CEAI ACADEMY

INTENSIVE ONLINE TRAINING COURSE ON IRC CODES OF PRACTICES FOR BRIDGE ENGINEERS

5th September, 2025 – 6th December, 2025

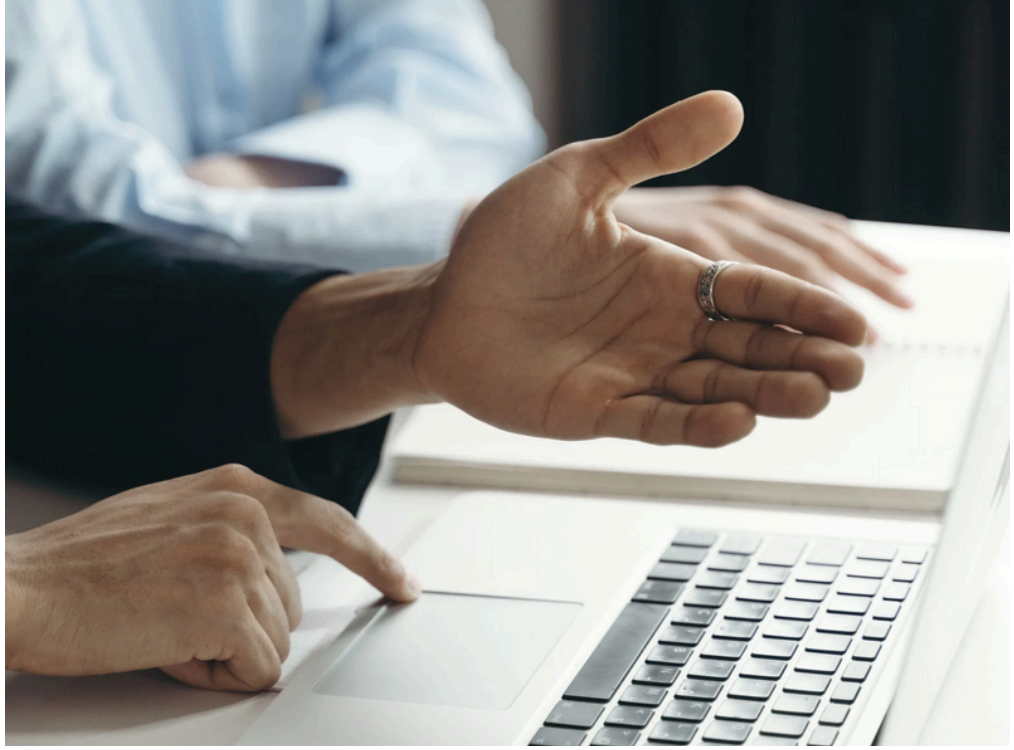
ABOUT CEAI ACADEMY

Consulting Engineers Association of India (CEAI) is the apex body of consulting engineers in India, with membership spanning both organizations and individuals. CEAI is a Member Association of the International Federation of Consulting Engineers (FIDIC), representing the Indian consulting engineering fraternity globally.

CEAI Academy is its training arm, offering capacity-building programs including technical workshops, short-term modules, and professional development opportunities, empowering engineers across India.

ABOUT THE COURSE

The Indian Roads Congress (IRC) issues and updates codes that form the foundation for highway bridge planning, design and construction across the country. These codes are continuously amended by IRC Code committees from time to time. All the amendments are published in Indian Highways. It is observed that the bridge designers, contractors, proof checkers and clients are finding it difficult to keep pace with the amendments brought in the code, which results in non-compliant and unsafe designs being executed. Recognizing the need for flexible, high-quality learning and familiarization with the latest provisions of codes and standards, CEAI Academy decided to introduce a series of professionally curated, training courses focused on the practical application and interpretation of key IRC bridge codes. The course is planned and conceived by a core team of experts led by Chairman, CEAI Academy, Er Alok Bhowmick. Designed by experts and accessible on-demand, these training course offer the convenience of self-paced learning while delivering in-depth technical guidance for code compliant design of bridges.



All the lectures will be recorded and the participants will have the benefit of attending the lecture as per their own convenience, in case they miss attending any lecture as per the schedule. Handouts will be provided which will be a permanent resource material for the participants.

