

DEPARTMENT OF BIOMEDICAL ENGINEERING



Dr. N.G.P. INSTITUTE OF TECHNOLOGY

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Recognized by UGC & Accredited by NAAC

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MESSAGE FROM THE DESK



Dr. Nalla G Palaniswami
Chairman, KMCH

Biomedical Engineering is an important discipline of technical innovations in the health care industry. Combination of many engineering knowledge and biosciences goes hand in hand in the development of equipments, devices and treatment modalities. Dr. N.G.P. IT students in the bio engineering are capable of handling all type of needs of health care industry. I am

sure that our bioengineering technologists will do their best in this important field of health care delivery system.

With regards



Dr. Thavamani D Palaniswami
Secretary, Dr. N.G.P. IT

The Biomedical Engineering students of Dr. N.G.P. Institute of Technology, are exposed to the Health care industry and other industries regularly. They excel in technology and are consistently applying the technology in the Health care system.

Every year they work closely with Health care system to understand the dynamics of the people. Their specialized approach and knowledge about the human biology, clinical care will drive them for new innovation.

My best wishes for them



Dr. O.T. Buvaneshwaran
Chief Executive Officer
KMCRET

It gives me great pleasure to welcome you to the Department of Biomedical Engineering, Dr. N.G.P. Institute of Technology. The curriculum covers a wide spectrum of Biomedical Engineering subjects and is revised continuously to meet the growing needs of the industry. The department has a team of committed

faculty members, who inculcate in the students conceptual foundations coupled with practical insights. The width and depth of courses is complemented by academia-industry interface imparting uniqueness to our students. I take this opportunity to invite you to participate in the placement program and look forward to absorbing students in your esteemed organization.

My Best Wishes



Dr. K. Porkumaran
Principal, N.G.P. IT

Biomedical Engineering is an upcoming field of technology characterized by a considerable stress on interdisciplinary approach. Biomedical Engineering develops devices and procedures that solve medical and health related problems by combining biology and medicine with engineering and enhancing the quality of life of suffering patients by technological

innovations. A biomedical professional works with other healthcare professionals like Physicians, nurses, Therapists and Technicians and design instruments, design a software that contribute to the development of healthcare. Hence we request you to consider this appeal and thereby visit our institution to recruit our students who, I am sure, will strive towards their best and will be an asset to your esteemed organization.



Dr. S. Prabakar
HoD - BME

The Department of Biomedical Engineering was established in the year 2012 and ever since has continually upgraded itself in terms of academic programmes and all research infrastructure including state-of-the-art laboratories during last four years after its establishment. The Kovai Medical Center

and Hospital (KMCH) is 1000 bedded Super Speciality Hospital provides enrich clinical experience to the students. The students are given hands on clinical training in the various departments of the hospital. The department attracts the finest young and dynamic faculty members and the best of students for its Bachelors programme. The students are trained through a very strong academic input of the faculty matched by hands on training through live projects conducted by the students with vocational training, offering students a real life training to hone their skills.

I am happy to present this placement broucher in the hands of your esteemed organization and would like to extend a warm welcome to you and invite you to Dr. N.G.P. Institute of Technology, Coimbatore. I heartily welcome both the recruiters and our graduating students to come to a common platform and get the best out of each other. *Happy Recruiting.*

PLACEMENT BROCHURE



DEPARTMENT OF BIOMEDICAL ENGINEERING

"Biomedical Engineering" is an application of all classical engineering principles to solve clinical problems in medical and surgery. Being an integrating medium for two dynamic professions, Medicine and Engineering, this discipline cherishes the broad objective of assisting in the struggle against illness by providing techniques, research, diagnosis and treatment. The department started in the academic year 2012 - 13 under the canopy of our highly professional faculty and students. The department has achieved **100% Placement** of students in reputed industries, with the first graduate batch this year.

OBJECTIVES

1. To equip the students to work towards developing low cost, efficient technology to facilitate the current medical scenario of the society at large.
2. To guide the students to carry out sustainable research and innovative thinking for lab to land projects.
3. To collaborate with health care industries and hospitals through MOU, joint and consultancy projects.

