

## PROJECT WORK

The students have to undergo a 4 week training programme in a hospital or a medical device industry as an important feature of this programme which helps the students to take up projects those are highly relevant to the society, from industry or from the hospitals

Centre for Medical Electronics, an autonomous research centre of Anna University has collaboration with various hospitals and industries. Some of them are

1. Apollo Hospitals
2. Sri Ramachandra University
3. DEBEL, Bangalore
4. Diabetic Footcare, Chennai
5. NIMHANS, Bangalore
6. Sankara Nethralaya
7. TANUVAS
8. Stanley Medical College

Through the collaboration of Centre for Medical Electronics with the hospitals, the students are encouraged to take up projects in these hospitals and are provided with opportunities to work in projects specified by the hospitals and projects funded by DST, Govt. of India, Life Sciences Research Board, DRDO & CTD, Anna University.

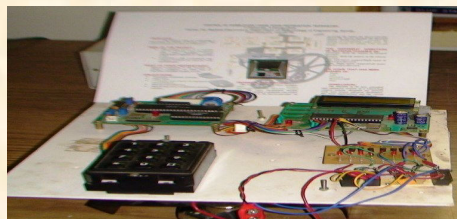
## FACILITIES

The Department possess state of the art Infrastructure like High End DAQ, Gait Analysis System, Modeling Software, Biosignal analysis system with treadmill, Electrical Safety Analyzers to name a few.

## CAREER OPPORTUNITIES

Post graduates of M.E Biomedical Engineering find employment in Government Departments, various research Institutes and medical device industries which include:

1. Biomedical Engineers at Hospitals
2. DRDO, Govt of India
3. Medical device industries



FOR FURTHER INFORMATION PLEASE CONTACT  
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DEPARTMENT OF  
ELECTRONICS AND COMMUNICATION ENGINEERING  
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M.E BIOMEDICAL ENGINEERING  
Professor-in-charge: Prof.Dr.M.Sasikala



## VISION

To be recognized as a benchmark and trend setter in Electronics and Communication Engineering domain keeping in pace with rapidly changing technologies through effective partnership with reputed academic institutions, research organizations, industries and community.

## BACKGROUND: SIGNIFICANCE OF BIOMEDICAL ENGINEERING

With expertise spanning physiology, biology, healthcare and health informatics, mechanics, and engineering, biomedical engineers can combine their diverse skills to create solutions for continuing world wide health issues, helping to change how patients are treated and lowering the cost of care.

With technology advancing and the demand for cutting-edge medical equipment and devices expanding, biomedical engineering, has emerged as a rapidly growing field. From 2014 to 2024, employment for biomedical engineers is projected to grow a staggering 23 percent, growing more than three times faster than other careers.

## EVOLUTION OF THE DEPARTMENT

The Department of Electronics and Communication Engineering, College of Engineering has the rare distinction of having a separate Medical Electronics Lab from as early as 1975. A Post Graduate degree specializing in Medical Electronics was introduced in 1993- the first of its kind among the Indian Universities The alumni are employed in Biomedical Electronics industries and hospitals. M.E. Biomedical Engineering is an addition to this department, started in July 2006.

## PROGRAMME SPECIFIC OBJECTIVES

- Train the students to possess good scientific and engineering knowledge in the field of biomedical engineering.
- To understand the principles and recent trends in physiological measurements, diagnosis and therapy procedures followed in hospitals.
- To introduce the concepts of hospital architecture, planning and organization.
- To impart knowledge on the management of equipment, finance, human resources and waste related to hospital.
- Ability to practical engineering in biological, medical and healthcare system related fields and excel as biomedical professionals in hospitals.

## FEATURES OF THE PROGRAMME

M.E. in Biomedical Engineering is a full time four semester course offered by the Department of Electronics and Communication Engineering, Anna University, Chennai. Biomedical Engineers require a good scientific and engineering knowledge to bridge the gap between engineering and medicine. With this aim, the curriculum for this programme includes principles and recent trends in physiological measurements, diagnostics and therapeutics followed in hospitals, concepts of hospital architecture, planning and management of equipments, human resource management in hospital and hospital waste management. This programme ensures that the students are well trained in the above skills.

The course consists of Lectures, Tutorials, Practice sessions, Workshops and Hands-on training experiences for the betterment of students.

## RESEARCH AREAS

Some of the research fields to which the students of this programme are exposed to are :

1. Development of low cost rehabilitation devices
2. Medical Informatics & Standards
3. Rehabilitation Engineering
4. Bio MEMS
5. Tissue Engineering
6. Development of Biomaterials

## CORE COURSES

1. Human Biology
2. Diagnostic & Therapeutic Equipment
3. Medical Imaging Systems
4. Signal Processing and Image processing techniques applied to Biological Systems
5. Rehabilitation Engineering
6. HealthCare, Hospital and Equipment Management
7. Health Informatics

## ELECTIVE COURSES

1. Biomechanics
2. Hospital Waste Management
3. Quality Assurance and Safety in Hospitals
4. Biomaterials
5. Brain Computer Interface
6. Medical Ethics and Standards
7. Telehealth Technology
8. Tissue Engineering
9. Physiological Systems Modelling and Simulation

