Placement Brochure

2022-23

IIT Delhi's
Centre for Biomedical
Engineering

Welcome

About us

CBME was established in 1971 as a Joint venture of IIT Delhi and AIIMS, Delhi. The Centre has applied engineering principles to address medical and biological problems. Over the years CBME has become the premier biomedical centre of the country.

It has faculty from diverse backgrounds who are actively engaged in various interdisciplinary research activities including disease prevention, diagnosis, and treatment, rehabilitation and injury mechanics, biomaterials, biomedical device development, Finite Element Modeling (FEM), data driven modelling, and Disease/Recovery Predictions using Machine Learning and Deep Learning.

Programs Offered

- M.Tech in Biomedical Engineering
- Doctorate (PhD)

Admission Criteria

- Students with a top ranks in GATE or any equivalent national examinations are shortlisted followed by an interview.
- Two-stage rigorous selection process ensures that only the best and the brightest make it to the department.

Head of the Centre

Prof. Naresh Bhatnagar

Head, Centre for BiomedicalEngineering, IIT Delhi.

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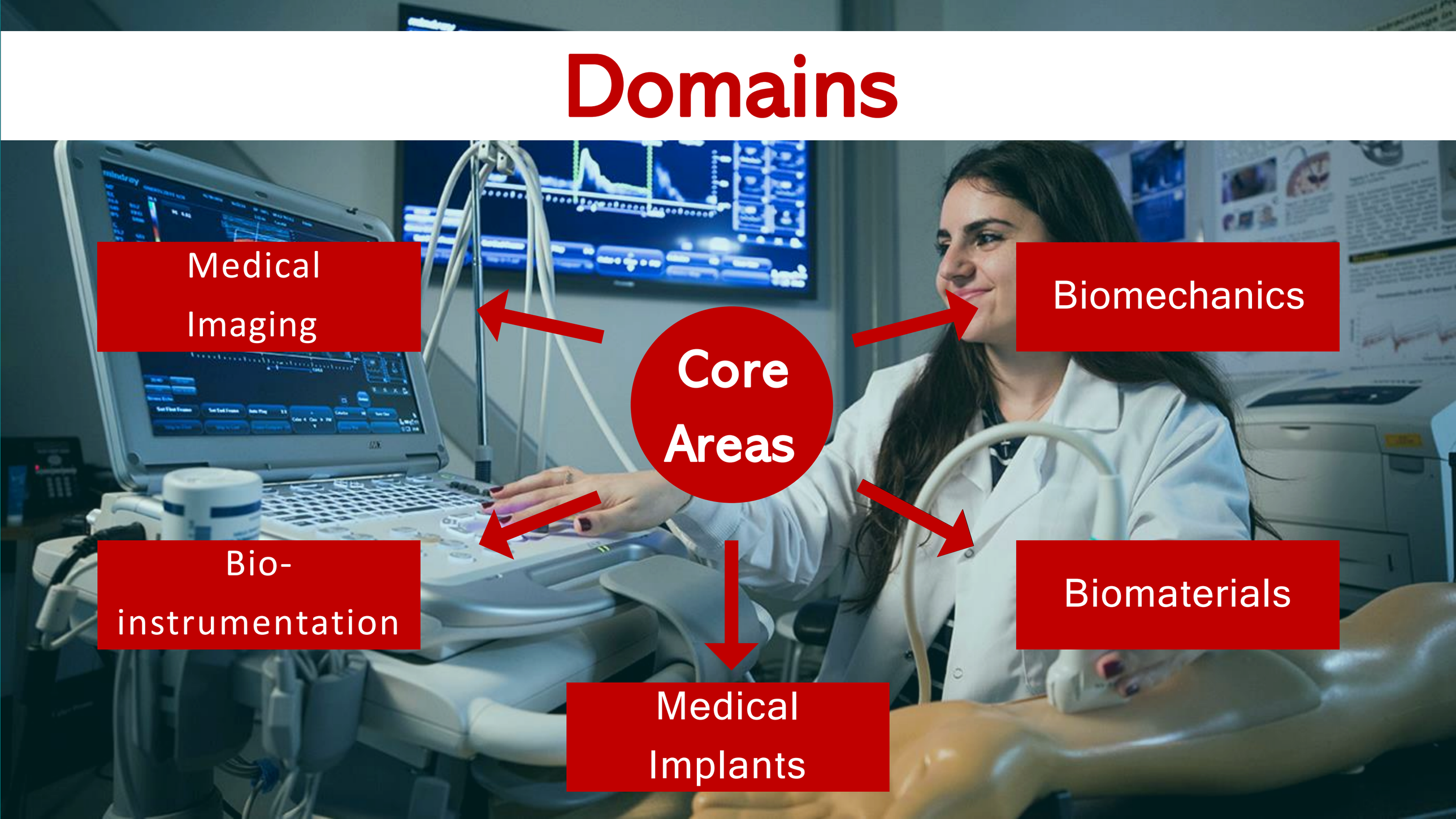
Domains


Medical Imaging
Biomechanics
Core Areas
Bio-instrumentation
Biomaterials
Medical Implants

Academics

- M.Tech programme in Biomedical Engineering is designed for students from both engineering and science disciplines to give training in frontier areas for solving the longstanding problems of healthcare using including but not limited to applications of Data-driven approaches, Machine Learning, Deep Learning, 3D Modelling.

