

DEPARTMENT OF CIVIL AND  
ENVIRONMENTAL ENGINEERING

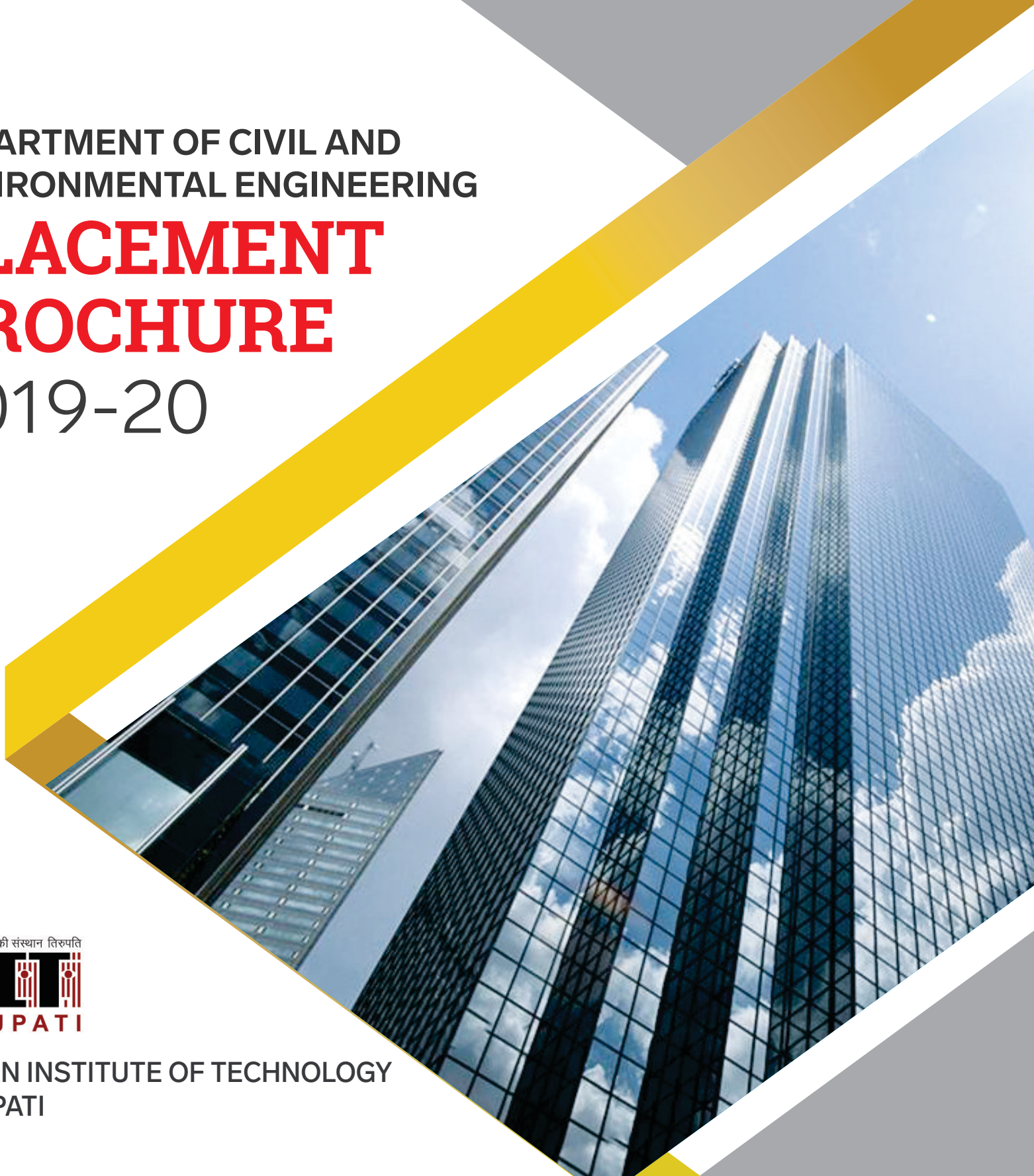
# PLACEMENT BROCHURE

2019-20

भारतीय प्रौद्योगिकी संस्थान तिरुपति



INDIAN INSTITUTE OF TECHNOLOGY  
TIRUPATI







Indian Institute of Technology Tirupati, Renigunta Road, Tirupati–517506, A.P.