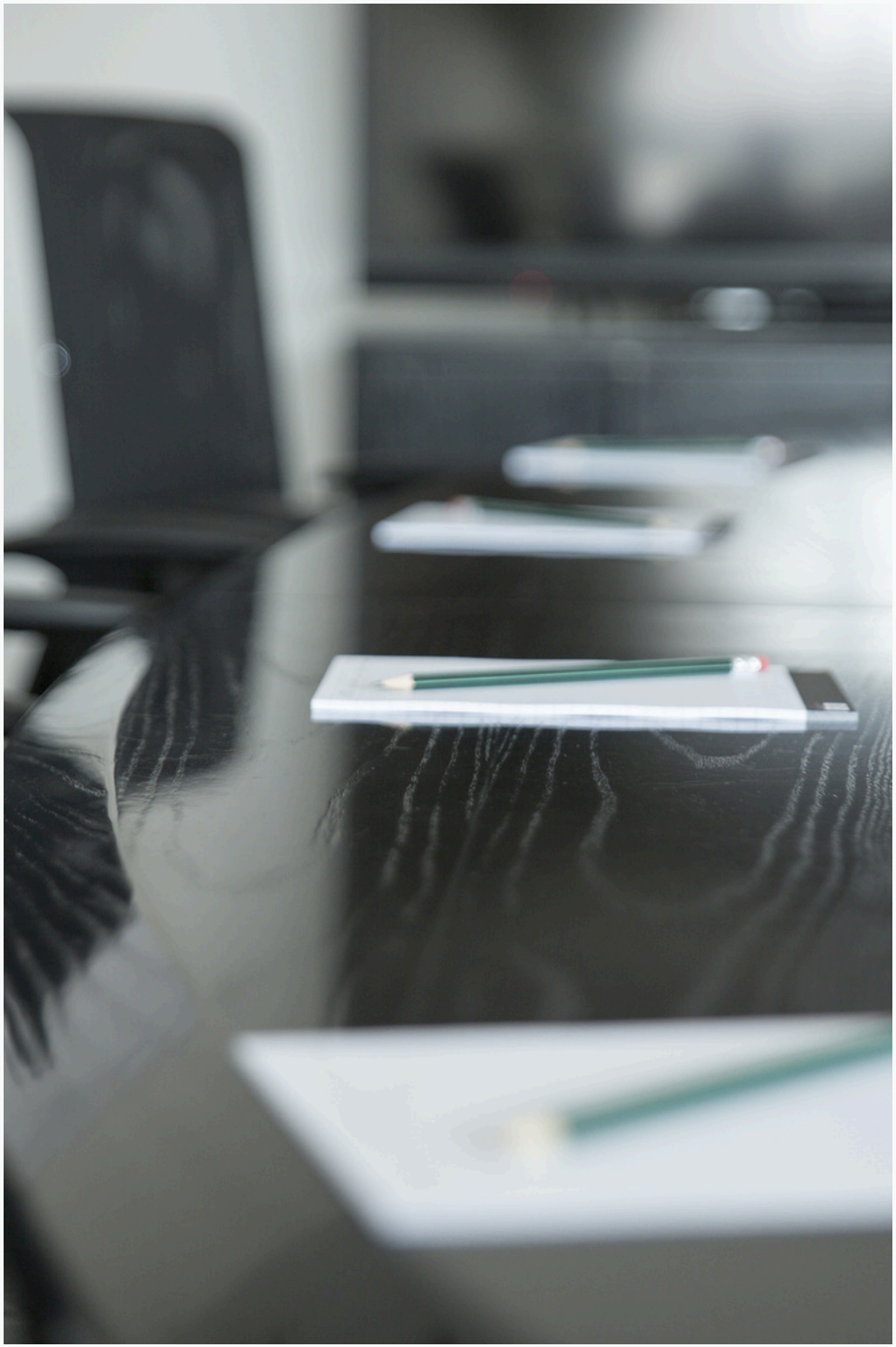
The course will deal with the latest provisions of the suite of IRC bridge codes dealing with bridges. The training course is divided into 6 distinct modules and will cover the latest versions of the following codes:

- Module 1 : IRC:5, IRC:6 & IRC:SP:114
- Module 2 : IRC 112
- Module 3 : IRC:24, and IRC:22
- Module 4 : IRC:78 (Part-1) & IRC:78 (Part-2)
- Module 5 : IRC:83 (Part-I, II, III IV), IRC: SP: 69 & Isolation Bearings
- Module 6 : IRC 87

WHO SHOULD JOIN?

These 6 modules of online training are tailored to the needs of :

- Practicing bridge engineers at all levels.
- Civil Engineering Students
- Government Officials (state PWD, NHAI, NHIDCL, MoRT&H, NRRDA, Railways, Municipal Corporations, Local Urban bodies, Metro Authorities, etc.)
- Bridge Engineering Consultants
- Quality Control Specialists
- Proof Checkers, Technical Auditors, Peer Reviewers
- Contractors, Enabling Structure Designers
- Faculty from Academic Institutions
- Engineers from Research Institutions
- Operations & Maintenance Engineers



WHY ENROLL?

- Expert-led training by code-makers and domain specialists.
- Illustrative worked-out examples for practical understanding.
- Clause-by-clause walk-throughs and commentary of the code.
- Certificate of Participation upon attending the course.
- Certification of proficiency after assessment through an online exam (optional).
- The certification program is a single-phase assessment consisting of online exams with multiple-choice questions. A separate fee will be charged for appearing in the exam for proficiency.
- Lifetime access to handouts of purchased modules.
- Live interaction with the experts in the field.
- Once registered, the lectures are accessible for viewing online for a limited period.

BRIEF ABOUT MODULE 1

IRC:5-2024, IRC:6-2017 & IRC:SP:114-2018

COURSE COORDINATOR:
MR. ALOK BHOWMICK
MANAGING DIRECTOR, B&S
ENGINEERING CONSULTANTS PVT. LTD.

