

M.E (Infrastructure Engineering and Management)

(Affiliated to Anna University, Chennai)

PROGRAM BROCHURE



Organized by

Department of Civil Engineering

National Institute of Technical Teachers Training and Research

(Ministry of HRD, Govt. of India)

Taramani, Chennai - 600 113, India

www.nitttrc.ac.in

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1.0 About NITTTR

National Institute of Technical Teachers Training and Research (NITTTR), Chennai was established in 1964 by the Government of India as a key catalyst institution for ensuring quality in technical education in South India comprising the States of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Telangana and the Union Territory of Pondicherry. This Institute being a Resource Institute offers educational services in Curriculum Development, Instructional Methods, Media, Materials Development, Examination Reforms, Institutional Development, Continuing Education, Distance Learning, Training and Development, Educational Psychology, Educational Management and Research. The Institute strives continuously and vigorously to further enhance its sensitivity to environmental changes and greater heights of excellence active collaboration with National and through International agencies on projects and programmes aimed at quality improvement of technical education systems.

2.0 Department of Civil Engineering:

The Department of Civil Engineering organizes need based short - term content updating programmes in the areas of Modern Surveying (Total Station & GPS), GIS, Modern Construction Materials & Techniques, Computer Applications in Civil Engineering, CAD, Special topics on Structural Engineering, Modeling, Animation and Project Management for the benefits of teachers of Polytechnics and Engineering Colleges. The Department's CAD & GIS laboratories are fully equipped with computers with adequate peripherals including projection facilities. Popular software in the areas of surveying, LIS, GIS, and Image Processing are available. Besides conventional surveying instruments, modern Total Station, differential GPS, hand held GPS are being used for training programs. The Department conduct Advanced certificate Course on "Spatial Information Technology for Urban Planning and Management" for the International participants every year under ITEC, TCS and SCAAP schemes of Ministry of External Affairs, Govt. of India. The Dept. proposes to offer Post Graduate Program (M.E) Infrastructure Engineering and Management and M.S (Research) & PhD in Civil Engineering.

Vision

Towards Excellence in Promoting need based Training Programmes and Research in Civil Engineering



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Mission

- To provide support services to Government of India schemes related to technical and vocational education system and as entrusted by MHRD, Government of India, from time to time.
- To offer research, testing services and consultancy for Industries and Govt. Organizations.
- To establish partnership with Industries for offering Skill based Training Programs for Industrial Personnel and Industrial Training for the faculty of Polytechnic and Engineering Colleges.
- To design new instructional system and strategies for production of multimedia learning resources and transfer through latest technologies including broadcasting, webcasting/Multicasting.
- To offer faculty exchange programs by linking with various Universities of India and abroad.

Core Values

Team Work – Networking - Faculty Development - Research and Development – Transparency

3.0 Areas of Short Term Courses

- Geographical Information System and its Applications
- Computer Applications in Project Management
- Modern Surveying using Total Station and GPS
- Construction Techniques and Management
- Free and Open Source Software in Civil Engineering
- Disaster Management
- Civil Engineering Drawing using AutoCAD
- Teaching Engineering Mechanics
- Design of Steel Structures
- Geotechnical Engineering
- Trends in Urban Planning and SMART Cities Development
- Computer Applications in Structural Engineering
- Earthquake Resistant Structures
- Design of RCC Structures
- Design of Bridges & Irrigation Structures
- Strategic Planning and Institutional Development
- Outcome Based Education and Accreditation



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4.0 M.E (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 Centres, Consultancy Firms, Industrial Plants and Housing & Urban Development Authorities. More than all the above opportunities NITTTR will provide an excellent Job opportunity to serve as a great teacher in Engineering and Polytechnic Colleges to the successful students.

The Program Educational Objectives (PEO) for M.E Infrastructural and Management Program

PEO 1: The graduate will apply management and economic theories to formulate strategies for construction industries to achieve their goals

PEO2: The graduates of the program will serve of team members for their projects with critical thinking and decision making capabilities

PEO3: The graduates will be capable of integrating their knowledge and skill for solving the problem of construction industries

PEO4: The graduates of the programs will have required competence on latest tools and techniques and professional responsibilities for successful completion of project

The program will have core courses, Elective courses and project works. The project may also have seminar practical/Industrial training summer project.

Core Courses:

- Statistical Methods for Engineers
- Project Management for Infrastructure
- Traffic Engineering and Management
- Advanced Structural Design
- Infrastructure Planning and Management
- Management of Human Resource and Quality
- Geographical Information systems for Infrastructure Planning.
- Urban Environmental Management
- Geo Technical Engineering for Infrastructures
- Industrial Training Phase I (2 Weeks)
- Contract Laws and Regulations
- Infrastructure for SMART City Planning
- Industrial Training (4 weeks)
- Seminar
- Project Work (Phase I)
- Project Work (Phase II)

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Elective Courses:

- Environmental Impact Assessment for Infrastructure Projects
- Economics and Financial Management
- Pre-stressed Concrete Structures
- Material Procurement and Management
- Earthquake Resistance Design of Structures
- Sustainable Development and Urban Planning
- Modern Construction Material and Technology
- Maintenance and Rehabilitation of Structures
- Pavement Analysis Design and Evaluation
- Disaster Mitigation and Management
- Value Engineering
- Bridge Engineering and Maintenance
- Safety in Construction EngineeringOrganizational Development.

Credits:

The minimum prescribed credits required for the award of the degree shall be within the limits : 65 to 75 (As per Anna University, Chennai)

UNIVERSITY EXAMINATIONS

There shall be an End- Semester Examination of 3 hours duration in each course will be conducted by Anna University.

Faculty Involved

Prof. Dr. SUDHINDRA NATH PANDA

Director

Ph.: 044 - 2254 5406

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Areas of expertise:

Water Conservation and Reuse, Systems approach for Integrated Land & Water Resources Planning & Management.

Prof. Dr. E.S.M. SURESH

Professor & Head, Civil Engg

Ph.: 044-2254 5423 /

944 428 4464

Email: esmsuresh@gmail.com

suresh@nitttrc.ac.in



Areas of expertise:

Remote Sensing & GIS, Urban Planning & Mgt., Disaster Mgt., Geotechnical Engg., Instructional Design & Delivery Systems, Technology Enabled Learning, Strategic Planning & Institutional Management, OBE and Accreditation

Dr. R. SANTHAKUMAR

Professor

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944 403 2745

Email: rscrescent@yahoo.co.in

shanthakumar@nitttrc.ac.in



Areas of expertise:

Analysis and Design of RCC & Steel Structures, Earthquake Resistant Structures, Application of FRP, Finite Element Analysis, Nanotechnology, Designing of Instructional Materials

Dr.G.JANARDHANAN

Associate Professor

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944 552 0968

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dr.gjanardhanan@gmail.com



Areas of expertise:

Geotechnical & Geo-environmental Engg., Solid Waste Mgt., Landfill Design, Technology Enabled Active Learning, Environmental Mgt.

Dr. K.S.A.DINESH KUMAR

Assistant Professor

Ph.: 044 - 2254 5421 /

944 373 7315

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dinesh@nitttrc.ac.in



Areas of expertise:

Structural Engineering, GIS and its applications, Groundwater Modeling, Surveying – GPS and Total Station, Instructional Planning and Student Evaluation

