



Engineering Staff College of India
An Autonomous Organ of The Institution of Engineers (India)
Old Bombay Road, Gachi Bowli, Hyderabad-500 032
(IMS (ISO 9001:2015, ISO 14001:2015, ISO 50001:2018,
ISO 45001:2018 Certified), AICTE & CEA Recognized Institution)
(NABL Accredited Civil Engineering Testing Laboratory)



CIVIL & TRANSPORTATION ENGINEERING DIVISION

Training and Development Programme on
Advanced Materials & Concrete Technology
26th – 30th October, 2026

Venue : ESCI, Hyderabad



Centre for Promotion of Professional Excellence

INTRODUCTION:

Advanced Construction Materials in Concrete Technology and its applications in Concrete Industry will acquaint with newly developed concrete materials. Developments in the field of Concrete technology have been phenomenal in the last decade. There have been number of notable advancements made in concrete technology. Concrete is used throughout the world for a wide range of applications. To enhance the properties of concrete, recent advances in material science present new materials or admixtures to be added to or replace conventional concrete materials. Such materials could be used in new concrete construction and/or in repairing new or existing structures.

Advanced Concrete Technology focuses on enhancing strength, durability, and sustainability through specialized materials like fly ash, slag, silica fume, and fiber reinforcement. Key advancements include Self-Compacting Concrete (SCC), High-Performance Concrete (HPC), and Geopolymers, utilizing high-range water reducers (superplasticizers) to achieve low water-cement ratios and superior workability.

The participants will know the necessary information about the different advanced concrete materials, what tests should be performed and how to interpret their results, what to look for in specifications, and define the advantage and disadvantages for each new material and also focus on modernizing construction practices through high-performance materials, sustainable aggregates, and advanced repair techniques. Key areas include self-compacting concrete, fiber-reinforced concrete, fiber reinforced polymer (FRP) reinforcement, and sustainable concrete recycling, aimed at professionals seeking to enhance durability and performance.

OBJECTIVES:

- To describe with design methods and differentiates between codes and standard
- To Explain the new materials in the concrete industry
- To Understand advanced methods of construction and Special Concrete.
- To understand latest testing methods and standardization in civil engineering

COURSE COVERAGE :

- Overview on Advanced Concrete and Construction Materials for Sustainable Structures
- Importance of sustainability in construction & Environmental impact of traditional materials
- Advanced Construction Materials: Smart Materials, Composite Materials, Nano-materials, 3D-Printing Materials, & Insulating Materials Enhancing Concrete Structural durability
- Supplementary cementitious material and its Importance in designing Special concrete
- Latest Testing methods and standardization in civil engineering
- Advanced and Sustainable Concrete Technologies like : Geopolymer, High Strength Concrete (HSC), High-Performance Concrete (HPC), Ultra-High Performance Concrete (UHPC) Self-Healing Concrete, Lightweight Concrete ect.,
- Self-Compacting Concrete, Fiber-Reinforced Concrete, Fiber Reinforced Polymer (FRP) and Sustainable Concrete Recycling
- Technique for Concrete Repair
- Group discussions, Presentation of Case Studies by Participants

BENEFITS TO THE PARTICIPANTS:

- Participants will learn to; Increase knowledge of up to date of advance material in concrete for many different purposes.
- Improving the skills of the Participants to use the Optimizing the design of concrete by employing the advanced material
- Improving skills on using Recycled Materials in Concrete technology
- Increase the skill in Concrete Structural durability with advanced construction Material.

TARGET:

This course is suitable to all Engineers and officers working at Junior Level to Senior Level from Government Departments like R&B, PWD, MES, Municipal Corporations, Panchayat Raj, Housing Boards, GHMC, RITES, and Border Roads Development & Defense. Engineers from all State and Central Government Departments, & Construction Companies.

RESOURCE PERSONS:

Renowned personalities both from Industry / Educational Institutions like IIT's/ NIT's / Research Institutes, Reputed Universities, who are experts in this field, will be involved in providing the training.

PROGRAMME VENUE, DATES &TIMINGS:

VENUE : ESCI, Hyderabad

DATES : 26th – 30th October, 2026

Registration : 09:45hrs.

Session timings : 10:00 – 17:00 hrs with 3 times breaks.

COURSE DIRECTOR:

**Dr. R Venkat Reddy, Ph.D (Osmania), FIE
Head**

COURSE COORDINATOR:

Ch. Tilak – Faculty

COURSE FEES:

Rs.30,000/- (Rupees Thirty Thousand Only) + GST 18% per participant. Fee includes, Soft copy of course material, course kit and Twin Sharing AC accommodation, breakfast, lunch, dinner, tea / coffee and snacks during the actual days of training programme.

DISCOUNTS

- ❖ **Non-Residential Fee-** 10% discount on course fee is allowed for non-residential participants.
- ❖ **Group Discount:** Additional 10% discount for three or more participants, if sponsored by the same organization.

GST 18% is to be paid extra over and above the training fee, as training is also brought under the purview of **Service Tax. PAN Card No AAATT3439Q; Service Tax registration No AAATT3439QST008 (under commercial training or coaching services – clause 65(105) (ZZC) of Finance act – 1994). GSTN Number – 36AAATT3439Q1ZV (HSN Number – 999293)**

Programme fee is to be paid in favor of “**IE (I) – Engineering Staff College of India**” in the form of demand draft payable at Hyderabad.

Alternatively the payment may be made by **Electronic Fund Transfer (EFT) to ESCI - SB A/c No. 10007111201 with The SBI, PBB, Rajbhavan Road Branch, Khairatabad, Hyderabad-500004 by NEFT / RTGS / IFSC Code No. SBIN 0004159 – MICR No.500002075**. While using EFT method of payment, please ensure to communicate us your company name, our invoice reference and programme title.

REGISTRATION:

Please send your nominations from your Department/ Organization/ Institution/ if any.,

To
The Head
Civil & Transportation Engineering Division
Engineering Staff College of India
Old Bombay Road, Gachi Bowli, Hyderabad - 500 032
Mobile : **9490011311 / 9492011311**
Phone: 040-6630 4114
Email : cte@escihyd.org

CERTIFICATE:

A certificate of participation will be awarded to each participant.

GENERAL INSTRUCTIONS

- ESCI encourages participants to present case studies from their respective organizations.
- ESCI provides complimentary accommodation and boarding to the participants one day before commencement (Check-in 1200hrs) and one day after conclusion (Check-out 1100hrs) of the program duration. Overstay charges will be applicable as per ESCI rules (subject to availability of accommodation).