This comprehensive module offers an integrated understanding of three foundational IRC codes essential for bridge design. These codes cover the General Features of Bridges, Loads & Load Combinations to be considered in Bridges, including earthquake loads. In these lectures, apart from detailed explanation clause by clause of these codes, participants will be made aware of the historical evolution of these codes. Attending these courses will help participants in following manner:

1. understand the historical evolution of the code, getting details about which clause was introduced when. This will help to assess existing old bridges.
2. gain enhanced understanding of the current IRC codes for ease of use, providing clarity to the user;
3. gain insight about the background of every clause of the code; and
4. get access to numerous illustrative worked examples which will be discussed and explained during the course.

Sessions will be interactive with enough time slot given for Q&A to enable participants to clear their doubts.

Sub-Module	Code Covered	Number of Lectures	Faculty / Speakers	Approximate number of hours of training
1A	IRC:5-2024 General Features of Design	4	Alok Bhowmick, Rajiv Ahuja, V N Heggade, G L Verma	4
1B	IRC:6-2017 Loads and Load Combinations	7	Alok Bhowmick Partha P Banerjee, Rajiv Ahuja, Dr Lakshmy Parameswaran, Partha P Banerjee Jatin Singla	6
1C	IRC:SP:114 - 2018 Guidelines for Seismic Design of Road Bridges	7	Alok Bhowmick, Rajiv Ahuja, Prof. Yogendra Singh, Sandeep Pattiwar, Varun Garg, Harpreet Singh	9

BRIEF ABOUT MODULE 2

IRC:112-2020

COURSE COORDINATOR: MR. VN HEGGADE

FOUNDER & CEO OF DECON COMPLETE SOLUTIONS

This module offers a comprehensive understanding of the concrete bridge code IRC:112-2020. Concrete is the most widely used construction material in the world, after water, hence good understanding of this code is of paramount importance to bridge engineers. This course will equip bridge engineers, designers, and consultants with essential knowledge of design methodology, material behaviour, structural safety, durability, robustness and sustainability. Participants gain practical insights into applying codal provisions in projects. It covers considerations for fatigue, different limit states, seismic detailing, and serviceability. With expert-led sessions, the workshop emphasizes clarity in code implementation, supported by Illustrative examples wherever required. Sessions will be interactive with enough time slot given for Q&A to enable participants to clear their doubts.

Sub-Module	Code Covered	Number of Lectures	Faculty / Speakers	Approximate number of hours of training
2	IRC:112 Concrete Road Bridges	16	Prof. Mahesh Tandon, Rajeshirke, P.G.Venkatram, Anirudh Chande, Nirav Mody, J.S. Pahuja, Sandeep Pattiwar, Devjyoti Paul, Vinay Gupta, Prof. B Bhattacharjee, Harpreet Singh, Alok Bhowmick, Dr. Manish Mokal	23

BRIEF ABOUT MODULE 3

IRC:22 & IRC:24

COURSE COORDINATOR:

MR. AMITABHA GHOSHAL

ADVISORY CONSULTANT &
PAST PRESIDENT - CEAI

MR. M M GHOSH

CONSULTANT AT INSDAG

The course will cover steel and steel concrete composite bridge designs and detailing, which is covered in code IRC:24 and IRC:22. Apart from providing detailed clause-by-clause interpretations of these two codes, this course will focus also on explaining the design concepts, structural detailing practices, DO's and DONT's in structural steel detailing. The course will also cover discussions on material specifications and real-world implementation. Annexures and illustrated worked examples will be presented to ensure that participants can better comprehend the codal language with field execution effectively. Sessions will be interactive with enough time slot given for Q&A to enable participants to clear their doubts.

Sub-Module	Code Covered	Number of Lectures	Faculty / Speakers	Approximate number of hours of training
3	IRC:22 Composite Construction (Limit States Design) & IRC:24 Steel Road Bridges (Limit State Method)	13	Harshavardhan Subbarao, M M Ghosh, Shiladitya Chanda, M K Madhavan, Sumantra Sengupta, Sanjeev Garg, Anirban Sengupta, V Karthik	23

BRIEF ABOUT MODULE 4

IRC:78 (PART 1 & PART 2)

This module will provide a comprehensive understanding of bridge foundation design provisions in IRC:78, combining both Part 1 and Part 2 of the code. Clause by clause explanation will be given for correct understanding and interpretation of the codal clauses. Participants will be also explained about various foundation types—open, pile, and well—along with essential conceptual differences in treatment of these types of foundations. Coverage will include requirements for subsurface exploration, both geotechnical as well as geophysical. Loads, load combinations and stability checks will be covered. The module will delves into the design philosophy using both the Limit State Method and Working Stress Method. Through worked examples, explanatory notes, and practical design scenarios, the session will equip engineers and professionals with the confidence to implement codal requirements accurately across diverse geotechnical conditions for safe foundation design and construction. Sessions will be interactive with enough time slot given for Q&A to enable participants to clear their doubts.

