

S. No.	Name of the Student	Year	Detail about the Achievement	Organizing Institute
1.	SAIRAM S	I	Blindfolded Brans – II Prize	KPRIET
2.	SUDHESHNA V S		50th Tamilnadu State Shooting Championship 2025 – II Place	Tamilnadu Shooting Association
3.	PARAMESHVARAN G	II	Centies Cricket Championship 2025 – II Prize	Coimbatore Institute of Technology
4.	JEEVIKA S		THE IGNITRRON TROPHY – II Prize	KPRIET
5.	MAHARNIYA B			
6.	VISHNU KRISHNA A	III	Connections - Pradidhi'25 – III prize	Kongu Engineering College
			Graduation – Secretary training program	Revathi Medical College of Nursing
			NSS State level Workshop on Youth for Social Justice	Bharathiar University
			Quiz - Pradidhi'25 – III prize	Kongu Engineering College
7.	LAKSHANA S		LEAP PAPER PRESENTATION – Active & Inventive	Leeway Biomedical, Bangalore
8.	LINGHADHARINEE A S		LEAP 2025 – Innovative Contribution	Leeway Biomedical, Bangalore
9.	BISHNU THAKUR	IV	Dr. Kalam Young Achiever Award 2025	World Youth Federation
10.	HARSHINI A – IV BM NIVEDHA – III BM ROJAA – III BM MAHA – III BM SHARUKESHINI– III BM DHARSHINI M– III BM	BM	Throwball - Medal	KPRIET

Faculty Contribution

S.No.	Name of the Faculty member	Details of Contribution
1.	Dr. K. S. Tamilselvan, Professor & Head/BM	Completed one-week Internship at C-DIT, Trivandrum.
2.	Dr. P. Sreelatha, Professor/BM	Completed one-week Internship at Sri Venkateswara Carbonic Gases Pvt Ltd, Coimbatore.
3.	Dr. D. Sudarvizhi, Associate Professor/BM	Completed one-week Internship at Prashan Medical Technologies, Coimbatore.
4.	Dr. N. Rajasingam, AP-III/BM	NPTEL MOTIVATED LEARNERS Event at IIT Madras NPTEL DOMAIN SCHOLARS Event at IIT Madras Making Learning Engaging through Interactive Games at NPTEL - IIT Madras
5.	Dr. P. Arunkumar, AP-III/BM	Completed two-week Internship at Medsby Healthcare, Coimbatore.
6.	Mr. R. Krishna Kumar, AP-II/BM	Completed two-week Internship at Prashan Medical Technologies, Coimbatore.
7.	Ms. Pinki Dey, AP-II/BM	Completed one-month Internship at SHRM Biotechnology, Kolkata
8.	Ms. Ms. Payel Das, AP-I/BM	Completed one-week Internship at Health Cure Nursing Home, West Bengal
9.	Ms. Kiruthika, Technical Lead/BM	Completed three days internship at Prashan Medical Technologies, Coimbatore.