



**Engineering Staff College of India**  
An Autonomous Organ of The Institution of Engineers (India)  
Old Bombay Road, Gachi Bowli, Hyderabad-500 032  
(An ISO 9001:2015 ISO 14001:2015, ISO 45001:2018, ISO 50001:2018 &  
ISO/IEC 17025:2017 Certified Institution)



**CIVIL & TRANSPORTATION ENGINEERING DIVISION**

**Training and Development Programme On**  
**Rehabilitation of Bridges using Latest Techniques &  
Risk criteria**

**21<sup>st</sup> – 25<sup>th</sup> October, 2024**



**Centre for Promotion of Professional Excellence**

## **INTRODUCTION:**

All the Structures built with material and exposed to weathering conditions are bound to show signs of distress in the form of cracks or deflections during some stage of the life. If the structure shows the signs of distress before its design life, it can be made to perform well with appropriate repair / rehabilitation / retrofitting process. It is essential that the structure needs to be evaluated thoroughly, before any of these remedial are applied.

Prevention, diagnosis and rectification of Bridges defects, if neglected, sometimes leading to collapses, is the legal and moral responsibility of all those concerned with conceiving, planning, design and construction of Bridges projects.

It is essential for everyone involved in the construction industry to understand the intricacies involved in repair / rehabilitation / retrofitting of the structures for understanding the problem in a better manner and also to know the latest trends in managing these issues. Structural health monitoring (SHM) system is a method of evaluating and monitoring structural health. It has been widely applied in various engineering sectors due to its ability to respond to adverse structural changes, improving structural reliability and life cycle management.

This programme—aims to address the issues involved in damage assessment, rectification of defects and preventive measures. In addition, latest technology in the rehabilitation of concrete structures, the latest advances in materials and techniques and the latest trends for concrete together with concerns that require consideration when modern materials are used an implementations of AI in Bridge Maintenance.

## **OBJECTIVES:**

- To familiarize and improve the skills of the participants with the concepts of Rehabilitation of Bridges including Diagnosis and Preventive Actions by using latest techniques.
- To impart knowledge on Innovation During Bridge Rehabilitation Improves Mobility & Safety
- To update the knowledge, upgrading the skills in Implementations of AI in Bridge Maintenance.
- To impart knowledge on Structural Health Monitoring (SHM) Method

## **COURSE COVERAGE :**

- Overview of Rehabilitation of Bridges using Latest Techniques & Risk criteria
- A strategic plan toward Repair and Rehabilitation of Bridges
- Damage assessment and Diagnosis of Bridge Failure using latest Techniques.
- Structural Health Monitoring (SHM) Method for Damage Assessment as diagnostic tool
- Construction Methodology
- Innovative Materials used in Rehabilitation of Bridge,
- Protection of Bridges against Extreme Conditions.
- Innovation During Bridge Rehabilitation Improves Mobility & Safety
- Implementations of AI in Bridge Maintenance.
- Field visit

## **BENEFITS TO THE PARTICIPANTS:**

- To know the strategic plan toward Repair and Rehabilitation of Bridges
- To understand various types of Bridges damages, identify appropriate repair action to be taken and understand the preventive measures to be adopted.
- Get exposure to new materials used in Bridge repairs, latest trends in diagnosis & repairs.

## **TARGET PARTICIPANTS:**

This course is suitable to all engineers and officers working at junior level to senior level from Government departments like R&B, PWD, Municipal Corporations, Panchayat Raj, Housing Boards, GHMC, RITES, SCCL, and Border Roads Development. Engineers from all State and Central Government Departments, Private organizations, Structural Engineers & Contractors.

## **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 imparting the training.

## **PROGRAMME VENUE, DATES &TIMINGS:**

**VENUE** : Engineering Staff College of India (ESCI) Campus, Old Bombay Road, Gachi Bowli, Hyderabad- 500 032.

**DATES** 21<sup>st</sup> – 25<sup>th</sup> October, 2024

Registration : 09:45hrs.

Session timings : 09:45 – 17:15 hrs with 3 times breaks.

## **COURSE DIRECTOR:**

**Dr. D. Adinarayana, FIE**

**Sr. Faculty & Head**

## **COURSE COORDINATOR:**

**Ch. Tilak – Faculty**

## **COURSE FEES:**

**Rs.25,000/- (Rupees Twenty Five 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

**To**  
**The Head**  
**Civil & Transportation Engineering Division**  
Engineering Staff College of India  
Old Bombay Road, Gachi Bowli, Hyderabad - 500 032  
Phone: 040-6630 4114, 4115, 4107, 4134  
Email : [cte@escihyd.org](mailto:cte@escihyd.org)  
Mobile No : **9052313252**

#### **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).