



Biomedical engineering



भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Addressing the grand healthcare challenges

PhD admissions brochure



PhD admissions - Dept. of Biomedical engg.

We welcome applications from suitably qualified and highly motivated students, willing to pursue research in Dept. of Biomedical engineering at Indian Institute of Technology, Hyderabad.

Research areas of all faculty are provided below.

Biomedical imaging

Dr. Renu John

- Novel non-invasive bio-imaging techniques
- Coherence imaging and microscopy techniques
- Molecular contrast agents and Targeted molecular imaging
- Nanoparticles
- Targeted drug delivery and Bio-photonics applications



[Lab website](#)

Biomicrofluidics

Dr. Harikrishnan Narayanan Unni

- Micro and Nano Scale flows and particle/cell interactions
- Biomolecule transport and Mesoscale Properties
- Dissipative Particle Dynamics (DPD) simulation
- Micro-Nano Fabrication of Lab-on-a Chip devices and Biosensors



Regenerative medicine & stem cell research

Dr. Subha Narayan Rath

- Evaluation of in vitro stem cell-biomaterial interactions for tissue engineering applications
- Molecular biological analysis of angiogenesis, osteogenesis, and evaluation of diabetic cell therapy
- Application of 3D-cell printing for regeneration of vascularized and osteo-chondral tissues.



[Lab website](#)

Nano medicine & regenerative medicine

Dr. Jyotsnendu Giri

- Micro/nano system for vaccine development
- Immunoengineering
- Cancer therapeutics
- Novel Biomaterials for Tissue Engineering
- Stem Cell Engineering
- Drug Delivery



[Lab website](#)

Computational neurosciences

Dr. Mohan Raghavan

- Modeling of spinal cord and central nervous system
- Computation in motor neurons
- Role and significance of electrical synapses in motor system
- Modeling neural circuits for augmented diagnostics and therapy



[Lab website](#)

Note: Candidates with a background in programming, mechanical engg or any other quantitative sciences are preferred!!

Bio-nanotechnology and Nanomedicine

Dr. Aravind Kumar Rengan

- Organo-inorganic nanohybrids for Photothermal therapy
- Cancer Nanotechnology
- Nanotoxicology
- Triggered Drug Delivery
- Theranostic applications



[Lab website](#)

Biofabrication and Tissue engineering

Dr. Falguni Pati

- 3D bioprinting of tissue/organ constructs
- In vitro tissue/organ models
- 3D bioprinting for tissue engineering and regenerative medicine
- 3D printed anatomical and surgical models
- 3D printing for plastic and reconstructive surgeries



Neurotechnology and neuroscience

Dr. Kousik Sarathy Sridharan

- Neuroimaging of the healthy and diseased brain
- Invasive and non-invasive neuromodulation for neurological and psychiatric disorders
- Neuromonitoring at point of care
- Bioinstrumentation



[Lab website](#)

Eligibility criteria

1. First class or 60% marks (55% marks for SC/ST) in Master's Degree in Science/Engineering / Technology
2. M.Tech./M.E./M.S.(Engineering/Technology) degree with first class or equivalent in the respective or allied areas
3. Candidates with Bachelor's degree in Engineering/Technology or Master's degree in Sciences in an allied area and possessing a valid GATE score may also apply.
4. For those who have not yet completed their qualifying examination, marks up to the 7th semester/ 3rd year (for B.Tech students) and 3rd semester/ 1st year for PG students will be considered
5. Candidates with CSIR-NET-JRF / UGC-NET-JRF award for Research fellowship or equivalent or GATE Qualification are encouraged to apply
6. Please note that more stringent criteria may be used based on the marks in previous degrees in short-listing candidates to be called for interview.

General information

- Residency requirement is compulsory for external registrants to complete the required course credits (a minimum of four (4) courses) in the first year
- Applicants working in reputed R&D Organizations/Laboratories are eligible to apply
- Such applicants (a) need to be deputed on leave by the parent organization/department (b) do not require GATE qualification, and (c) will not be paid any assistantship or scholarship by IIT Hyderabad.
- Selection process is purely merit based and candidate will be tested in interview
- Application fees and details are available on IITH web page (www.iith.ac.in)
- Create login id and apply online on IITH website www.iith.ac.in/phdadmissions

Contact details



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Join us in an exciting journey...!