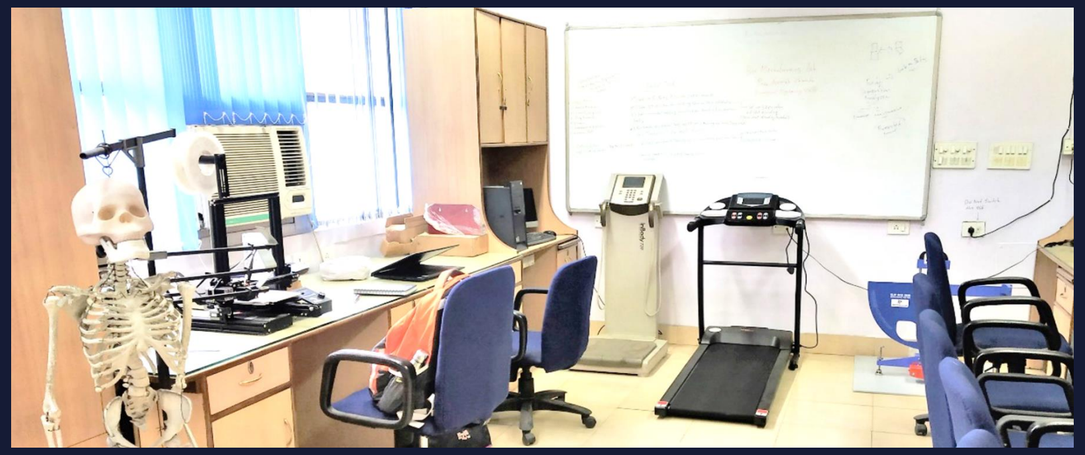
Courses Students Have Taken

Biomedical Data Analysis
Biomedical Signal & Image Processing
Biomedical Instrumentation
Wearable Technologies
BioInstrumentation
Basic Electronics
Fundamentals of Biomechanics
Neuromechanics
Introduction to Machine Learning
Probability and Statistics
Deep Learning for Mechanics
Finite Element Modeling of disease
Point of Care Medical Diagnostic Devices
Industrial Biomaterial Technology
Research Techniques of BME (Signal processing)

Recent Research Projects in CBME

- Applications of Machine Learning in Medical Image Processing
- Applications of Machine Learning in Biomedical Signal Processing.
- Medical Image/Signal Processing and Data Analysis
- Methodology for Quantitative CEST-MRI Quantitative software tools to detect mass lesion
- Development of elbow prosthesis
- Proprioceptive devices using machine learning Mathematical modelling of Disease
- Applications of nanofabrication technologies and nanoscale devices
- Development of biodegradable copolymers from renewable resources
- Development and modifications of Biomaterial for improved performance
- Development of new functional nanomaterials.

