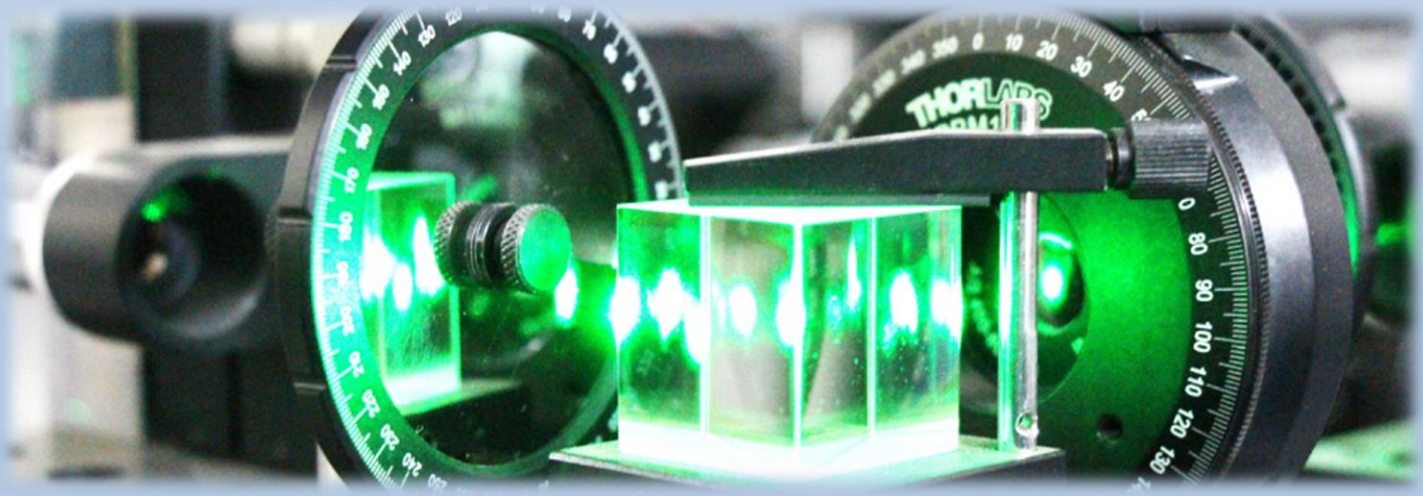
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Indian Institute of Technology, Hyderabad
Department of Biomedical engineering

Master of Technology in

Biomedical engineering

Admissions brochure- July 2020



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Vision

The Biomedical engineering at IIT Hyderabad is where the boundaries between disciplines fade for defining excellence in research and education. The primary mission of the department is to foster interdisciplinary work of highest quality by bringing together a broad spectrum of faculty expertise under a single umbrella to focus on research in Biomedical engineering. The M Tech Biomedical Engineering programme (BME) at IITH is a 2-year programme and offered to students qualifying GATE examination.

M Tech BME curriculum involves an intensive course and laboratory work for two semesters followed by research project for two semesters.

There are two broad focus groups within a typical M Tech cohort:

1. **Healthcare Engineering & Analytics**
   - Typically requires a background in EE, CS, Instrumentation, Physics, Math or quantitative sciences
2. **Biomaterials and Nanomedicine**
   - Typically requires a background in biotechnology, medicine, pharmaceutical or life sciences

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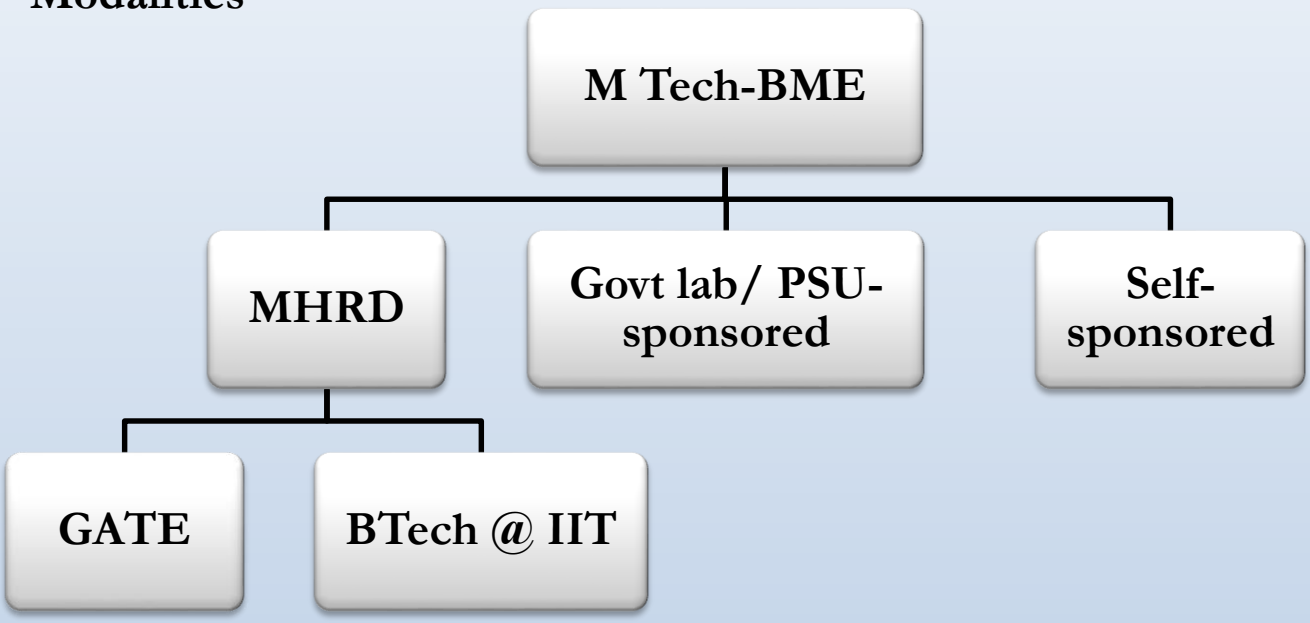
Modalities



