

## Message From HoD



We are a part of modern and growing IIT founded in 2008. Initially the department used to provide M.Tech degree in Civil and Infrastructure Engineering that has been changed to Civil Engineering recently. The Department of Civil and Environmental Engineering at IIT Patna has continually upgraded itself in terms of academic programs and all research infrastructure including state of the art laboratories

The post-graduate syllabus of the Department and its research activities are focused on five specialized areas of Civil Engineering such as Structural, Geotechnical, Transportation, Water resources and Environmental Engineering. Apart from core courses, our curricula provide flexibility to students to choose elective courses of interdisciplinary nature. Students are encouraged to work for their project or dissertation on topics of industrial and societal needs. The presence of state-of-the-art experimental and computational facilities, active industry-academia interaction, rigorous training both inside the classrooms and laboratories as well as through immersive industrial/research internships prepare the students of the Department with their innate quality to meet more than adequately any challenge in their competitive professional life and also take on leadership roles in later years in their career.

I heartily welcome both the recruiters and our post-graduate students to come to a common platform and get the best out of each other. I am quite sure that students of our Department will prove themselves competent enough to meet the challenges of modern technical world and the society. I wish them all the best for their future.

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# Faculty Member



Dr. Ramakrishna Bag



Dr. Subrata Hait



Dr. Avik Samanta



Dr. Pradipta Chakrabortty



Dr. Syed K.K Hussaini



Dr. Amarnath Hegde



Dr. Koushik Roy



Dr. Om Prakash



Dr. Vaibhav Singhal



Dr. Trishikhi Raychoudhury



Dr. Vishal Deshpande



Dr. Sudhir Varma

### About Us

Keeping in mind the infrastructure requirements for improved quality of life in a growing society as well as for industry and economic development, the need of the hour is to focus on Civil and Infrastructure Engineering with interdisciplinary approach.

In order to satisfy the current societal needs and growing industry demands, the M.Tech in Civil and Infrastructure Engineering program started in 2014 under the aegis of Department of Civil and Environmental Engineering at Indian Institute of Technology Patna intends to be the forefront of imparting engineering education by amalgamating traditional Civil Engineering with modern Infrastructure Engineering.

The program is designed to provide in-depth knowledge in the fundamentals, design, analysis and implementation of solutions for modern-days Civil Infrastructure problems. Moreover, the program intends to emphasize application-oriented and thesis/project-based learning.

### **Courses Offered**

#### **Core Courses**

- 1. Advanced Engineering Mathematics
- 2. Civil Engineering Design I &II
- 3. Finite Element Methods
- 4. Technical Communication
- 5. Civil Engineering Lab I&II

#### **Electives Courses**

- 1. Structural Dynamics
- 2. Soil Exploration
- 3. Ground Improvement Techniques
- 4. Air Pollution and Control
- 5. Railway Engineering
- 6. Site Remediation
- 7. Groundwater Hydrology
- 8. Geometric Design of Highway
- 9. Design of Flexible Pavement

## Student's Project List

- 1. Seismic behaviour of building considering soil-structure interaction
- 2. Correlation between electrical resistivity of soil and SPT-N
- 3. Seismic design of piles
- 4. Damage detection considering soil structure interaction
- 5. Estimation of direct runoff volume
- 6. Mechanical and biological behavior of Bikaner and bermer bentonite
- 7. Back calculation of dynamic modulus in flexible pavement under moving load
- 8. Waste management
- 9. Finite element modelling of confined masonry structure

## Research Lab



Railway Engineering Lab



Structural Engineering Lab



Soil Dynamics Lab



CAD Lab



Geotechnical Engineering Lab



Environmental Engineering Lab



Transportation Engineering Lab



Civil Engineering Workshop

## Student's Activities

## ACE

The Association of Civil Engineers is a student club established to proliferate knowledge & provide industrial exposure by bringing corporates, professors and students on common platform. The various activities include technical seminars, talks on going research practices, competitions and quizzes. The students are also encouraged to participate in technical competitions in various fests.

### Samnivesha

Samnivesha is the two-day civil technical fest of IIT Patna organized by ACE of DCEE. The idea behind Samnivesha was to provide people with the glimpse of depth of beauty of the field of Civil Engineering and the idea was certainly fulfilled. The two days provided are certainly something to behold. The maiden edition witnessed a footfall of over 300 people from outside the campus of IIT Patna.

The events organized are spectacular and interesting for each and everybody present. Workshops and Quiz are also organized for the participants. Other events which caught participants eyes were Richter 9.0, Blueprint, House of Cards, Research Conclave.



#### **Contact Us**

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