Research Facilities: A Glimpse



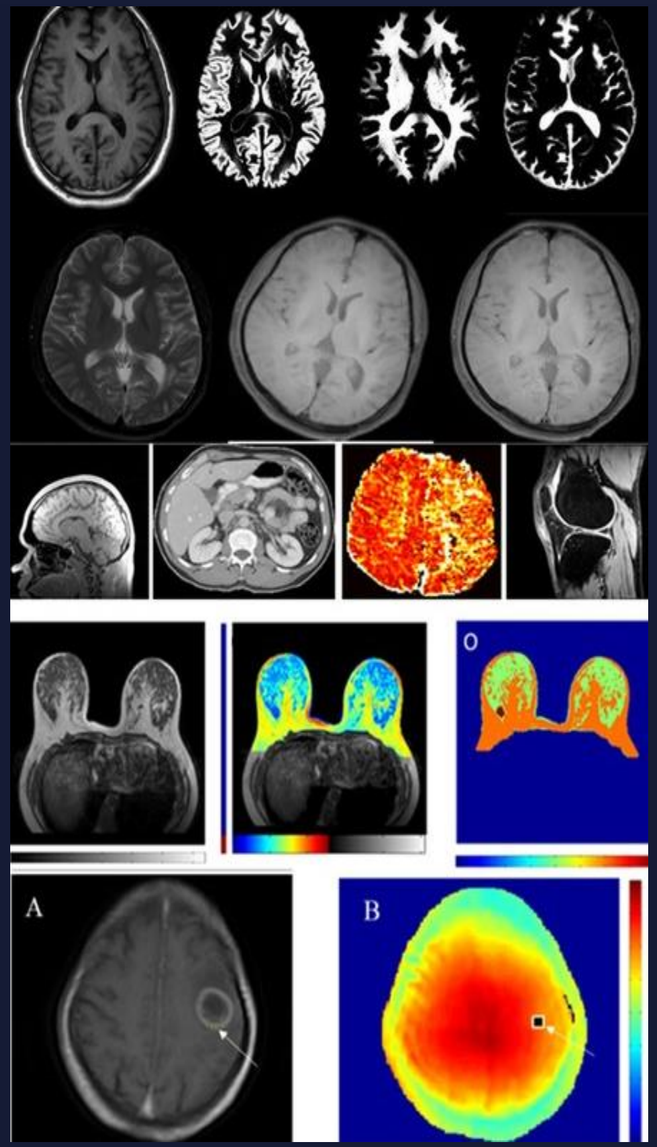
Ongoing M.Tech Thesis Projects

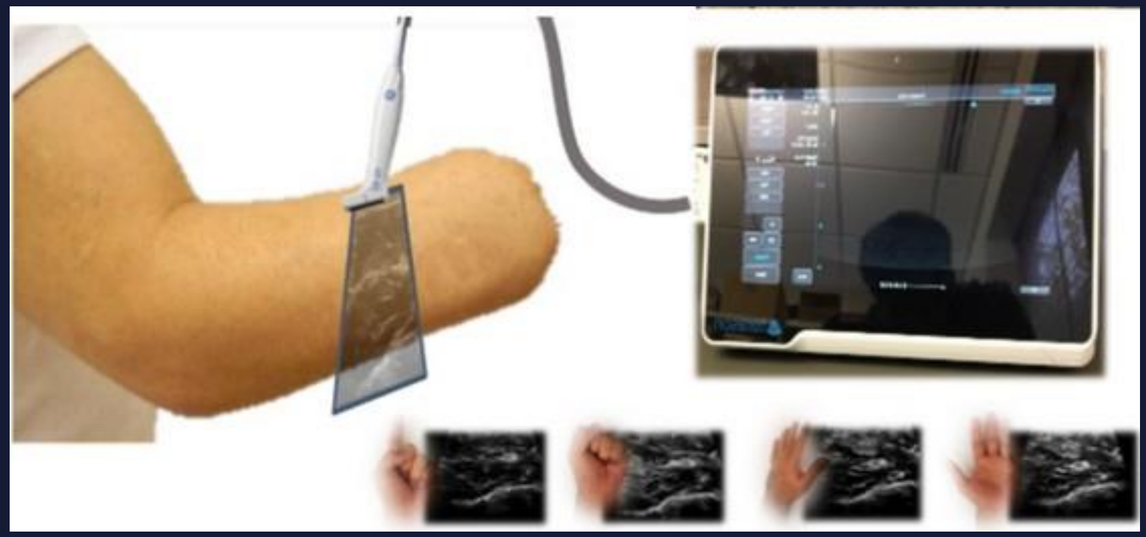
- Medical Image Processing and Data Analysis Including applications of Artificial Intelligence.
- Finite Element Modeling of Disease.
- Medical Image Processing and Analysis for Clinical Translation .
- Development of Mathematical model/algorithm that could allow early detection of acute liver failure.
- Wearable Immunosensor for sweat biomarker monitoring.
- Self Adhesive Immonomodulatory Injectable Cardiac patch for the treatment of Myocardial Infarction.

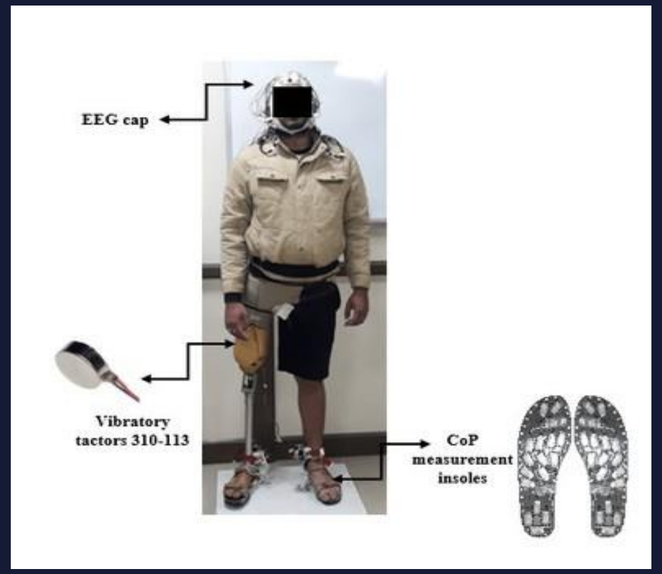
Softwares

that Students are familiar with and using extensively.

Research Gallery



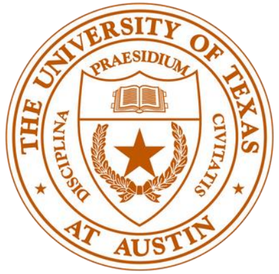




Collaborations

Government Organizations

Academic Organizations



Previous year Students Placed at

Please visit website of the Office of Career Services (https://ocs.iitd.ac.in) for information regarding recruitment process and more.

Contact Us

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