COURSE COORDINATOR:
MR. RS SHARMA
EX PRESIDENT CEAI

Sub-Module	Code Covered	Number of Lectures	Faculty / Speakers	Approximate number of hours of training
4A	IRC:78 (Part 1) Foundation & Substructure for Bridges (General Features & Working Stress Design)	7	PV Mayur, SK Jain, V N, Heggade, Navneet Gupta, RK Jaigopal, SS Gahawar, Ravi Sundram	11
4B	IRC:78 (Part 2) Limited State Design of Foundations	2	SK Jain, Navneet Gupta	4

BRIEF ABOUT MODULE 5

IRC:83 (PART I, II, III, IV), IRC:SP 69, DESIGN OF ISOLATION BEARINGS FOR BRIDGES

COURSE COORDINATOR:
MR. ALOK BHOWMICK
MANAGING DIRECTOR, B&S ENGINEERING CONSULTANTS PVT. LTD.

This module offers a comprehensive overview of various types of bridge bearings, expansion joints and also isolation bearings. The provisions of IRC:83 (Part-I to IV) and IRC:SP-69 will be explained threadbare, clause by clause to the participants. This will cover the design, manufacture, installation, and maintenance of rocker bearings, roller cum rocker bearings, elastomeric bearings, pot bearings, pin, metallic, spherical, and cylindrical bearings. It also includes detailed sessions on expansion joints and seismic isolation systems. Participants will gain practical knowledge on codal provisions, quality control, seismic detailing, and long-term performance. With expert-led sessions, the course will be extremely useful for bridge engineers. Sessions will be interactive with enough time slot given for Q&A to enable participants to clear their doubts.

Sub-Module	Code Covered	Number of Lectures	Faculty / Speakers	Approximate number of hours of training
5A	IRC:83 (Part I) Roller and Rocker Bearings	4	Nilanjan Ray, Anirban Mandal	4
5B	IRC:83 (Part II) Elastomeric Bearings	4	Santanu Majumdar, Santanu Adhikary, Pranabesh Mukhopadhyay, Saptarshi Maiti, Chinmoy Ghosh, Arijit Ghosh	5
5C	IRC:83 (Part III) Pot, Pin, Metallic Guide and Plane Sliding Bearings	4	Santanu Majumdar, Santanu Adhikary, Amit Mohanta, Shibsankar Karmakar, Chinmoy Ghosh, Arijit Ghosh	5
5D	IRC:83 (Part IV) Bearings (Spherical and Cylindrical)	4	Jitendra Rathore, Piyush Sen, Rohit Kumar	5
5E	IRC:SP 69 Guidelines and Specifications for Expansion Joints	4	Santanu Majumdar, Chinmoy Ghosh, Arijit Ghosh	5
5F	Design of Isolation Bearings for Bridges	4	Dr Agostino Marioni	5

BRIEF ABOUT MODULE 6

IRC:87-2018

COURSE COORDINATOR:
MR. MV JATKAR
DIRECTOR, GILCON PROJECT SERVICES LTD.

Temporary Structures and Enabling structures are the neglected lot by all stakeholders. We have seen a number of failures of temporary structures in the past, which is primarily because the bridge engineers do not pay proper attention to design, detailing and execution of temporary and enabling works. This training course will provide a structured understanding of the code IRC:87-2018, focusing on the planning, design, and execution of formwork, falsework, and temporary structures used in bridge construction. Every clause will be dealt with in detail and explained. The course will also cover new IRC draft document (unpublished) related to design of launching girders and bridge deck construction equipments. Led by seasoned professionals from the industry, this interactive sessions will offer both codal knowledge as well as practical insights for safe and efficient temporary works in bridge engineering.

Sub-Module	Code Covered	Number of Lectures	Faculty / Speakers	Approximate number of hours of training
6	IRC: 87 - 2018 Guidelines for Formwork, Falsework and Temporary Structures for Road Bridges	4	M V Jatkar, Sameer Malvankar, Ramnath Bhat	4

DETAILS OF TRAINING SCHEDULE: MODULE 1

COURSE COORDINATOR AND MODERATOR: ER. ALOK BHOWMICK

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 1 : (5th Sept. 2025) Inaugural Session and Introduction to IRC:5 (Module 1A) (Time : 14:30 hrs. to 18:00 hrs.)			
1	Inaugural Session	- President, CEAI - Course Co-Ordinator cum Moderator	30 Minutes
2	Lecture 1: Broad Overview of this Code a) History and Evolution of the Code b) Hierarchy of IRC Codes for Bridges c) Broad Content of IRC:5 and Explanation d) Detailed explanation of Clause 100, 101 & 102	**Mr. Alok Bhowmick** MD, B&S Engineering Consultants Pvt. Ltd.	75 Minutes
3	Lecture 2: General Provisions, Planning Considerations, Geometric Design Considerations, Hydrology & Hydraulic Design (Clause 103, 104, 105 & 106)	**Mr. Rajiv Ahuja** Independent Structural Consultant	75 Minutes
4	Q&A		30 Minutes
Day 2 : (6th Sept. 2025) IRC : 5 - Continued (Module 1A) (Time : 15:00 hrs. to 18:00 hrs.)			
5	Lecture 3: General Design Requirements, Construction & Constructability Considerations (Clause107 and 108)	**Mr. V N Heggade** Founder & CEO of DECon Complete Solutions	75 Minutes
6	Lecture 4: Auxiliary Components, Illumination, Road Signs & Signals, Aesthetics, Operation & Maintenance (Clause 109 to 113)	**Mr. G L Verma** CEO, Engineering & Planning Consultants	75 Minutes
7	Q&A		30 Minutes
Day 3 : (12th Sept. 2025) Introduction to IRC:6 (Module 1B) (Time : 15:00 hrs. to 18:00 hrs.)			
7	Lecture 5: Broad Overview of this Code a) Introduction b) History and Evolution of the Code c) Broad Content of IRC:6 and Explanation d) Combination of Loads (Table 1 & Annex-B)	**Mr. Alok Bhowmick** MD, B&S Engineering Consultants Pvt. Ltd.	75 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 1