## ABOUT THE INSTITUTE

<http://cdc.iittp.ac.in>

The Indian Institute of Technology at Tirupati, along with the other five 3<sup>rd</sup> generation IITs, was announced by the Government of India in 2014. In August 2015, the Institute rolled out the red carpet for its first batch of undergraduates in four core branches of engineering. The Institute has witnessed immense growth in terms of faculty recruitment, the start of new academic programmes, research initiatives and infrastructure development. MS (by research) and PhD programmes in the four engineering streams – Civil and Environmental Engineering, Computer Science and Engineering, Electrical Engineering and Mechanical Engineering, Mathematics, Sciences and Humanities were launched in July 2017. M.Tech programmes in three branches of engineering commenced in August 2018. Within a short period of time, IIT Tirupati has been able to build world-class infrastructure and acquire the latest equipment for carrying out advanced research. IIT Tirupati Transit Campus project has been awarded the GRIHA Council Award for exemplary demonstration of Sustainable Building Material/Technologies and it is the First Prize winner of HUDCO Design Awards 2018 under the category of Green Buildings.

Alongside academics, social service is also being given due importance, encouraging students to develop applications to better lives. The institute foresees a further accelerated growth with the enthusiasm and the involvement exhibited by the students, the faculty and the management.





**Prof. K.N. Satyanarayana**

The establishment of Indian Institute of Technology Tirupati (IITT) was announced in 2014 by the Government of India along with five other new IITs at Palakkad, Jammu, Bhilai, Goa, and Dharwad (announced in 2015). IIT Tirupati launched its academic programme with the support of its mentor Institute, IIT Madras, on August 5, 2015 from a temporary campus situated on Tirupati-Renigunta Road,

## MESSAGE FROM THE DIRECTOR

Tirupati. In the fourth year of its operations, IIT Tirupati has started partly functioning from its 530 acres Permanent Campus located in Merlapaka Village on Yerpedu-Venkatagiri Highway. The construction of the permanent campus is underway and the first phase of the construction is expected to be complete by 2020 that will cater to 1250 students and 120 faculty members. The complete campus to cater to 2,500 students, 250 faculty members and 275 staff members is planned to be built by 2024.

Currently, the Institute offers admissions to B. Tech programme against 203 seats in the branches of Chemical Engineering, Civil Engineering, Computer Science and Engineering, Electrical Engineering, and Mechanical Engineering, and M. Tech in Civil Engineering, Computer Science & Engineering, Electrical Engineering, and Mechanical Engineering. With the completion of the third round of faculty recruitment, the faculty strength of the Institute will reach around 90. Along with young and dynamic faculty, who have joined after completing their doctoral programs and postdoctoral training from top Universities/Institutes across the world, IIT Tirupati has several senior faculty from other established IITs. Being young and energetic, the faculty members have established their latest world-class research programs at



IIT Tirupati. This has given the students an opportunity to get involved in these research initiatives. The Institute has signed MoUs with various academic laboratories and institutions of international repute in India and abroad for the collaborative research and exchange of faculty and students. The students are fully availing these research opportunities outside IIT Tirupati. As part of their curriculum, the graduating batch students completed their summer internship between May and July 2019 in top class companies, academic and research institutions. The students actively participated in summer internship drive that ensured them 100% internship opportunity. This internship experience has provided them with an opportunity to connect the classroom knowledge with its real-world applications.