CURRICULUM

- ▲ Biomedical Instrumentation
- ▲ Diagnostic & Therapeutic Equipment
- ▲ Anatomy & Human Physiology
- ▲ Biochemistry & Bio Control Systems
- ▲ Physiological Modeling
- ▲ Analog & Digital Communication
- ▲ Microprocessor & Microcontroller
- ▲ Hospital Management & Medical Informatics
- ▲ Bio Signal Processing
- ▲ Medical Imaging Techniques
- ▲ Rehabilitation Engineering
- ▲ Pattern Recognition and Neural Networks
- ▲ Nano Electronics
- ▲ Telehealth Technology
- ▲ Assist Devices
- ▲ Bio MEMS

E-LEARNING FACILITIES

- ▲ Virtual Labs (VLAB)
- ▲ AVIEW
- ▲ NPTEL
- ▲ National Instruments LabVIEW Academy
- ▲ Edusat
- ▲ IIT Spoken Tutorial

LABORATORY FACILITIES

BIOMEDICAL INSTRUMENTATION LAB

The lab is equipped with specialized medical instruments that enable experiments involving the recording and analysis of physiological data. The lab imparts concepts covered in Introduction to Biomedical Engineering.

DIAGNOSTIC AND THERAPEUTIC EQUIPMENT LAB

This lab trains in the general methodologies, concepts and approaches of basic equipment in diagnosis and therapy. The lab workstations have industry standard programming software such as Mathworks MATLAB to filter, process, and evaluate experimentally acquired data, allowing for a more accurate assessment of the recorded signals and the correlation with the biological basis of their origin.

BIOCHEMISTRY & MICROBIOLOGY LAB

This lab introduces techniques in the study of Biochemical reactions, Anatomy and physiological experiments.

HOSPITAL TRAINING

Our Hospital training program aims to provide students an insight of their professional responsibility as a biomedical engineer. Training provides practical and theoretical knowledge ranging from clinical laboratory to diagnostic tests using specialized equipments. Responsibilities includes trouble shooting, calibrating, handling and maintaining a spectrum of equipment.

BIO SIGNAL & MEDICAL IMAGE PROCESSING LABORATORY

This lab provides hands on training in signal processing software such as EEG Lab, EGG Analysis, ecgAUTO, MATLAB Toolbox and EMGworks. The processing software used in this lab includes NLabVIEW, MATLAB, NISmart Camera and Soliton 3 Mega pixel CMOS Area Sgh Camera.

DR. NGP MEDICAL EQUIPMENT CALIBRATION CENTER (KMCH)

This lab provides state of the art equipments to facilitate calibration of medical equipments. The student are trained to calibrate medical equipments and are intended to do calibration before utilisation.

DR. NGP CENTER FOR MEDICAL EQUIPMENTS AND SYSTEMS

This lab facilitates hands-on experience of handling medical equipments for students. They also familiarize themselves with various product designs currently in the market. The lab is well equipped with basic hand held diagnostic devices to high end equipments namely X-ray and C-Arm machines.



FACULTY DETAILS

Name	Qualification	Designation	Specialization
Dr.S.Prabakar	M.E., Ph.D.,	HoD/ Professor	Biosignal & Image Processing and Physiological modeling systems
Mrs.K.Yasoda	M.Tech., (Ph.D)	Associate Professor	Biomedical Instrumentation, Bio Signal Processing
Mrs.Sharmili	M.E.,	Assistant Professor	Medical Electronics, Diagnostic and Therapeutic Equipments
Mrs.V.Priyadharshini	M.E., (Ph.D)	Assistant Professor	Medical Image Processing
Mrs.D.Hemapriya	M.E., (Ph.D)	Assistant Professor	Biomedical Instrumentation, Bio Signal Processing
Mrs.S.Gowthami	M.E.,	Assistant Professor	VLSI Signal Processing, Medical Image Processing
Mr.C.Ramkumar	M.E., (Ph.D)	Assistant Professor	Communication System, Wireless Sensor Networks
Mrs.R.Saranya	M.Tech.,	Assistant Professor	Biomedical Instrumentation, Medical Physics
Mrs.R.Nithya	M.Tech., (Ph.D)	Assistant Professor	Nanobiomaterials, Diagnostic equipment
Mrs.A.Mohanapriya	M.E.,	Assistant Professor	Biometric Systems, Bio Image Processing
Mr.John Amose	M.Tech	Assistant Professor	Biosignal Processing, Pattern Recognition
Mrs.K.Chamundeswar	M.Tech	Assistant Professor	Biomedical Instrumentation, Nano Technology
Mrs.R.Bhuvana	M.Tech	Assistant Professor	Biomaterials, Tissue Engineering
Mr.R.Hariprasad	M.Tech	Assistant Professor	Advance Biomechanics, Rehabilitation engineering
Ms.N.Gowripriya	M.Tech	Assistant Professor	Clinical Engineering, Biomedical Instrumentation

