

## Preamble

Technical textiles have ushered in a new era in Civil Engineering, offering multifaceted solutions across various domains. In-ground stabilization, they play a pivotal role by reinforcing soils and facilitating proper drainage, thereby enhancing the structural integrity of projects like roads, embankments, and retaining walls. Geotextiles, specifically, use extensively in hydraulic engineering, where they combat erosion, boost filtration, and provide crucial reinforcement in structures such as dams, levees, and coastal protection.

Technical textiles significantly contribute to pavement durability and sustainability, reducing maintenance requirements and bolstering infrastructure resilience. Their applications in environmental protection are equally noteworthy, as they combat soil erosion, filter out pollutants, and facilitate vegetation growth, particularly in vulnerable areas like slopes and shorelines. Geotextiles, geogrids, and geomembranes are instrumental in various containment projects, including canals, embankments, and landfills, ensuring stable and environmentally friendly solutions.

These applications underscore the pivotal role of technical textiles in advancing civil engineering practices.

## Objectives

The major aim of STTP is to introduce technical textile applications in various domains of Civil Engineering to the participants. Other objectives of the programme are:

- To learn testing of technical textiles for various parameters
- To learn applications of technical textiles in geotechnical engineering
- To include technical textiles in the design and construction of transportation infrastructure
- To use technical textiles for environmental protection and sustainable construction
- To identify problems in different domains of civil engineering where technical textiles can be used beneficially

## Course Contents

The programme encompasses both theoretical and practical laboratory sessions dedicated to the testing of technical textiles.

Design methodology and construction aspects for applications in following civil engineering domains like:

- Geotechnical engineering focusing on reinforced soil walls & slopes, foundations, prefabricated vertical drains, and other ground improvement techniques.

- Transportation and infrastructure engineering covering geosynthetics in pavements, railways, runways, tunnels and architectural uses.
- Hydraulic and environmental engineering, including coastal protection, canal embankments, erosion control, and waste containment with case studies.

## Faculty

Leading professionals from various industries, eminent academicians from reputed institutions from India & abroad and in-house faculty members will deliver sessions.

## Registration Charges

Delegates from academic organizations: Rs. 5000/-

Delegates from professional organizations: Rs. 8000/-

Full-time Research Scholar: Rs. 3000/-

Course fee includes Tea, Working Lunch and Course Material. All other expenses are to be borne by the participants. Registration charges are non-refundable. Participants are required to make their own arrangements for lodging, boarding and travelling. However, on request, the arrangement for accommodation can be made on a chargeable basis.

## Important Dates

Last date of receiving application: 25/06/2024

Confirmation of Selection by mail: 28/06/2024\*

\*Limited number of spot registrations are also available (bring duly signed application form with demand draft)

## Eligibility for Admission

This programme is planned for academicians, research scholars and professionals working in the field of civil engineering and technical textiles.

## How to Apply

Applicants should send the Demand Draft/Local Cheque drawn in favour of **Institute of Technology, Nirma University** payable at **Ahmedabad** with registration form (photocopy may also be used) before 25<sup>th</sup> June 2024 to:

### Dr. Hasan M. Rangwala

Coordinator – ATTCE

Civil Engineering Department, Institute of Technology, Nirma University,

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## APPLICATION FORM

Short Term Training Programme  
on

## Applications of Technical Textiles in Civil Engineering

1<sup>st</sup> July – 12<sup>th</sup> July, 2024

Under the Auspices of  
Internal Quality Assurance Cell (IQAC)

Organized by  
Civil Engineering Department,  
Institute of Technology,  
Nirma University, Ahmedabad

1. Name: .....

2. Designation: .....

3. Qualification: .....

4. D.O.B.: ..... Gender: .....

5. Institution: .....

6. Mailing Address: .....

Phone: ..... Fax: .....

E-mail: .....