The Institute provides an environment that fosters curiosity and creativity within and beyond the classroom. With strong emphasis on theory and fundamentals, the

students have participated in various technical events around the country like Smart India Hackathon and Inter IIT Tech meet. Along with academics, we encourage our students to participate in extracurricular activities as well. The students actively participate in numerous clubs such as astronomy, music, social outreach, etc. Students have taken up excellent initiatives to set up the sports and cultural events on the campus that have helped the students to hone collective responsibility skills and leadership qualities.

Being a new Institute, IIT Tirupati is nimble and aggressively pursuing opportunities to collaborate with leading Indian & multi-national companies, public sector organizations, financial institutions and others. We highly value our partnership with the Industry and remain committed to making your recruiting experience with IIT Tirupati productive and positive. I cordially invite you to IIT Tirupati for the on-campus placement process.





## ABOUT THE DEPARTMENT

The Department of Civil and Environmental Engineering is one of the first four departments set up at IIT Tirupati. It offers numerous courses at the undergraduate level to introduce students to both the industry and research. Most of the courses are structured in a problem-solving or a design-based approach, which are currently the key demands of the industry. Undergraduate research is encouraged by the institute by providing B.Tech students the option of working on research projects with their faculty as a part of their curriculum.

The department is enriched with an academic personnel consisting of 13 permanent members who mentor doctoral

research scholars from various sub-disciplines. In addition to the existing M.S. and PhD programmes, the department has also commenced masters programmes in 2019 with specializations in environmental and water resources engineering, structural engineering and transportation and infrastructure engineering. This has brought in a wide range of specialized courses for the final year B.Tech students.

Sponsored projects and consultancy are two important activities of the department, besides academics. The faculty and the students have worked together to address a variety of engineering problems posed by various organizations. They have participated actively in smart city projects for Tirupati city.

## MESSAGE FROM HEAD OF THE DEPARTMENT



Dr. Abhijit Ganguli

It gives me immense pleasure to introduce the Department of Civil Engineering at IIT Tirupati. The Civil Engineering undergraduate students are offered various courses during the four years of their curriculum to equip them for taking up various challenges in their profession.

The analytical foundation necessary to be an engineer is imparted through basic sciences and engineering courses, which the students take during the initial period of their stay

in the Institute. This is followed by departmental courses that train the students thoroughly in the theoretical aspects of the wide spectrum of sub-disciplines pertaining to the Civil Engineering profession. Practical and engineering aspects of the stream are imparted through design and laboratory courses. Soft skills, managerial education and real-life experience in the Industry are accorded through a summer internship program.



# WHY RECRUIT IIT TIRUPATI?

promoting an excellent  
atmosphere to

think  
create  
study  
research

IIT Tirupati aims to focus on the holistic development of the students by designing a curriculum which emphasizes knowledge, personality development and life-skills.

- Established in 2015 as a third generation IIT, the Institute is invested specifically in promoting an excellent atmosphere to think, create, study and do research. At IIT Tirupati, teaching and research go hand in hand reinforcing each other.
- The 2020 graduating batch of 113 students have officially registered 100% summer internships with students being offered diverse roles across various domains.
- Furthermore, students have also been awarded various fellowship programs such as Texas A&M research internship and Rowan University Internship.
- Last year, out of 91 students registered for placement 70 are placed in reputed companies with an average package of 9.18 LPA.
- IIT Tirupati has signed MoUs with a number of public and private organizations, which include CSIR labs, CMTI-Bangalore, SBI, CPWD, Nagaoka University of Technology, Texas A&M Engineering Equipment station, Toshiba Software India, Analog Devices India (ADI) Private Limited, etc., to ensure that the students get an opportunity to work in the leading labs and industries in the nation and the world.