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
8	Lecture 6: Explanation of Clause 201 to 205 & 218	Mr. Partha P Banerjee Director (Technical), AYESA India Pvt. Ltd.	75 Minutes
9	Q&A		30 Minutes
Day 4 : (13th Sept. 2025) IRC:6 Continued (Module 1B) (Time : 15:00 hrs. to 18:00 hrs.)			
10	Lecture 7: Explanation of Clause 206 to 211	**Mr. Rajiv Ahuja** Independent Structural Consultant	75 Minutes
11	Lecture 8: Explanation of Clause 212 to 217	**Mr. Rajiv Ahuja** Independent Structural Consultant	75 Minutes
12	Q&A		30 Minutes
Day 5 : (19th Sept. 2025) IRC:6 Continued (Module 1B) (Time : 14:30 hrs. to 18:00 hrs.)			
13	Lecture 9: Explanation of Clause 209, Wind Load (Including Annex-C)	**Dr. Lakshmy Parameswaran** Former Chief Scientist, CSIR-CRRI	60 Minutes
14	Lecture 10: a) Clause 220, Barge Impact on Bridges b) Clause 221 to 223 c) Annex-A, E & F	**Mr. Alok Bhowmick** MD, B&S Engineering Consultants Pvt. Ltd.	60 Minutes
15	Lecture 11: Worked Examples	**Mr. Partha P Banerjee** Director (Technical), AYESA India Pvt. Ltd. **Mr. Jatin Singla** Design Engineer, B&S Engineering Consultants Pvt. Ltd.	60 Minutes
16	Q&A		30 Minutes
Day 6 : (20th Sept. 2025) IRC:SP:114 (Module 1C) (Time : 15:00 hrs. to 18:00 hrs.)			
17	Lecture 12: Broad Overview of this Code a) History and Evolution of the Code b) Hierarchy of IRC Codes for Bridges c) Broad Content of IRC:SP:114 and Explanation	**Mr. Alok Bhowmick** MD, B&S Engineering Consultants Pvt. Ltd.	75 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 1

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
18	Lecture 13: a) Chapter 2: Introduction b) Chapter 3: Conceptual Design	Mr. Rajiv Ahuja Independent Structural Consultant	75 Minutes
19	Q&A		30 Minutes
Day 7 : (26th Sept. 2025) IRC:SP:114 (Module 1C) (Time : 15:00 hrs. to 18:00 hrs.)			
20	Lecture 14: a) Chapter 4: Seismic Induced Forces & Site Conditions b) Chapter 5: Seismic Analysis Methods	**Prof. Yogendra Singh** Railway Bridge Chair, IIT, Roorkee	75 Minutes
21	Lecture 15: a) Chapter 6: General Design Provisions b) Chapter 7: Seismic Design Methods	**Mr. Rajiv Ahuja** Independent Structural Consultant	75 Minutes
22	Q&A		30 Minutes
Day 8 : (27th Sept. 2025) IRC:SP:114 (Module 1C) (Time : 14:30 hrs. to 18:00 hrs.)			
22	Lecture 16: a) Chapter 8: Design of Bridge Components b) Chapter 9: Ductile Detailing of Structures	**Mr. Alok Bhowmick** MD, B&S Engineering Consultants Pvt. Ltd.	60 Minutes
23	Lecture 17: Chapter 10: Seismic Isolation Devices	**Prof. Yogendra Singh** Railway Bridge Chair, IIT, Roorkee	60 Minutes
24	Lecture 18: Appendices (Worked Examples) a) A-1: Sandeep Pattiwar b) A-2: Varun Garg c) A-3, A-4, A-5: Mr Harpreet Singh d) New Example on Isolation Bearings: Varun Garg	**Mr. Sandeep Pattiwar** Director, Tech Tangent Solutions Pvt. Ltd. **Mr. Varun Garg** CEO (India) & Lead Engineer, Spannovation **Mr. Harpreet Singh** Dy. Director (Tech.), B&S Engineering Consultants Pvt. Ltd.	60 Minutes
25	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 2

