M. Tech. INFRASTRUCTURE ENGINEERING AND MANAGEMENT

DEPARTMENT OF CIVIL ENGINEERING

NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH
(Ministry of Education, Govt. of India),
Taramani, Chennai- 600 113, India.
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NITTTR, CHENNAI

The National Institute of Technical Teachers' Training and Research, Chennai is a premier institution established in 1964 under the Ministry of Education, Government of India, dedicated to enhancing the quality of technical education in the country. It has been granted the "Institution Deemed to be University" status by the Ministry recently. This recognition acknowledges our 60 years of commitment to providing quality education and training, marking a significant milestone in our journey towards excellence in technical education and research.

Established to improve the standards of technical education, NITTTR offers a range of programs and services tailored to the needs of educators and institutions in the technical education sector. At the core of NITTTR's mission is the training and professional development of technical teachers. Through its various training programs, workshops, and courses, NITTTR equips educators with the necessary skills and knowledge to excel in their roles. These programs cover diverse topics such as curriculum development, teaching methodologies, educational technology, and quality assurance, ensuring that educators stay updated with the latest trends and practices in the field.

In addition to training, NITTTR also conducts research and consultancy activities aimed at improving the overall ecosystem of technical education. The institutions engages in cutting-edge research to address key challenges and opportunities in the field, contributing to the advancement of knowledge and innovation. Moreover, NITTTR offers consultancy services to technical institutions seeking guidance on various aspects such as infrastructure development, curriculum design, and pedagogical practices.

NITTTR's commitment to excellence in technical education extends beyond its training and research initiatives. The institution actively promotes collaboration and networking among professionals in the technical education sector, fostering a community of practice where ideas and best practices are shared and exchanged. NITTTR plays a pivotal role in shaping the future of technical education in India. By providing high-quality training, conducting impactful research, and offering expert consultancy services, NITTTR continues to make significant contributions towards the enhancement of technical education standards and the development of a skilled workforce for the nation's growth and prosperity.

DEPARTMENT OF CIVIL ENGINEERING

The Department of Civil Engineering was established in 1964 to provide academic leadership in content updating courses in existing and emerging technology areas through short term & long term programmes. Later on the Department ventured in offering Ph.D. in Engineering Education and Civil Engineering to promote research activities. Currently the Department is offering a Postgraduate Program (M.E) Infrastructure Engineering and Management both in regular and modular mode with the choice of learners.

M. Tech. INFRASTRUCTURE ENGINEERING AND MANAGEMENT

Infrastructure is a basic system that a country or an organization uses in order to work efficiently. The Program lays an emphasis on Construction/Infrastructure engineering in terms of designing, planning and environmental management of large buildings, townships, roads and bridges, transportation engineering and Infrastructure Projects. The employment opportunities include Real Estate, Private and Public Sector Undertaking, Transportation Centers, Consultancy Firms, Industrial Plants and Housing & Urban Development Authorities.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

- The graduate will apply management and economic theories to formulate strategies for construction industries to achieve their goals
- The graduates of the program will serve as team members for their projects with critical thinking and decision making capabilities
- The graduates will be capable of integrating their knowledge and skill for solving the problem of construction industries
- The graduates of the programs will have required competence on latest tools and techniques and professional responsibilities for successful completion of projects.

PROGRAMME OUTCOMES (POs)

- Able to independently carry out research / investigation and development work to solve practical problems.
- Able to write and present a substantial technical report / document.
- Able to demonstrate a degree of mastery over the area of infrastructure engineering and management.
- Able to apply the advanced knowledge of planning, analysis, and design fundamentals of infrastructure Engineering and employ these principles to manage projects as members and leaders in a team.
- Able to demonstrate computational (Software) skills in infrastructure engineering planning and management.
- Able to practice ethical and professional responsibilities, engage in lifelong learning, and organize themselves to the changing needs in implementing the infrastructure projects.

CORE COURSES

- Statistical Methods for Engineers
- Contract Management
- Construction Project Management
- Urban and Transportation Planning
- Construction Materials and Techniques
- BIM Laboratory
- Project Cost and Risk Management
- Environmental and Energy Audit
- GIS and Remote Sensing
- Geotechnical Engineering for Infrastructure
- Infrastructure Material Testing Laboratory
- GIS Lab

ELECTIVE COURSES

- Quality Control / Quality Assurance in Infrastructure
- Green Building
- Repair and Rehabilitation of Structures
- Advanced Surveying Techniques
- Laboratory Management System
- Traffic Engineering
- Lean Construction Techniques
- Smart City
- Drone Applications
- Structural Health Monitoring
- ETabs / STAADPRO
- Digital Twin
- Road Safety Audit

IN ADDITION TO THE ABOVE

- Industrial Training (IT) (4 Weeks)
- Project Work Phase 1 & II

FACILITIES OF DEPARTMENT OF CIVIL ENGINEERING

THE DIRECTOR

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