



Dhanalakshmi Srinivasan Engineering College

Perambalur – 621 212.

Department of Biomedical Engineering

News Letter 2015 – 2016

1. About the Department

The Department was established in the year 2005. To foster research and education that benefits human health on novel technologies, devices and therapies, the field has developed its own knowledge base and principles those are the foundation for the academic courses designed by the Department of Biomedical Engineering. Biomedical Engineering and e-health are interdisciplinary sectors that are growing prodigiously and have a significant social and economic impact.

The Biomedical area represents at most dynamic and leading research field and areas of innovation. It has a huge existing and emerging industrial base.

The Bio Medical Engineering, one of the most fascinating fields in medical has a great future as it combines the knowledge of sophisticated technology with the biology of mankind in order to solve the physiological problems of human beings.

1.1. Vision of the Biomedical Engineering

Emergence of advanced learning, research and training to strengthen technologies in biomedical engineering for human welfare and Nation needs.

1.2. Mission of the Biomedical Engineering

The mission of the Biomedical Engineering Department is to bridge engineering, science and medicine.

M1. To engage with the specific to generic community for knowledge dissemination and career development.

M2. To update, analyze and impel the knowledge in the multi-disciplinary fields to strengthen technologies in biomedical engineering.

M3. To encourage the students to overcome the gap between engineering and medicine for the welfare of society.

M4. To provide students expertise both in engineering and technical fields related to competitive medical technology in research and continuing education.

1.3. Program Educational Objectives (PEOs)

PEO 1. The graduates of the program will have ability to strengthen technologies by combining the design and problem solving skills for enhancing health care products.

PEO 2. Graduates of the program will function as productive team member and leader to bridge the gap between engineering and biology.

PEO 3. Graduates will be outstanding professionals by enhancing their advanced learning techniques in the field of biomedical engineering to face the global challenges.

PEO 4. Nurture responsible engineers with ethical values to serve the society and to learn and excel in higher education.

1.4. Program Specific Outcomes (PSOs)

PSO 1. Bio-Analysis. Apply Mathematical Analysis for human illness, to problems, thereby to interface engineering and life science.

PSO 2. Data Interpretation and Problem Solving. Make measurements on and interpret data from physiological systems and decipher the problems associated with the interaction between living and nonliving materials and systems.

2. Awards and Achievements

Student achievement measures the amount of academic content a student learns within a stipulated duration. Our department is constantly working to improve the knowledge and ability of students so as to face various technical challenges. The below mentioned are the awards and achievements bagged by our tireless students.

2.1. By Students

University Rank Holders (2011-2015):



5th Rank
Lavanya S.



21st Rank
Andreose Joice J

The student contribution in inter college events:

- ✍ National Seminar-KPR Institute of Engineering & Technology, Coimbatore - 641 407.
- ✍ National level Technical Symposium-Mahendra Institute of Technology, Namakkal-12,
- ✍ National level Technical Symposium-Velalar College of Engineering & Technology, Erode-2,

- ✍ National Hub for Healthcare Instrumentation.
- ✍ Development Organized Symposium - Anna University, Chennai-3
- ✍ National level Workshop – PSG College of Technology, Coimbatore – 5.
- ✍ National level Workshop-NIELIT, Calicut – 6.
- ✍ National level Seminar organized by NIT, Trichirappalli - M. Kumarasamy College of Engineering, Karur – 6.
- ✍ National level Seminar-Sri Ramakrishna Engineering College, Coimbatore – 11.
- ✍ International Conference-Publication of Manuscript in the Proceedings (ICAER-2015).
- ✍ National level Seminar- Sri Ramakrishna Engineering College, Coimbatore – 2.

The student contribution in National and International Journals are as follows:

- ✍ *Ms M. Priyanga, Ms S. Vanisri & Ms K. P. Pooja Udayan*, “A Novel Approach for Prediction of Bulging in the Type A Dissected Aorta using Mimics Tool”, Asian Journal of Science and Applied Technology, Volume 4, Issue 1, 2015-ISSN: 2249-0698.
- ✍ *Ms A. Yogapriya, Ms S. Sindhuja*, “Breast Masses Classification based on BPN using Scilab”, International Journal of Applied Engineering Research, Volume 10, Issue 55, 2015-ISSN: 0973-4562.