COURSE COORDINATOR AND MODERATOR: ER. V. N. HEGGADE

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 1 : (3rd Oct. 2025) Inaugural Session and Introduction to IRC:112 (Module 2) (Time : 14:30 hrs. to 18:00 hrs.)			
1	Inaugural Session	- President, CEAI - Course Co-Ordinator cum Moderator	30 Minutes
2	Lecture 1: Overview & Scope (Sections 1 to 4)	**Prof. Mahesh Tandon** Chairman – Tandon, Consultants Pvt. Ltd..	75 Minutes
3	Lecture 2: Basis of Design (Section 5)	**Mr. Umesh Rajeshirke** MD, Spectrum Techno Consultants Pvt Ltd.	75 Minutes
4	Q&A		30 Minutes
Day 2 : (4th Oct. 2025) IRC:112 – Continued (Module 2) (Time : 15:00 hrs. to 18:00 hrs.)			
5	Lecture 3: Material Properties and their Design Values (Section 6)	**Mr. Umesh Rajeshirke** MD, Spectrum Techno Consultants Pvt Ltd.	75 Minutes
6	Lecture 4: Analysis (Section 7)	**Mr. P G Venkatram** CTO, ASSYSTEM India Pvt. Ltd	75 Minutes
7	Q&A		30 Minutes
Day 3 : (10th Oct. 2025) IRC:112 – Continued (Module 2) (Time : 15:00 hrs. to 18:00 hrs.)			
8	Lecture 5: ULS of Linear Elements for Bending and Axial Forces (Section 8)	**Mr. Anirudh Chande** Director, IDEAS SE PVT LTD	75 Minutes
9	Lecture 6: ULS of Two and Three Dimensional Elements for Out of Plane and In-Plane Loading Effects including concrete shell elements (Section 9)	**Mr. Nirav Mody** Director, Spectrum Techno Consultants Pvt Ltd.	75 Minutes
10	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 2

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 4 : (11th Oct. 2025) IRC:112 – Continued (Module 2) (Time : 15:00 hrs. to 18:00 hrs.)			
11	Lecture 7: ULS of Shear, Punching Shear and Torsion (Section 10)	**Mr. Jatinder Singh Pahuja** MD, Paragon Consultant	75 Minutes
12	Lecture 8: ULS of Induced Deformations (Section 11)	**Mr Sandeep Pattiwar** Director, Tech Tangent Solutions Pvt.Ltd.	75 Minutes
13	Q&A		30 Minutes
Day 5 : (17th Oct. 2025) IRC:112 – Continued (Module 2) (Time : 15:00 hrs. to 18:00 hrs.)			
14	Lecture 9: Serviceability Limit State (Section 12)	**Mr. Devjyoti Paul** Sr. Project Manager, B&S Engineering Consultants Pvt. Ltd.	75 Minutes
15	Lecture 10: Prestressing Systems (Section 13)	**Mr. Vinay Gupta** Director General, Indian Institution of Bridge Engineers (IIBE)	75 Minutes
16	Q&A		30 Minutes
Day 6 : (24th Oct. 2025) IRC:112 – Continued (Module 2) (Time : 15:00 hrs. to 18:00 hrs.)			
17	Lecture 11: Durability and Deterioration of Concrete Structures (Section14)	**Prof. B. Bhattacharjee** Retired Emeritus Professor, Civil Engineering Department, IIT Delhi	75 Minutes
18	Lecture 12: Detailing requirements (Section 15 & 16)	**Mr. Harpreet Singh** Dy. Director (Tech.), B&S Engineering Consultants Pvt. Ltd.	75 Minutes
19	Q&A		30 Minutes
Day 7 : (25th Oct. 2025) IRC:112 – Continued (Module 2) (Time : 15:00 hrs. to 18:00 hrs.)			
20	Lecture 13: Ductile detailing for seismic resistance (Section 17)	**Mr. Alok Bhowmick** MD, B&S Engineering Consultants Pvt. Ltd.	75 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 2

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
21	Lecture 14: Materials, Quality Control & Workmanship (Section 18)	Dr. Manish Mokal JGM – Quality Excellence Cell, Afcons Infrastructure Limited	75 Minutes
22	Q&A		30 Minutes
Day 8 : (31st Oct. 2025) IRC:112 – Continued (Module 2) (Time : 15:00 hrs. to 18:00 hrs.)			
23	Lecture 15: Design for fatigue (A6)	**Mr. Umesh Rajeshirke** MD, Spectrum Techno Consultants Pvt Ltd.	75 Minutes
24	Lecture 16: Strut & Tie Models (Appendix)	**Mr. Umesh Rajeshirke** MD, Spectrum Techno Consultants Pvt Ltd.	75 Minutes
25	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 3