The program is also available to up to ten students in a ***self-sponsored & Govt lab/PSU-sponsored mode***. The basic eligibility criteria is the same across all modalities of admission.

A **3-Year MTech program** is also available subject to availability of projects.

GATE Disciplines

- Biomedical engineering (BM)
- Biotechnology (BT)
- Electrical Engineering (EE)
- Electronics and communication Engineering (EC)
- Instrumentation Engineering (IN)
- Computer Science and Information technology (CS)
- Life Sciences (XL)
- Chemistry (CY)
- Mechanical Engineering (ME)
- Chemical Engineering (CH)
- Engineering Sciences (XE) with compulsory Mathematics paper
- Textile Engineering and Fibre Science (TF)
- Metallurgical Engineering (MT)
- Physics (PH)

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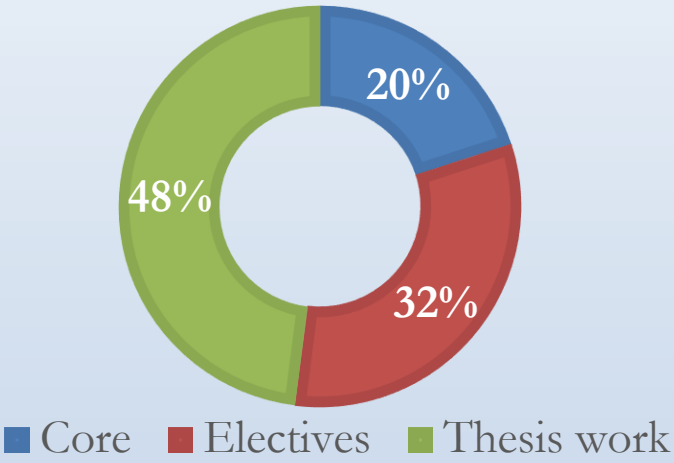
Credit requirements

Total course credits – 50 credits

Core (compulsory) – 10 credits

Elective courses – 16 credits

Thesis work – 24 credits



Elective themes

- Biophotonics & optics
- Biomedical imaging
- Biomechanics & microfluidics
- Biomaterials
- Regenerative medicine
- Neuroscience & Neurotechnology
- Biofabrication
- Tissue engineering
- Nanomedicine
- Computational biology

Eligibility criteria – M Tech (BME)

Common criteria for all modes: First class or 60% marks (55% for SC/ST reserved categories) in **(A)** BTech/BE in Biomedical, Biotechnology, Electrical, Electronics and communication, Instrumentation, Mechanical, Computer Science and Information Technology, Chemical Engineering, Metallurgy and Material Science, Textile Engineering and Fibre Science, Engineering Sciences **(or) (B)** M Sc or equivalent (2 year) in Physics, Biophysics, Chemistry, Material science, Ceramics, Electronics, Computer Science, Life Sciences , Physiology, Engineering Sciences (or) **(C)** MBBS, BDS, BPharm, BVSc or equivalent programme with duration of 4 years or more.

Specific for MHRD GATE mode: Applicants should have cleared GATE (for engineering and science graduates in their respective disciplines)/G-PAT/JGEEBILLS. For candidates with their degrees in Medical Science need to clear AIIMS / All India MCI/JIPMER/PGI Chandigarh/AFMC Pune/DNB Part I national level medical postgraduate entrance examinations or GATE Life Sciences examination for medical and biological sciences, and All India level pre-MDS/ MVSc selection examination for BVSc and BDS candidates. Eligibility / rank certificates are required for all such entrance examinations.

Specific for MHRD-IIT-BTech - Students who pass out of **IITs** with a relevant **BTech degree** (GPA >8) do not need a GATE score and can apply.

Financial support (i.e., assistantship or scholarship) will be provided to up to ten Indian students enrolled under the MHRD mode.

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