IIT HYDERABAD

BIOMEDICAL ENGINEERING

PLACEMENT BROCHURE (2022-2023)

M.Tech Biomedical Engineering (2-year program) at IIT Hyderabad is successfully enhancing the research ecosystem for real-world applications by bridging the traditional disciplines of biology, medicine, and engineering to drive the healthcare industry ahead. Our department curriculum provides students to be industry-ready with a deep understanding of how human biology and cross-functional engineering disciplines can upgrade healthcare solutions and improve our society. The program aims to develop engineering strategies to promote innovations in medical technologies, solve challenging problems in medicine, and facilitate translating technology to clinical health care.

STREAMS

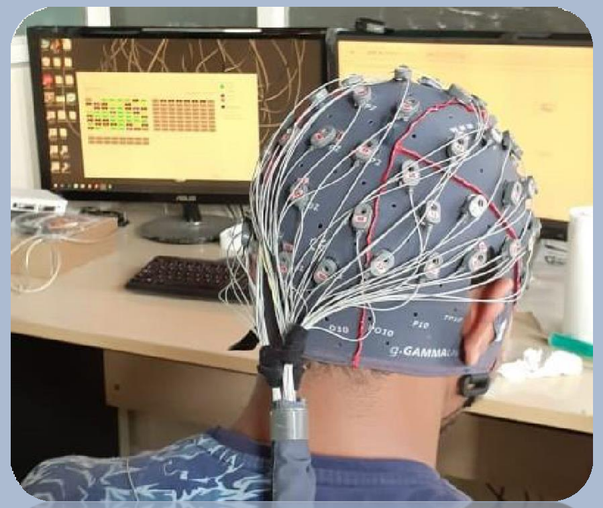
MedSAS (Medical Sensing Analytics and Simulation):

MedSAS stream consists of enthusiasts from EE, CS, Instrumentation, Mechanical engineering, Physics, Mathematics, or quantitative science streams. Students in the MedSAS stream hold expertise in Signal processing, Design, Data Science & Analytics, and AI, including Machine learning and Deep learning, with programming skills like C++, Java, Python, and many more.

NBM (Nanomedicine and Biomaterials):

NBM stream consists of passionate minds from a background in Biotechnology, Medicine, Pharmaceutical, or Life sciences. Students in the NBM stream have hands-on experience in Tissue engineering, Biomaterials and their characterization, nanomedicine, regenerative medicine, and Microfluidics related aspects.

WHY HIRE US?



Students are from diverse backgrounds like ECE, EEE, Mechanical, Instrumentation, Medicine, Biotechnology, Life sciences, Pharmaceuticals.

Batch of freshers & work experienced enthusiasts having exposure to industry relevant skill set including Programming, Machine Learning, Deep Learning and many more.

Sound understanding of design thinking process and device regulations.

Exposure to various industries through expert talks, seminars and symposiums.

Hands on experience of handling bioreactors, materials from macro to nano scale and various characterization techniques.

Collaborations with industries, hospitals, national and international universities.

Courses Offered

MedSAS Electives

- Machine Learning/AI
- Biomedical Imaging
- BCI and Neurotechnology
- Theoretical and Computational Neuroscience
- Neuro Mechanics
- Special topics in Microscopy
- Biomedical Devices
- Ultrasound in medicine
- Lab on Chip
- Bio Microfluidics

Core Courses

- Biodesign
- Sensors and Transducers in Healthcare
- Product Design (3D printing)
- Biomaterials
- Cell and Human Physiology
- Molecular Imaging
- Biomechanics
- Cell Technology

NBM Electives

- Nanomedicine and Regenerative medicine
- Bio fabrication Technology
- Advanced Biomaterials
- Tissue Engineering
- Lab on Chip
- Bio microfluidics
- Advanced Microscopy and Image processing
- Programming for bio macromolecular data analysis
- Stem cell biology and Regenerative medicine
- Genome organization and gene regulation
- Animal models in medical research

Students - MedSAS

Rohan BM

Novel algorithms for MEP/ SSEP processing to monitor spinal columns.
Skills : C/C++ ,Python AI/ML
Linkedin Profile

Saquib Zafar

Image segmentation using Machine Learning
Skills : C++/Python, ML,DSA
LinkedIn Profile

Nikhil Prakash

ML incorporated Digital holographic Microscope.
Skills : C++/Python, ML Management
LinkedIn Profile

Jigyasa Chand

Computer Vision based kinematics.
Skills : ML, Python/C++, SQL
LinkedIn Profile

Tushar K Raysad

Analysis of various parameters in 3D Bio Printers.
Skills : Python, ML,DSA
LinkedIn Profile

Malisetti Gayathri

Classification of human stomach cancer using Machine Learning from OCT images
Skills : Python/C++, ML/DL, DSA
Linkedin Profile

G. Prithvi Shankar

Oxygen and temperature detection in incoupling medium for HIFU therapy
Skills : Python, Biomedical Imaging, Management
Linkedin Profile

Shaswata Chowdhury

Design of contact-based sensor system for ultrasound therapy.
Skills : Medical Imaging, IoT, Electrical CAD
LinkedIn Profile

Ankita Jain

Classification of Neurovascular damages in stroke patients during recovery
Skills : ML/DL, Computer Vision, Python/C++
LinkedIn Profile