## B.TECH PROGRAMME

### First year

- Basic sciences [Physics, Chemistry]
- Engineering Mathematics
- Workshops
- Basic Engineering courses [Engineering graphics, mechanics and computational engineering]

### Second year

- Solid mechanics and fluid mechanics
- Structural analysis
- Building drawing
- Functional design of buildings
- Soil mechanics
- Surveying: theory and practical

### Third year

- Structural design: Reinforced concrete and steel
- Geotechnical Engineering
- Water resources engineering
- Environmental Engineering
- Transportation Engineering
- Labs [Construction materials, Structural engineering, hydraulic and environmental engineering]

### Fourth year

- Estimation and Construction management
- Specializations
- Final Project

### B.Tech Project

- Duration : 1 Year



## LABS AND INFRASTRUCTURE

### Building Materials Laboratory

The Building Materials Laboratory at the institute is intended not only to introduce undergraduate students to the different tests carried out on construction materials, but also to incubate quality research in the same field. Apparatus conforming to the ASTM standards for tests on cement and concrete are used.

### Geotechnical Engineering Laboratory

The Building Materials Lab embodies an exclusive geotechnical engineering laboratory section. It encompasses a wide range of equipment to carry out different physical and mechanical tests on soils. Being in accordance with the relevant standards, the equipment aids research work in addition to academics.

### Environmental Engineering Laboratory

The Environmental Engineering laboratory is well equipped for conducting numerous tests pertaining to water and wastewater quality. In addition, it houses powerful equipment required for material characterization also.

### Hydraulic Engineering Laboratory

The main intention of the Hydraulic Engineering Laboratory is to strengthen the fundamentals of hydrostatics, pipe flow and open channel flow learnt by the students in class by providing them a hands-on experience.



### Structural Engineering Laboratory

The institute has a scaled structural engineering laboratory equipped with high-quality apparatus to support both academics and research. A wide range of experiments on solid mechanics and structural engineering are performed by the undergraduate students in the lab. Besides, the lab is well equipped to carry out mechanical characterization tests on commonly used building materials and composites.

### Transportation Engineering Laboratory

Pavement materials characterization and performance analysis are the main activities carried out in the Transportation Engineering Lab. High-quality equipment enables robust experiments on tailor-made, sustainable pavement materials used in the construction of parts of the institute's permanent campus.

## AREAS OF RESEARCH

### Structural Engineering

Earthquake resistant low-cost housing systems, structural health monitoring, modelling and quantification of uncertainties in structural systems and Non-destructive testing to simulate corrosion

### Transportation Engineering

Development of pavement materials (Pervious concrete) and Pavement maintenance and management systems.

### Environmental Engineering

The broad area of research is in the development of nanomaterials for environment remediation and development of affordable disinfection system for rural India

### Hydraulic Engineering

The main research area is the Evaluation of groundwater sustainability in Chittoor District





## CO-CURRICULAR AND EXTRA CURRICULAR ACTIVITIES

### Coding Club

Being one of the very first student run clubs, the Coding Club at IIT Tirupati seeks to nurture problem solving and coding skills of students. The club has been actively conducting several activities and competitions since its inception. Alongside regular hackathons, the club organizes tutorial sessions to help students learn essential skills while being guided by senior students, faculty and experts.

### Technical Festivals

The students have avidly participated in contests held at various technical festivals across the country like Shaastra, TechFest, Technex along with Inter IIT Tech Meet. At our Institute, students in large numbers participate in competitions conducted in Tirutsava, our annual techno-

cultural festival. The competitions encompass various fields like coding, robotics, computer vision, quizzing, software development etc.

### Literary, Quizzing, Music And Sports Club

Students have taken a keen interest in various cultural and sports activities. The Literary club is among the most active clubs at the Institute. It helps develop an interest towards humanities and sciences and encourages participants to work on bettering their communication skills and bringing a clarity of ideas. The music club conducts various competitions and events throughout the year, helping the students to hone their skills in music. Inter-branch games are the most anticipated activity of an annual year, where students from various branches play their way to the top.



### Achievements

IIT Tirupati participated in the 7<sup>th</sup> Inter IIT Tech Meet 2018 held at IIT Bombay and secured 8th position out of the 23 participating IIT's in Overall General Championship.