A total of 46 students undergone Training programmes in various reputed concerns like Meenakshi Hospital, Madurai-8, Velammal Medical College & Hospital, Madurai-1, Medical Expo-2015, Chennai-34 and Elite Mission Hospital, Thrissur-3.

2.2. Faculty Contributions

National and International Publications

- ▣ **Dr Sharanabasaveshwar G Hiremath, Prof. C. Narayanan**, “Soaring in Vivo Platelet Motions in Woman Fibromyalgia Victims”, International Journal on Recent Researches In Science, Engineering & Technology (IJRRSET), DEC 2015.
- ▣ **Prof. C. Narayanan**, “Cardiac Disorder Diagnosis Through Nadi (Pulse) Using Piezoelectric Sensors”, IJMRME, Volume 1, Issue 1, 2015-ISSN: 2454-6119.
- ▣ **Prof.C.Narayanan and Prof.K. Pradeep** “A Novel Approach To Monitor Ammonia In Exhaled Breath”, Journal of Engineering Scientific Research and Applications, ISSN: 2395-1613 Volume (1), Issue (1), January – June 2015.
- ▣ **Prof.K. Pradeep and Prof.M.Priyanga**,” A Novel Approach for Prediction of Bulging in the type A Dissected Aorta Using MIMICS Tool” Asian Journal of Science and Applied Technology, ISSN: 2249-0698 Vol. 4 No. 1, 2015, pp.26-31.
- ▣ **Prof. Hemalatha Karnan**,” Importance of Classification Algorithms in Epileptic Seizure Detection” Journal of Bioengineering & Biomedical Science, ISSN:2155-9538 ,Volume 6 • Issue 3 •
- ▣ **Prof.M.Priyanga**,” Breast Masses Classification Based On BPN Using SCILAB”, International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.55 (2015)
- ▣ **Prof.Hemalatha Karnan and Prof.M.Priyanga**,” Adaptive wavelet thresholding technique for Medical image denoising”, Journal of Engineering Scientific Research and Applications, Vol.1, No.1,ISSN 2395 – 1613.
- ▣ **Prof.K. Karthick Babu**,” Reliable selective forwarding in wireless communication for Medical care”, Journal of Engineering Scientific Research and Applications, Volume (1), Issue (1) ISSN: 2395-1613.
- ▣ **Prof.A.K.Nivedha,Prof.Krishnapriya, & Prof.Sripoornima**,”Continuous intraocular pressure monitoring by noninvasive wireless pressure sensor”, International Journal of Multidisciplinary Research and Modern Education (IJMRME), ISSN (Online): 2454 - 6119 Volume I, Issue I, 2015. CISMA-2015.
- ▣ **Prof.C.Narayanan**,” Real-time muti parametric biosignal Acquisition and removal of baseline wandering for polysomnography analysis”, TEQIP –II sponsored national Conference on instrumentation Systems, Measurement and Automation, CISMA-2015
- ▣ **Prof.A.Selvi**,” An Accurate and generalized approach to plaque characterization in ultrasound scan of atherosclerosis disease”, IJRASET, ISSN 2321-9653.
- ▣ **Prof.A.K.Nivedha**,” Wireless and wearable EEG system for preventing the vehicle accident”, SSIJMR, ISSN 2395-7964.

The outcome based Education has contributed to continuous improvement of academic career. The beneficiaries, the students, the faculty and the staff, have won laurels through Co-curricular and Extra-curricular activities.

