



# WELCOME FROM THE HEAD OF DEPARTMENT



Greetings and welcome to the Department of Civil and Infrastructure Engineering at Indian Institute of Technology (IIT) Jodhpur. Established with the ethos of excellence and innovation, our department stands as a cornerstone of the institute's academic prowess. Since its inception in 2020, the Department of Civil and Infrastructure Engineering has been at the forefront of shaping the infrastructure landscape of our nation. With a rich legacy dating back to our founding year 2020, our department has grown into one of the most esteemed and expansive departments at IIT Jodhpur. Boasting a talented cohort of esteemed faculty members distributed across various specialized divisions, we cater to the academic needs of undergraduate and postgraduate students, including a thriving community of doctoral scholars.

At the heart of our department lies a commitment to providing unparalleled educational experiences and fostering cutting-edge research endeavours. Backed by state-of-the-art laboratories and unwavering support from our dedicated staff members, we take pride in being a premier destination for aspiring civil engineers seeking top-tier education and research opportunities in the country. Our faculty members are not only just educators but also pioneers in their respective fields, actively engaging with global challenges through their ground-breaking research and consulting projects. From addressing critical infrastructure needs to shaping industry standards, our faculty members' endeavours transcend boundaries, resulting in impactful publications in renowned journals and transformative solutions for real-world problems.

This department serves as a testament to the expertise and achievements of our esteemed faculty members, showcasing their remarkable contributions to the field of civil and infrastructure engineering. Whether you aspire to delve into the depths of knowledge or seek innovative solutions to complex engineering challenges, we invite you to embark on a journey of exploration and discovery within our vibrant academic community.

I extend a warm welcome to you as you embark on this enriching journey with us, where boundless opportunities await to nurture your passion and drive for excellence in the Department of Civil and Infrastructure Engineering at IIT Jodhpur.

**Prof. Subhasish Dey,**

FNA, FASc, FNASc, FNAE, FIAHR, MASCE, JC Bose Fellow  
Distinguished Professor & Head of Department



## OUR CAMPUS

### Vision

Indian Institute of Technology Jodhpur a future-driven institute for nurturing excellence of thought; creating, preserving, and imparting knowledge; and using transformational technologies/interventions with a multidisciplinary approach for responding to societal challenges and aspirations.

### Mission

- Foster humanitarian values, passion for learning, and creativity in faculty and students.
- Move towards high quality, futuristic educational, and research ecosystem.
- Develop socially responsible faculty, students, and future leaders, committed to creating self-reliant India.
- Catalyze a professional internal culture along with enabling infrastructure and ancillary services.
- Forge effective national as well as international collaboration and partnership with industry and academia for diverse purposes and activities.





# ABOUT THE DEPARTMENT

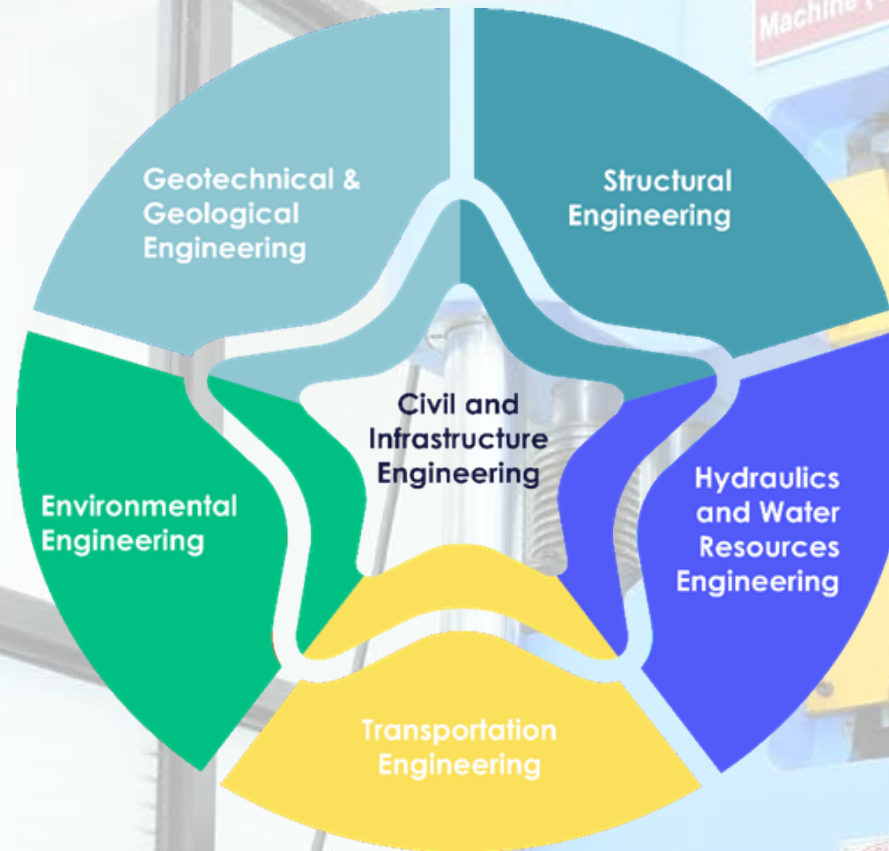
The rapidly urbanizing society and increasing quality of life demand reliable and intelligent infrastructure systems that cater to societal needs at different scales – from the individual to the community level. Consequently, the civil and infrastructure industry has undergone profound changes and is constantly evolving. However, the new-age designs and innovations in the civil and infrastructure industry can only be driven by a group of engineering graduates with multidisciplinary training and a sound understanding of emerging technologies. The Department of Civil and Infrastructure Engineering, IIT Jodhpur, was established in January 2020. The department offers unique programs that incorporate and integrate the elements of conventional civil engineering with advanced transformative technologies such as artificial intelligence (AI), cyber-physical systems (CPS), digital twins (DT), and automated management and information systems. Additionally, a significant thrust is also planned on the design, implementation, and maintenance of large-scale integrated infrastructure systems across different domains.





