

M.TECH. IN COMPUTATIONAL CHEMICAL ENGINEERING

At the Department of Chemical Engineering @ IITH, we prepare the next generation of chemical engineers who can solve today's socio-technical problems with emphasis on sustainability



About the Program

- ✓ *The M. Tech. program in Computational Chemical Engineering is to be offered to students who are interested in advanced learning and research in this field with a focus on Multiscale Modelling and Simulation Techniques in Chemical Engineering.*
- ✓ *The curriculum is at the intersection of Chemical engineering, Mathematics, and Computing which involves learning and contributing in the areas of Computational Thermodynamics, Systems Engineering, Computational Fluid Mechanics, Reaction Modelling, Modelling Biological Processes, Transport Phenomena, Atomistic Simulations, Molecular Modelling, Numerical Modelling, Optimization Techniques etc.*

Admission Process

ELIGIBILITY:

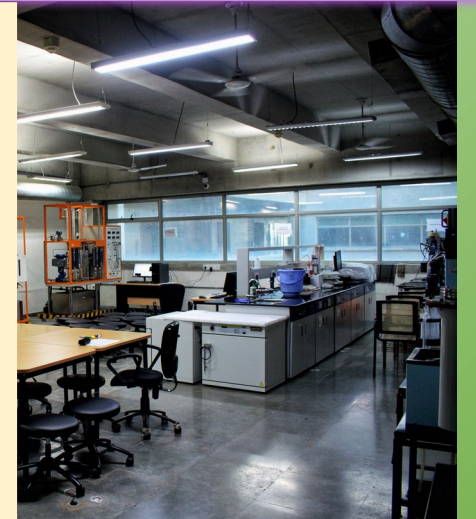
REGULAR MTECH (2 Years): The department offers a two-year regular MTech program in Chemical Engineering with teaching assistantship. Admission is based on a valid GATE score. Students in their final semester of B.E./B.Tech. are eligible, subject to result declaration by July 15, 2026. IIT graduates with a minimum CGPA of 8.0 in Chemical Engineering or related disciplines can apply without a GATE score.

SELF-SPONSORED MTECH (2 Years): The department offers a two-year Self-Sponsored MTech program. Applicants must hold a B.E./B.Tech. from a government-recognized institution with a minimum CGPA of 7.0 (equivalent to 70% marks). A valid GATE score is not required.

* MSc in Mathematics, Chemistry or Physics with 1st division / 60% marks are also eligible

Selection Procedure:

- ✓ Regular MTech Program with a valid GATE Score: Admission is solely based on the GATE score.
- ✓ Self-Sponsored MTech Program: Selection is determined by performance in a written test and/or personal interview.
- ✓ Direct Admission: Graduates of IITs with a minimum CGPA of 8.0, without a GATE score, are eligible to apply. The department may conduct a written test or interview for their selection



Department of Chemical Engineering

Indian Institute of Technology, Hyderabad

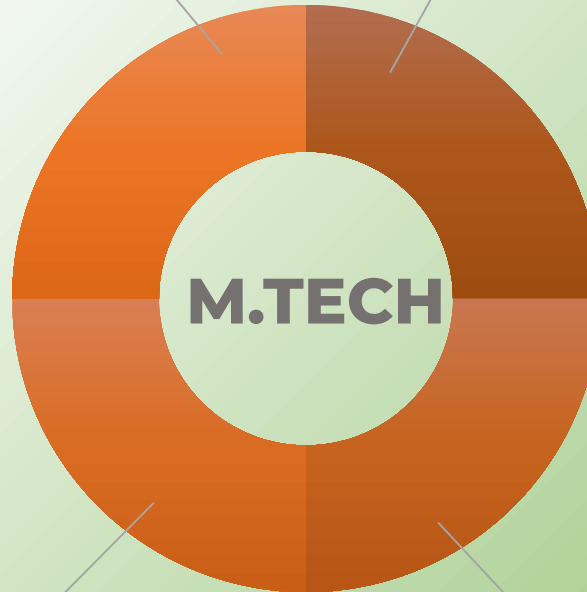
M.TECH (COMPUTATIONAL CHEMICAL ENGINEERING) – COURSE DISTRIBUTION

SEMESTER-1

- Advanced Numerical Methods
- Heterogeneous Catalytic Reaction Engineering
- Advanced Process Control
- Process Integration
- Process Engineering Lab
- English Communication
- Electives

SEMESTER-2

- Advanced Transport Phenomena
- Molecular Thermodynamics
- CFD Lab
- Industry Lectures
- Thesis (Stage 1)
- Electives



SEMESTER-4

- Thesis (Stage 3)

SEMESTER-3

- Thesis (Stage 2)