COURSE COORDINATOR AND MODERATOR: ER. AMITABHA GHOSHAL & ER M M GHOSH

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 1 : (1st Nov. 2025) Inaugural Session and Introduction to IRC 24 (Module 3) (Time : 14:30 hrs. to 18:00 hrs.)			
1	Inaugural Session	- President, CEAI - Course Co-Ordinator cum Moderator	30 Minutes
2	Lecture 1: Broad Overview of Code IRC:24 Explanation of Clause 501, 502 & 504	**Dr. Harshavardhan Subbarao** Chairman & Managing Director, Construma Consultancy Pvt. Ltd	75 Minutes
3	Lecture 2: Explanation of: Clause 503 of IRC:24	**Mr. M M Ghosh** Consultant, INSDAG	75 Minutes
4	Q&A		30 Minutes
Day 2 : (7th Nov. 2025) IRC:24 (Module 3) (Time : 15:00 hrs. to 18:00 hrs.)			
5	Lecture 3: Explanation of: Clause 505, 506 of IRC:24	**Mr. Shiladitya Chanda** Asst. General Manager (C&S), INSDAG	75 Minutes
6	Lecture 4: Explanation of: Clause 507 of IRC:24 & Annex - C	**Dr. M K Madhavan** Professor of Civil Engineering, IIT Hyderabad	75 Minutes
7	Q&A		30 Minutes
Day 3 : (8th Nov. 2025) IRC:24 (Module 3) (Time : 15:00 hrs. to 18:00 hrs.)			
8	Lecture 5: Explanation of: Clause 508 of IRC:24	**Dr. Sumantra Sengupta** Dy. Director (Technical), B&S Engineering Consultants Pvt. Ltd.	75 Minutes
9	Lecture 6: Explanation of: Clause 509, 510 of IRC:24	**Dr. M K Madhavan** Professor of Civil Engineering, IIT Hyderabad	75 Minutes
10	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 3

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 4 : (14th Nov. 2025) IRC:24 (Module 3) (Time : 15:00 hrs. to 18:00 hrs.)			
11	Lecture 7: Explanation of: Clause 511 of IRC:24	**Dr. Sanjeev Garg** Executive Director, Urban and Rapid Regional Transport Railway Board	75 Minutes
12	Lecture 8: Explanation of: Clause 512 & 513 of IRC:24	**Mr. Anirban Sengupta** Consultant and Technical Advisor for Structural Projects, Kolkata, IAStructE	75 Minutes
13	Q&A		30 Minutes
Day 5 : (15th Nov. 2025) IRC:24 (Module 3) (Time : 15:00 hrs. to 18:00 hrs.)			
14	Lecture 9: Annex A, B, D, E & F of IRC:24	**Dr. Sumantra Sengupta** Dy. Director (Technical), B&S Engineering Consultants Pvt. Ltd.	75 Minutes
15	Lecture 10: Overview of Code IRC 22 Explanation of Clause 600 to 604	**Mr. M M Ghosh** Consultant, INSDAG	75 Minutes
16	Q&A		30 Minutes
Day 6 : (21st Nov. 2025) IRC:22 (Module 3) (Time : 14:30 hrs. to 18:00 hrs.)			
17	Lecture 11: Overview of Code IRC 22 Explanation of Clause 600* TO 605* (*) For portions which are already covered under IRC 24, need not be repeated)	**Mr. V Karthik** Engineering Manager, Jacob	60 Minutes
18	Lecture 12: Explanation of: Clause 606 to 611 of IRC:22	**Mr. V Karthik** Engineering Manager, Jacob	60 Minutes
19	Lecture 13: Explanation of: Clause 612, 613 and Annexure I, II & III of IRC:22	**Mr. V Karthik** Engineering Manager, Jacob	60 Minutes
20	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 4

COURSE COORDINATOR AND MODERATOR: ER. R. S. SHARMA

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 1 : (22nd Nov. 2025) Inaugural Session and Introduction to IRC:78 (Part-1) (Module 4A) (Time : 14:30 hrs. to 18:00 hrs.)			
1	Inaugural Session	- President, CEAI - Course Co-Ordinator cum Moderator	30 Minutes
2	Lecture 1: Explanation of: 1) Section 700: Scope 2) Section 701: Terminology 3) Section 702: Notations 4) Section 705: Depth of Foundation	**Mr. PV Mayur** Design Engineer (Structures)	75 Minutes
3	Lecture 2: Explanation of: 1) Section 706: Loads, Forces, Stability and Stresses 2) Section 707: Open Foundations 3) Appendix 2: Guidelines for the Design and Construction of Raft Foundation for Road Bridges	**Mr. Sanjay Kumar Jain** Director & CEO, B&S Engineering Consultants Pvt. Ltd.	75 Minutes
4	Q&A		30 Minutes
Day 2 : (28th Nov. 2025) IRC:78 (Part-1) - Continued (Module 4A) (Time : 15:00 hrs. to 18:00 hrs.)			
5	Lecture 3: Explanation of: 1) Section 708: Well Foundations 2) Appendix 3: Procedure for Stability Calculations 3) Appendix 4: Precautions to be taken during Sinking of Wells	**Mr. V N Heggade** Founder & CEO of DECon Complete Solutions	75 Minutes
6	Lecture 4: Explanation of: 1) Section 709: Pile Foundation 2) Appendix 5: Capacity of Pile based on Pile Soil Interaction	**Mr. Navneet Gupta** Executive Director, Tandon Consultants Pvt Ltd.	75 Minutes
7	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 4