## DEPARTMENT'S VISION

The Department strives to be an internationally renowned centre of excellence in education, research, and innovation with a major focus on sustainability and digitalization of infrastructure.







# THE COURSES ACADEMIC PROGRAMS





## UNDERGRADUATE PROGRAMS

### B.TECH IN CIVIL AND INFRASTRUCTURE ENGINEERING



B Tech Civil and Infrastructure Engineering



## POSTGRADUATE PROGRAMS

### M.TECH IN CIVIL AND INFRASTRUCTURE ENGINEERING



M.Tech/M.Tech-Ph D Civil and Infrastructure Engineering with Specialization in Energy



M.Tech/M.Tech-Ph D Civil and Infrastructure Engineering with Specialization in Environmental Engineering



## Ph.D. PROGRAMS

### Ph.D. IN CIVIL AND INFRASTRUCTURE ENGINEERING



Transportation Engineering



Geological Engineering



Pavement Engineering



Environmental Engineering



Concrete Technology



Structural Engineering



Geotechnical Engineering



Hydraulics and Water Resources Engineering



The background is a composite of two images. The left side, with a red-to-purple gradient overlay, shows a red, porous cylindrical sample being cut by a blue blade. The right side, with a blue-to-white gradient overlay, shows a dark, porous cylindrical sample mounted in a metal testing fixture with several bolts.

# GOING BEYOND THE **CLASSROOM** LABORATORY





***Structural Laboratory***



***Transportation Laboratory***



***Geotechnical Laboratory***



***Air-Quality Laboratory***



***Geological Engineering  
Laboratory***



***Environmental  
Engineering Laboratory***



***Fluid Mechanics Laboratory***





## LIST OF OTHER SIGNIFICANT FACILITIES

- Transportation System and Traffic Modelling (TSTM) Laboratory
- Flexural Testing Machine
- Concrete Permeability Test
- Gas Analysers and Althalometer
- pH and Conductivity Meters
- Triaxial Accelerometer
- Profometer Corrosion
- Ultrasonic Pulse Velocity Tester
- Ductility Apparatus
- Impact of Jet Apparatus
- Cyclic Triaxial Apparatus
- Ground Penetrating Radar with 350 Hz
- Brazilian Index Tester
- Rock Shear Strength Measurement Apparatus
- Fumehood and Autoclave
- Stress Path Apparatus
- Consolidation Test Apparatus
- Universal 8 Channel Amplifier



# THE DESIGN RESEARCH AND INNOVATION







**Water-quality assessment and applications of nanotechnology**

**Source apportionment study, emission inventory and carrying capacity for Kota city, Rajasthan**



**Traffic flow modelling for Kota City, Rajasthan**



Response of high-rise structure



**Response of high-rise building structures under fire: Advanced simulations and design strategies**

**Drought Atlas of India**



**Sand Dune Migration and Mitigation in Thar Desert**







# STUDENTS QUOTES





"I am grateful to be part of a department that prioritizes interdisciplinary research, allowing the students to explore novelty in their work. The department's strong emphasis on fundamental research and practical applications ensures that our work has a meaningful impact on society, driving positive change and innovation in our respective fields."

***~Ananya Srivastava***



"Being a PhD student at the Department of CIE has been an exciting experience. The dedicated faculty, collaborative environment, and focus on interdisciplinary learning constantly push me to reach my full potential."

***~ Anand Kumar***



"The state-of-the-art research facilities at CIE have furnished me with an environment conducive to pursuing my scholarly interests in Geotechnical Engineering with a focus on regional issues. While my studies may have focused on the regional problem, the mechanisms or solutions proposed can be applied globally."


***~Sumaja Kolli***



"A place that inspires us to dream big and work smart and push the boundaries."

***~Mohit Bansal***





# ALUMNI ECHOES: TALES OF TRIUMPH





"In my journey through the Energy Programme at IITJ, I came across various perspectives of sustainable energy, broadening my understanding of this field. Exploring its interdisciplinary facets, I realised my passion for developing innovative solutions in sustainable energy."

***Arya P S, M. Tech in Infrastructure Engineering with Specialization in Energy (2022); PhD student, Kansas State University***





# OUTREACH ACTIVITIES





**National Workshop on Current Advancements in Computational Solid and Fluid Mechanics**



**Mini-Symposium On Environmental Nanotechnology: Applications and Implications**



**Open Lecture on Road Safety to Aspiring Engineers**



**National Workshop on "Precast Concrete Building – A Case Study at IIT Jodhpur"**



**National Seminar on Navigating Changes: Adapting to Hydroclimatic Extremes**



**Short-term course on "Digitalization tools for sustainable and Resilient Infrastructure Systems."**





Short-Term Training Program on  
Cyber-security for Water  
Infrastructure



Edificio Bridge Testing



Diwali Celebrations



Department Cricket Tournament



Department Annual Meet