3. Details of the Programme conducted by the Department

1. Guest Lectures

- ✍ The Guest lecture talk on “Biomaterial And Artificial Organs” was delivered by Ms.A.V.Anupa, Research Assistant on 08.03.16 to expertise the students in the same.
- ✍ An invited talk on “Medical applications of radioisotopes” was given by Dr.K. Manoharan, Physician on 08.03.16 to create awareness to the students in the same.
- ✍ The Special lecture & Hands on Training on “Ultrasound Equipments” was delivered by Mr.M.Vignesh, Senior Biomedical Engineering on 10.08.2015 to expertise the students in their core field.
- ✍ A Workshop on “MIMICS–physiological modeling” was conducted by Mr.R.Santhosh Kumar, Team leader, on 19.08.15 to give training on the bio modules to the students.
- ✍ A seminar talk on “DBMS for clinical Data” was delivered by Mr.M.Shankar, Assistant Professor on 19.08.15 to develop knowledge about clinically using software in handling medical datas to the budding engineers.
- ✍ A Special talk on “Elastography” was given by Mr.M.Rajesh, Key accounts manager on 16.09.15 to expertise the students in the same.

2. Association Inauguration & One Day Seminar

The Department of Biomedical Engineering conducted the Association Inaugural “Curatio De Main’15” and a One-day seminar on “Elastography”, on 16th September 2015. The Chief Guest of honor was Mr M. Rajesh, Key Accounts Manager, Siemens Healthcare, Chennai. Mr K. Pradeep & Mrs N. Sri Poornima, Assistant Professor, Dept. of Biomedical Engineering has coordinated the function.



The function was inaugurated by The Chief Guest. Dr T. Elango, the Principal of Dhanalakshmi Srinivasan Engineering College expressed his views about the emerging biomedical field.

Prof. C. Narayanan, Head of the Department delivered the welcome address. Mrs S. Sathya, Assistant Professor, Department of Biomedical Engineering introduced the Chief Guest. The seminar session started by 11:30 a.m. Mr M. Rajesh gave an effective presentation on “Elastography” Advanced Ultrasound Imaging Tool for Cancer Diagnosis. A concise note of the seminar is as follows, It is a medical imaging modality that maps the elastic properties of soft tissue.

A pathological process alters the elastic properties of the involved tissues. This change in elasticity is detected and imaged using elastography. This technique finds application in differentiation of malignant and benign neoplasms (especially breast); identifying early traumatic changes in muscles and tendons; reducing negative biopsy rates; assessing liver fibrosis and etc. Non-technical events were conducted in the afternoon session by the students. Mr.K.Pradeep, Assistant Professor delivered the vote of thanks. The program ended up successfully by 04:45 p.m.

3. Biomed Camp-AAVEKSHA-2K16



The department has conducted a Biomedical camp on 08.03.2016. Ms A. V. Anupa, Research Associate, Sree Chitratirunal Institute for Medical Sciences & Technology, Trivandrum, Kerala was the chief guest and inaugurated the camp. The dignitary pointed out the important role played by biomedical engineers in medical field and instrumentation society and also gave an insight on technologies used in Biomedical engineering.

The Principal Dr T. Elango of our college emphasized the role of engineering in creating a new era of medical science. Mr K. Pradeep & Mr K. Karthick Babu, Assistant professor, Dept of Biomedical Engineering has coordinated the function.

Around 300 students participated and had a full physical check up including Blood Group Testing, Hemoglobin Estimation, Height / Weight / BMI, Urine sugar testing, Blood pressure identification. Mr K. Pradeep, Assistant Professor conveyed the vote of thanks. This effective program ended up by 4.00 p.m.

Placement

Every year students from the department is being placed in industrial areas. This year a set of 57 Biomedical Graduates have been placed in well reputed companies.

Excellence

Best Outgoing Student of the year (2016)



R. Sumala Sri - 810412121078



4. Details of Sports events Participated by Students:

S. No	Student Name	Event	Date	Achievements	Place
1	B. Keerthika (2 nd Year)	Throw Ball	31.03.2016	Winner	Dhanalakshmi Srinivasan Engineering College, Perambalur.
		Javelin Throw		3 rd Place	
2	P. Athula (3 rd Year)	4*100 Relay		2 nd Place	
3	A. Rajeshwari (3 rd Year)	Volley Ball		Runner	
		4*100 Relay		2 nd Place	
4	A. Koushini Suba	Throw Ball		Winner	

