DEPARTMENT OF CIVIL ENGINEERING
(Serving the Nation since 1856)

Invites Applications For

MASTER OF TECHNOLOGY

for the Academic Year 2025–26

M. Tech. Specializations and Eligibility Criteria

Specialization	Qualifying degree	Valid GATE paper code (admission through CCMT)
Structural Engineering	B. E. / B. Tech.	CE
Geotechnical Engineering		CE
Transportation Engineering		CE
Water Resources Engineering and Geoinformatics		CE, AG, ES, GE
Environmental Engineering and Management		CE, CH, ES, MN, MT, ME, EE, PE, BT, CY

Build your Future at our Department

The department of Civil Engineering, IIEST Shibpur is the flagship department of this Institute of National Importance, with rich legacy since 1856. It offers the following unique strengths that foster advanced knowledge, research aptitude, and career readiness.

- Specially tailored course curriculum aligned as per National Education Policy (NEP 2020)
- MHRD-funded scholarships (GATE-qualified candidates)
- Expert faculty members with excellent academic record and industry experience
- State-of-the-art laboratories and computational facility
- Strong industry collaborations and opportunities to engage in ongoing sponsored research/consultancy projects
- Good placement opportunities and scope for higher studies
- Inter-disciplinary research opportunities

Scan to explore the Department

Thrust Areas

Structural Engineering

- Continuum and Computational Mechanics
- Structural Dynamics
- Structural Health Monitoring (SHM)
- Structures under Extreme Events
- Vibration Control
- Composite Structures
- Repair and Retrofitting
- Experimental Methods
- AI/ML, Uncertainty and Optimization
- Safety and Reliability

Geotechnical Engineering

- Theoretical Soil Mechanics
- Basic and Applied Soil Mechanics
- Foundation Engineering
- Soil Dynamics
- Geotechnical Earthquake Engineering
- Large-scale model testing and Instrumentation
- Centrifuge Facility (1.5 m radius beam centrifuge)
- Computational Geomechanics
- Ground Improvement and Geosynthetics
- Environmental Geotechnics
- Geophysical Characterization
- Geotechnics for Road and Railway
- Rock Mechanics and Rock Tunneling
- Underground Space Technology

Transportation Engineering

- Highway Capacity and Traffic Flow Analysis
- Road Safety
- Sustainable Transportation Planning
- Public Transportation Systems
- Sustainable Pavement Materials
- Pavement Design and Performance Study
- Intelligent Transportation Systems
- Transportation in Logistics and Supply Chain Management

Water Resources Engineering and Geoinformatics

- Integrated Watershed Management using Remote Sensing and GIS
- Climate Change Impact Analysis in Water Resources
- Stochastic Hydrology
- Rainfall Modelling using AI/ML
- Urban Drainage/ Storm-Water Management and Urban Flooding
- Modelling of Extreme Events and Mitigation Measures
- Machine Learning in Water Resources Applications
- Geoinformatics in Agricultural Water Management
- Hyperspectral and Microwave Image Processing
- Flow in Open Channels and Sediment Transport
- Numerical Modeling of Natural Disaster

Environmental Engineering and Management

- Drinking Water Treatment for Removal of Arsenic, Fluoride, Microbes and other Trace Contaminants
- Wetland Systems for Waste Management
- Municipal Wastewater Treatment and Recycling
- Removal of Emerging Contaminants from Water
- Municipal and Industrial Solid Waste Management and Recycling
- Air Pollution Mitigation
- Plastic and E-waste Management
- Hazardous Waste Management

Major Recruiters/ Research Engagement of Alumni