EMINENT SPEAKERS

Speaker	Topics
Mr. S. Manivannan, CEO, Emergeion, Chennai	Biomedical Engineering Trends and Challenges
Mr. T. Anbuselvan, Service Manager, Wipro GE Healthcare Pvt Ltd.,	Role of Engineers in Healthcare Development
Mr. TCL Narayana, Manager, Technical Services, India Medtronic Pvt Ltd.,	Advanced Surgical Navigation & other Intra-Operative Technologies
Dr. Parag K Shah, Ophthalmologist, Aravind Eye Hospital	Role of Telemedicine in Ophthalmology
Mr. P. V. Kumaravadivel, Managing Director, M/s.Jesai Healthcare Pvt Ltd.,	Recent Advancement in Emergency Care Patient Transport
Mr. P. Mathew Cherian, Interventional Radiologist, KMCH	Robotic Surgery in Interventional Cathlab
Mr. John Chavan, General Manager, Business & Marketing, Philips Healthcare India	Cutting Edge technology behind Philips Diagnostic Imaging Systems
Mr.U.K.Anandapadmanaban, Group President, Rainbow Hospitals, Hyderabad	Emerging trends in interfacing of medical equipment & EMR using cloud technology
Mr. M. Sathishkumar Director - India Operations, TriMedx India Pvt Ltd	Future of the Biomedical Industry in an Era of Globalization
Dr. G. Sai Narayanan, Senior Technical Specialist, HCL Technologies	Advances in Portable Medical Vision System



Speaker	Topics
Mr. Paresh Modh, CEO, Pamptrons, Mumbai	Latest Trends in Biomedical Equipments
Dr. Kannan Jegathala Krishnan, Ph.D., Victoria University, Melbourne, Australia	Unified Force (vethon) and its Relation with God Particles and Global warming crave for Green Energy Technology
Mrs. Jancyrani, Getinge Maquet, Coimbatore	Ventilators and its Principles
Mr. Gowri Shankar & Mr. Praveen Sankar Olympus Medical Systems Pvt. Ltd., Chennai	Skeleton scope & Defective Spares
Mr. Gopal Rao, Mr. Gokul, Mr. Karthik Rengarajan, Ms. Sindhuja, Dr. Preeti Vora & Mr. Jagnathan, Maquet Medical India, Pvt. Ltd., Chennai	OT Lights, OT Tables, ECMO & NAVA, Intra Aortic Ballon Pump, Heart lung Machine.
Mr. Elangovan & Mr. Prabhakar Fresenius Medical Care India Limited	Dialysis Machine
Mr. Harisha DS Wipro GE Healthcare Systems, Bangalore	Anesthesia work stations and Multiparameter Monitors