Some of the key highlights of the events were,

1. BETiC medical innovation challenge - Gold medal
2. PlutoX Hackathon-Gold medal (Only IIT in this event with Gold)
3. Campus Sustainability challenge - Bronze medal

The students also outperformed in the SMART INDIA HACKATHON and secured First prize of ₹1 Lakh for the problem statement "App Based Solution for Digitization of Valuation of Mobile Assets", followed by teams NightHawks, OnebyZero and Innovation Hunters all securing second place in their respective problem statements.

IIT Tirupati as an active member of Google DSC (Developer Student Club) organised 6 workshops this year which mainly focussed on App development and eventually ended the year with a Summer Project on the same.



## TOP RECRUITERS FOR PLACEMENTS 2018-19



LARSEN & TOUBRO



NCDEX

National Commodity & Derivatives Exchange Ltd.



ONIX  
CAPITAL



aarvee associates  
architects engineers & consultants pvt. ltd.



CONCEPTREE LEARNING  
JEE NEET FOUNDATION

## TOP RECRUITERS FOR SUMMER INTERNSHIPS 2019



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ENERGIES  
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Indian Institute of Science  
भारतीय विज्ञान संस्थान



BMSF Design Consultants Pvt. Ltd.



## ABOUT FACULTY



### **Dr. K.N. Satyanarayana**

Professor

**Ph.D :** Clemson University, USA

**Areas of Interest :** Construction Project Management



### **Dr. Abhijit Ganguli**

Associate Professor

**Ph.D :** Université Libre de Bruxelles, Belgium

**Areas of Interest :** Nondestructive Testing and Evaluation



### **Dr. Shihabudheen M. Maliyekkal**

Assistant Professor

**Ph.D :** Indian Institute of Technology Madras, India

**Areas of Interest :** Environmental Engineering



### **Dr. B. Janaki Ramaiah**

Assistant Professor

**Ph.D :** Indian Institute of Technology Delhi, India

**Areas of Interest :** Geotechnical and Geoenvironmental Engineering



### **Dr. Krishna Prapoorna**

Associate Professor

**Ph.D :** Arizona State University, USA

**Areas of Interest :** Transportation Engineering



### **Dr. Nithyadharan**

Assistant Professor

**Ph.D :** Indian Institute of Technology Madras, India

**Areas of Interest :** Metal structures and Earthquake resistant design



### **Dr. P.V. Sampath**

Assistant Professor

**Ph.D :** Michigan State University, East Lansing, USA

**Areas of Interest :** Water Resources Engineering



### **Dr. B. Radhika**

DST- INSPIRE Faculty

**Ph.D :** Indian Institute of Science, Bangalore, India

**Areas of Interest :** Structural Engineering



### **Dr. Romanbabu M. Oinam**

Assistant Professor

**Ph.D :** Indian Institute of Technology Delhi, India

**Areas of Interest :** Seismic evaluation & Retrofitting of structures



### **Dr. Roshan Srivastav**

Assistant Professor

**Ph.D :** Indian Institute of Technology Madras, India

**Areas of Interest :** Water resources Engineering, Hydroclimatology



### **Dr. Suresh Jain**

Associate Professor

**Ph.D :** Indian Institute of Technology Delhi, India

**Areas of Interest :** Air quality modelling and management; Environmental risk assessment



### **Dr. Bijily Balakrishnan**

Assistant Professor

**Ph.D :** Indian Institute of Technology Madras, India

**Areas of Interest :** Reinforcement concrete design, Prestressed concrete design



### **Dr. A Gowri**

Assistant Professor

**Ph.D :** Indian Institute of Technology Madras, India

**Areas of Interest :** Traffic Flow Modeling and Simulation, Traffic Operations and Management



### **Dr. A. Murali Krishna**

Associate Professor

**Ph.D :** Indian Institute of Science, Bangalore, India

**Areas of Interest :** Earthquake Geotechnics



## CONTACT US

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