Students - NBM

Prarthna Luthra
Mechanobiology of Traumatic Brain Injury.
Skills: Web Development, Java, Python
LinkedIn Profile

Fathima Shajahan
Functionalization of GTR membrane.
Skills: Dentistry, CAD, Cell culture
LinkedIn Profile

Akshit Prajapati
Intracellular TEM Imaging of Nanoparticles.
Skills: Python, Management, Biopharmaceutics
LinkedIn Profile

Ivan Isaac
Creation of a novel hydrogel system.
Skills: Scientific writing, Critical thinking., Material characterization techniques
LinkedIn Profile

Sujith M S
Computational modeling of microRNA in lung Cancer.
Skills : Android development, Toxicology, Creative Thinking.
LinkedIn Profile

Arghyadip Bose
Bioreactor Design & QC for 3D Printed Artificial Pancreas.
Skills: Bioinformatics, High-Performance Liquid Chromatography, Molecular Biology
LinkedIn Profile

Aditya Srivastava
Nanoliposome development against highly metastatic cancers.
Skills: Wet lab instrumentation, Research, Basic bioinformatics-coding.
Linkedin Profile

Rubleen Khosa
Novel Biomaterial for Cartilage Regeneration
Skills: Java, Content Development, Chromatography techniques
Linkedin Profile

Aslam Ahmed
Novel Biomaterial for Bone Regeneration
Skills: Biomaterial synthesis, Cell culture, Design thinking
Linkedin Profile

PAST RECRUITERS

- Johnson & Johnson
- Phable Care
- Flipkart
- Accenture
- HCL
- AISIN
- Goldman Sachs
- EATON
- Tokano
- GE Healthcare
- Philips Healthacare
- Boston Scentific
- Zenoti
- Xceedance
- Stryker
- Rapyuta Robotics
- NTT AT
- Byju’s

LAB FACILITIES

Computational Neurosciences Spinal Cord and Movement Lab

Bio-micro fluidics and Biomechanics Lab

Neurotechnology and Neuroscience NeuroTech Lab

Engineering Nanomaterials and Regenerative Medicine Lab – eNaRM Lab

Medical Ultrasound Research Laboratory(MURL)

Regenerative Medicine and Stem Cell Lab

Medical Optics and Sensors Laboratory

Bio fabrication and Tissue engineering lab

Computational Systems Biology and Biomechanics Lab

Plasmonic Nanospace – P-NAS

FACULTIES

- Nanomedicine
- Cancer Nanotechnology
- Photothermal Therapy
- AMR
- Biomaterials

Dr. Aravind Kumar Rengan
(Assistant Professor)

•Biomechanics
•Biophysics
•Systems Biology

Dr. Mohd. Suhail Rizvi
(Assistant Professor)

•Therapeutic Ultrasound (HIFU/FUS)
•Diagnostic Ultrasound
•Ultrasound based Drug Delivery
•Acoustics
•Cancer Therapy

Dr. Avinash Eranki
(Assistant Professor

•Biofabrication
•Tissue Engineering
•Regenerative Medicine
•Invitro tissue/organ/tumour models

Dr. Falguni Pati
(Associate Professor)

•Micro and Nano Scale flows and particle/cell interactions
•Biomolecule transport and Mesoscale Properties
•Dissipative Particle Dynamics (DPD) simulation

Dr. Harikrishnan Narayanan Unni
(Associate Professor)

•Nanomedicine
•Regenerative Medicine
•Oral Care, Diagnostic and Therapeutic
•Drug and Biomolecules delivery
•Novel Biomaterials

Dr. Jyotsnendu Giri
(Associate Professor)

•Neuromodulation
•Neuroimaging
•Intra-Operative Neurom onitoring
•Healthcare Data Analytics

Dr. Kousik Sarathy Sridharan
(Assistant Professor)

- Virtual Physiology
- Com putational Neuroscience
- Neuromechanics
- Motor Systems Simulation

Dr. Mohan Raghavan (Associate Professor)

- Optical coherence imaging and microscopy
- Nanoparticles and target-specific imaging

Dr. Renu John (Professor and Chairperson CfHE)

- Clinical Artificial Intelligence (AI) for Healthcare
- Affective Computing, Big data in medicine
- Medical Informatics, Behavioral informatics

Dr Nagarajan Ganapathy (Assistant Professor)

- Designing devices for novel applications in Diabetes
- Cancer-on-chips to study anti-cancer drugs against cancer stem cells
- Bio-mimicking smart designed biomaterials

Dr. Subha Narayan Rath (Associate Professor and HOD)

ADJUNCT / VISITING FACULTIES

- Affiliation: Indian Army
- Modeling various biological phenomena

Lt Gen (Dr.) Madhuri Rajeev Kanitkar (Adjunct Faculty)

- Affiliation: Dept. of Radiology, Yashoda Hospitals.
- CT,PET

Dr. Sikandar Shaik (Adjunct Faculty)

- Assistant Professor: Computer Science and Electrical Engineering, University of Maryland
- Brain-Computer interfaces
- Neuroprosthetics and exoskeletons

Dr. Ramana Vinjamuri (Visiting Faculty)

Placement Team

Kindly register through our Office of Career Services (OCS) Portal. For further information please refer to IITH's Placement Brochure: http://ocs.iith.ac.in/

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