CONFERENCES / EVENTS ORGANIZED

- MedZEST 2016 - A forum for hands on training and quality control of Medical Equipments was jointly organized by the Department of Biomedical Engineering of Dr.N.G.P. Institute of Technology in association with the Department of Biomedical Engineering Kovai Medical Center and Hospital (KMCH) during 26th and 27th February, 2016.
- ICMR sponsored National Conference on "Medical Imaging & Informatics for Oncology" organised by the Department of Research held at Dr. N.G.P. Institute of Technology from 03.07.2015 to 04.07.2015. The conference gave us an insight on the key issues in recent advancements and results in the field of Oncology through paper presentation and panel discussion.
- ICMR sponsored National Conference on "Recent advancements in Biomedical Engineering and Healthcare Technologies (RABEHT-2015)" organized by Department of Biomedical Engineering held at KMCH (Kovai Medical Center and Hospital) from 07.08.2015 to 08.08.2015. The conference focuses on the key issues in recent advancements and results in the field of healthcare through paper presentation and panel discussion. It also brings an awareness about the modern medical devices and their technology.
- A seven day Anna University Sponsored faculty development program on 'Principles of Digital Signal Processing' was organized during 2nd and 8th December, 2016.
- The Department of Information Technology in association with the Department of Biomedical Engineering organized a Health Awareness Camp using mobile apps and medical equipments on 11th of March, 2016. The event was organized at Government Higher Secondary School, Kalapatti, Coimbatore.

TRAINING

- Demonstration of Skeleton scope & Defective Spares
- OT Lights, OT Tables, ECMO & NAVA, Intra Aortic Ballon Pump, Heart lung Machine.
- Handson training on Dialysis Machine
- Anesthesia work stations and Multiparameter Monitors
- Clinical Training at KMCH hospital, Coimbatore
- Basic Life Support

VALUE ADDED PROGRAMS

- Calibration & Testing of Biomedical Equipments - Helix Corporation
- LabVIEW - National Instruments
- C, C++ - M/s Techno turf Info Services
- Mimics - Mtab



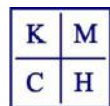
STUDENTS ACHIEVEMENTS

- Three teams got short listed in NiYANTRA 2016 from the Department of Biomedical Engineering. The proposed ideas and technology were materialized in our National Instruments LabVIEW Academy Center and performed clinical testing in Kovai Medical Center and Hospital (KMCH).
- Three of our students got selected in the Summer Research Program offered by Florida Atlantic University with whom we have a MOU with. The students are to receive a training on global areas of research.
- Nagavenkateswari.S secured Third Place in ICTACT Youth Present Regional Level Contest, 2015

CAREER ACHIEVEMENTS

- 36 students are placed in reputed core industries during on campus placement drive
- 10 students are pursuing their higher studies at prestigious institutes

RECRUITERS



S.No.	Company Name	No.of Student
1	ZIFO TECHNOLOGIES, CHENNAI	1
2	VWR LAB PRODUCTS PVT. LTD., COIMBATORE	3
3	DIABETIK FOOT CARE INDIA PVT. LTD., CHENNAI	2
4	UDHYAM MEDICARE SYSTEMS, COIMBATORE	1
5	AGS HEALTH CARE PVT. LTD., CHENNAI	17
6	VISIONARY RCM, COIMBATORE	5
7	VEE TECHNOLOGIES, SALEM	2
8	KOVAI MEDICAL CENTER AND HOSPITAL LTD., COIMBATORE	1
9	GENPACT, BANGALORE	2
10	EODDLEY MEDICALS PVT LTD, BANGALORE	3
11	MEDONE HEALTHCARE LLP, COIMBATORE	1
12	JAGGI OPHTHALMIC INSTRUMENTS, KERALA	2
13	CPC DIAGNOSTICS PVT LTD, MANGALORE	1
14	IBIS MEDICAL EQUIPMENT AND SYSTEMS PVT LTD, COCHIN	1
15	MAQUET, BOMBAY	2
TOTAL PLACED		44



INPLANT TRAINING & INDUSTRIAL VISITS

KMCH Hospitals, Coimbatore | Meenakshi Mission Hospital, Madurai | Ortho Rahavendar Hospitals, Madurai
 Vadamalayan Hospitals, Madurai | Annai Hospitals, Trichy | Billroth hospital, Chennai.
 Pasteur Institute of India, Coonoor | South India Textile Research Association, Coimbatore

INDUSTRY POWERED CENTRES



MOU's



PROFESSIONAL CHAPTERS



FOR MORE DETAILS CONTACT

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