7. ISTE Membership: .....

8. Experience

Teaching : ..... Years ..... Months

Industrial : ..... Years ..... Months

9. Accommodation required: Yes / No

10. Demand Draft Rs. ..... No. ....  
dated..... Bank .....

Place:

Date:

Signature of the Applicant

#### **Certificate from Sponsoring Authority**

Certified that the above applicant is employed in our organization and the information stated by him/her is verified and found correct. We therefore, sponsor him/her to attend the short-term training organized at your institute

Date: Signature of Sponsoring Authority  
Place:

#### **About Nirma University**

Nirma University was established in the year 2003 as a statutory university under Gujarat State Act at the initiative of the Nirma Education and Research Foundation (NERF). In 1994, the founder of Nirma Industries and an internationally renowned entrepreneur Dr. Karsanbhai K Patel crystallized his long-cherished dream of providing world-class facilities for professional education in Gujarat. He established NERF which in turn has established a 125-acre campus and eight institutions within a span of 15 years. Currently, eight institutes including the Institute of Technology are functioning under the aegis of NERF. All these institutions have emerged as centers of excellence offering various programmes ranging from undergraduate to doctoral levels. The University is duly accredited by National Assessment and Accreditation Council (NAAC) with "A+" Grade in the year 2022.

#### **Internal Quality Assurance Cell (IQAC)**

The Internal Quality Assurance Cell (IQAC) is a key step in setting long-term quality standards. IQAC is a significant administrative body that is responsible for all quality matters. It is the prime responsibility of IQAC to initiate, plan and monitor various activities that are necessary to increase the quality of the education, research and administrative aspects imparted in an institution. The role of IQAC in maintaining quality standards in teaching, learning and evaluation become crucial, and the present focus is to improve the functioning of IQAC with its expected outcomes. To channelize all efforts and measures of the university towards promoting its holistic academic excellence, the IQAC has been established. The prime task of the IQAC is to facilitate and participate in the development of a system for conscious and consistent improvement in the academic, research and administrative performance of the university.

#### **About Institute of Technology**

Institute of Technology, established in 1995, is the flagship Institute of the Nirma University. The Institute offers multidisciplinary undergraduate, postgraduate, and doctoral

programmes in the discipline of Engineering and Technology. The School of Engineering offers four-year B. Tech. Programmes in Chemical, Civil, Electrical, and Mechanical Engineering, while the School of Technology offers B. Tech. Programmes in Computer Science and Engineering, Electronics & Communications, and Electronics and Instrumentation Engineering. All the B. Tech. Programmes are accredited by the National Board of Accreditation (NBA) under the Tier-I category. The Institute of Technology is a constituent institute of Nirma University, ranked in the band of 101-150 by the National Institute Ranking Framework (NIRF), making its mark among 4000 plus engineering colleges in the country.

#### **The Department**

The department offers undergraduate programme B. Tech. in Civil Engineering since 1996, postgraduate programmes; M. Tech. in Computer Aided Structural Analysis & Design; M. Tech. in Construction Technology and Management and Ph.D. programme in Structural Engineering, Geotechnical Engineering, Construction Technology and Management, Concrete Technology, and Geomatics. The activities of the department are conducted under different divisions such as Geomatics, Construction Technology, Geotechnical, Environmental, Structural, and Transportation Engineering. The Department is actively involved in Research and Consultancy activities and is currently undertaking research in diversified areas of Civil Engineering. Department has well-developed laboratory facilities.

#### **Centre of Research in Geotechnical Textiles**

The Civil Engineering department has recently been awarded a grant from the National Technical Textiles Mission (NTTM), [<https://nttm.texmin.gov.in>], an initiative under the Ministry of Textiles, Government of India. This funding will lead to establish a state-of-the-art Centre of Research in Geotechnical Textiles, playing a pivotal role in advancing knowledge by testing various geotextile properties and exploring its behaviour with various construction materials for diverse infrastructure applications. The center will spearhead extensive research across multiple domains of Civil Engineering, encompassing geotechnical, transportation, environmental, water resources, and structures. This initiative not only fosters community self-sufficiency but also contributes to overall economic growth while addressing environmental concerns and promoting sustainability. Positioned as a comprehensive hub for research and hands-on training, the centre aims to empower the community with insights into effective geotextile utilization in infrastructure projects.



## **Short Term Training Programme**

on

### **Applications of Technical Textiles in Civil Engineering**

1<sup>st</sup> July to 12<sup>th</sup> July, 2024

#### **Coordinator**

Dr. Hasan M. Rangwala

#### **Co-coordinator**

Dr. Naman Kantesaria

#### **Mentor**

Dr. Urmil V. Dave

#### **Under the Auspices of**

Internal Quality Assurance Cell, Nirma University

#### **Organized by**

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#### **Co-Organizers**

