SRM
INSTITUTE OF SCIENCE & TECHNOLOGY
Deemed to be University u/s 3 of UGC Act, 1956

DEPARTMENT OF BIOMEDICAL ENGINEERING

School of Bio-Engineering
College of Engineering and Technology
SRM Institute of Science and Technology

SRM Nagar, Potheri, Kattankulathur

BIOMEDICAL ENGINEERING - THE WAY FORWARD

Biomedical Engineering is a multidisciplinary field of science that amalgamates biology and engineering, applies engineering laws, scientific principles and materials to develop medical devices and healthcare goods and services that leads to wellbeing of mankind.

HIGHLIGHTS OF BME @ SRMIST-KTR

SRMIST is one among the few universities in India offering B.Tech., M.Tech. and PhD programme in Biomedical Engineering spanning over two decades. The department established in 2004, with active clinical partnership in association with SRM Medical College and Research Institute, Kattankulathur, over the years, has actively been a part of diversified research and teaching, becoming one of the best institutions for the programme in the country. The department holds the highest graduate record with more than 1500 students graduating from the department of Biomedical Engineering. The program permits the student to undergo the Semester Abroad Program (SAP), wherein the students are allowed to take-up a few courses and /or a Major project in reputed foreign universities (MIT, Harvard, NTU,etc.)

PROGRAMS OFFERED

- ➤ B.Tech - Biomedical Engineering
- ➤ B.Tech - Biomedical Engineering with specialisation in Machine Intelligence
- ➤ B.Tech - Biomedical Engineering with specialisation in Biosensors
- ➤ M.Tech - Biomedical Engineering
- ➤ Ph.D - Biomedical Engineering

WHY BME @ SRMIST-KTR?

- ➤ Multi-disciplinary and Industry oriented Course design
- ➤ Corporate and International advisory board
- ➤ Biomedical Industry Collaborations
- ➤ In Campus SRM Medical College and Hospital
- ➤ Expert Faculty
- ➤ Infrastructure and geographical placement
- ➤ Strong Alumni Connect

INFRASTRUCTURE AND FACILITIES

The department has a "Centre for Biomedical Research and Healthcare Innovation (CBRHI)", a well-established Industry associated research facility in the field of healthcare. The facility is equipped to conduct research on Human movement analysis, Optical Imaging, Bio-sensing, Medical thermography, Bone densitometry, Ophthalmology, etc.,

The department has active Industrial collaborations with BPL Medical technologies, AMTZ - Medivalley, Capgemini and Forus Health by offering consultancy services in the relevant domain. The department is well equipped with state of the art laboratories in the following domain:

- ➤ Biophotonics and Imaging
- ➤ Biomedical Instrumentation
- ➤ Bio-signal Processing
- ➤ Medical Image processing
- ➤ Sensing systems
- ➤ Virtual Instrumentation
- ➤ Biomaterials
- ➤ Biomechanics

PROFESSIONAL OPPORTUNITIES

Biomedical engineers are imperative for everything that accounts for enhancement of human health and healthcare delivery systems. They are of paramount importance by integrating technology with human systems, and have led to development of many life-saving medical devices. Biomedical Engineers can be deployed in the following domains

- ➤ Hospitals: Clinical engineers
- ➤ Core Industry: Application specialist, Design and Development engineer
- ➤ Government Sector: Regulatory affair specialist and Biomedical engineer in Medical services corporation
- ➤ IT industry: Medical software developer and Medical data analyst.
- ➤ Research laboratories: Project scientist, Research associate, R&D officer.

MAJOR RECRUITERS

SRMIST holds an excellent track record for placements with about 80-90% placements in their yesteryears. Numerous students are placed in biomedical core industries like Abbott healthcare, Baxter India, Medtronic, B Braun Medical, GE healthcare, Karl Storz, Philips, Praxair, Siemens, Skanray technologies, Capgemini, Stryker, Johnson & Johnson, Boston Scientific, BPL medical technologies, Transasia, Zifo RnD solutions, etc., and with MNCs like Infosys, Wipro, CTS, HCL, TCS, Amazon, Practo, etc.

HIGHER STUDIES

Higher studies is a very promising choice among biomedical engineers. SRMIST BME students have undertaken their higher studies abroad in world class universities like Massachusetts Institute of Technology, USA, Harvard Medical School, Netherlands, Delft University of Technology, Delft, Netherlands, University of Sydney, Australia, University of Texas, USA, Nanyang Technological University (NTU), Singapore, etc
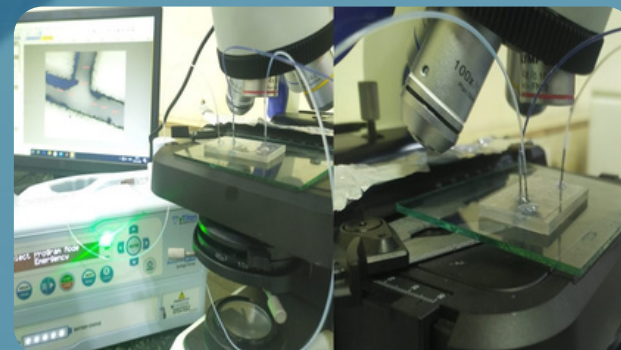

DEPARTMENT RESEARCH ACTIVITIES

The department involves in active multidisciplinary and interdisciplinary research activities. There are 26 research scholars currently pursuing PhD and 14 have been awarded PhD degree from the department. The department has received research grants from the Department of Science and Technology (DST), Government of India to the tune of one Crore Indian rupees for socially relevant projects, which have start-up and entrepreneurship purview.

GLIMPSE OF PROGRAMME SPECIALISATION

The department offers specialisation programmes: B.Tech - Biomedical Engineering with specialisation in Biosensors and B.Tech - Biomedical Engineering with specialisation in Machine Intelligence. The programme follows the basic B.Tech - Biomedical Engineering curriculum, which later diversifies in the higher semesters to enable the students learn professional courses of their choice.

PROFESSIONAL COURSES OFFERED:

B.Tech - Biomedical Engineering with specialisation in Biosensors
- ➤ Fundamentals of Biosensors
- ➤ Biodetection Techniques
- ➤ Bio-Nanosensors, Cell Based Biosensors
- ➤ Bio-MEMS and Fabrication, Intelligent Biosensors
- ➤ Biosensors for Imaging systems
- ➤ Biosensors for remediation- (Clinical, Food & Environmental)
- ➤ Lab on chip
- ➤ Wearable and Implantable Biosensors

B.Tech - Biomedical Engineering with specialisation in Machine Intelligence
- ➤ AI and Machine learning for healthcare
- ➤ Statistics and Data science
- ➤ Artificial Neural Networks and Pattern Recognition
- ➤ IOT and Smart Sensors
- ➤ Telehealth care Informatics
- ➤ Natural language processing for healthcare applications
- ➤ Deep learning Techniques in Medicine
- ➤ Computer vision and Image Processing
- ➤ Robotics and Smart Technologies
- ➤ Brain computer Interface
- ➤ Biomimetics and Bio-inspired Design
- ➤ Biomechanical modelling and Simulation

For admission related queries contact: 044-27417854
More Information on BME :
https://www.srmist.edu.in/engineering/department-of-biomedical-engineering/about-the-department