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 3 : (29th Nov. 2025) IRC:78 (Part-1) - Continued (Module 4A) (Time : 15:00 hrs. to 18:00 hrs.)			
8	Lecture 5: Explanation of 1) Appendix 6 Part1: Method – 1: Pile Load Capacity by Dynamic Test using Wave Equation and Method – 2: Pile Dynamic Test Method based on Hiley's Formulae (By Laser/infrared Operated Equipment) 2) Appendix 6 Part2: Standard Test Method for Low Strain Pile Integrity Testing 3) Appendix 7: Bi-Directional Load Testing of Piles	**Mr. R K Jaigopal** Managing Director, Struct Geotech Research Laboratories Pvt. Ltd	75 Minutes
9	Q&A		30 Minutes
Day 4 : (5th Dec. 2025) IRC:78 (Part-1 & 2) (Module 4A & 4B) (Time : 14:30 hrs. to 18:00 hrs.)			
10	Lecture 7: Explanation of: 1) Section 704: Sub-surface Exploration 2) Appendix 1: Guidelines for Sub-Surface Exploration	**Mr. Ravi Sundaram** Director, Cengrs Geotechnica Pvt Ltd.	60 Minutes
11	Lecture 8: Explanation of: 1) Section 1: Symbols 2) Section 2: Design Philosophy and Verifications under Ultimate and Serviceability Limit States 3) Section 3: Open Foundation 4) Appendix 1(1): Explanatory Note: Limit State Design Approach and Design of Open Foundation 5) Appendix 2: Introduction for the Worked Out Examples: Example on Open Foundation by Working Stress Method as per present IRC:78 and by Limit State Method	**Mr. Sanjay Kumar Jain** Director & CEO, B&S Engineering Consultants Pvt. Ltd.	60 Minutes
12	Lecture 9: Explanation of 1) Section 4: Pile Foundation 2) Section 5: Well Foundations 3) Appendix 1 (2): Design of Pile Foundation 4) Appendix 1 (3): Design of Well Foundation 5) Appendix 2 (2): Example on Pile Foundation by Limit State Method and by Working Stress Method as per present IRC:78 6) Appendix 2 (3): Example on Pier Well Foundation by Working Stress Method as per IRC:78 and Limit State Method	**Mr. Navneet Gupta** Executive Director, Tandon Consultants Pvt Ltd.	60 Minutes
13	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 5

COURSE COORDINATOR AND MODERATOR: ER. ALOK BHOWMICK

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 1 : (10th Oct. 2025) Inaugural Session and Introduction to IRC:83 (Part-I) (Module 5A) (Time : 10:00 hrs. to 13:30 hrs.)			
1	Inaugural Session	- President, CEAI - Course Co-Ordinator cum Moderator	30 Minutes
2	Lecture 1: Broad Overview of this Code Introduction, Brief History & Evolution of the Code Clause 1: Scope Clause 2: Definitions Clause 3: Symbols Clause 4: Functional Requirements	**Mr. Nilanjan Ray** Director, METCO	75 Minutes
3	Lecture 2: Design, Manufacture & Workmanship Clause 5: Special Requirement Clause 6: Materials & Specifications Clause 7: Materials Properties & Design Values Clause 8: Design Considerations Clause 9: Dimensioning of Components	**Mr. Anirban Mandal** Technical Director, METCO	75 Minutes
4	Q&A		30 Minutes
Day 2 : (11th Oct. 2025) IRC:83 (Part-I) Continued (Module 5A) (Time : 10:30 hrs. to 13:30 hrs.)			
5	Lecture 3: Acceptance, Installation & Maintenance Requirements Clause 10: Workmanship & Tolerances Clause 11: Acceptance Criteria & Testing Clause 12: Installation of the Bearings Clause 13: Inspection, Maintenance & Replacement of Bearings	**Mr. Nilanjan Ray** Director, METCO	75 Minutes
6	Lecture 4: Worked Examples for Design of Roller and Rocker Bearings of various types	**Mr. Anirban Mandal** Technical Director, METCO	75 Minutes
7	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 5

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 3 : (17th Oct. 2025) IRC:83 (Part-II) (Module 5B) (Time : 10:30 hrs. to 13:30 hrs.)			
8	Lecture 5: Broad Overview of this Code Clause 1: Introduction Clause 2: Scope Clause 3: Notations Clause 4: Materials	**Mr. Santanu Majumdar** CEO & Executive Member of the Board, mageba Bridge Products Pvt. Ltd.	75 Minutes
9	Lecture 6: Design, Manufacture & Workmanship of Elastrometric Bearings Clause 5: Design Included worked examples of the design bearings for various types	**Mr. Santanu Adhikary** Head Technical, Mageba Bridge Products Pvt. Ltd.	75 Minutes
10	Q&A		30 Minutes
Day 4 : (24th Oct. 2025) IRC:83 (Part-II) continued (Module 5B) (Time : 10:30 hrs. to 13:30 hrs.)			
11	Lecture 7: Acceptance Requirements Clause 6: Manufacture & Workmanship Clause 7: Acceptance Specification Clause 8: Certification & Marking	**Mr. Pranabesh Mukhopadhyay** Deputy General Manager - Works, Mageba Bridge Products Pvt. Ltd. **Mr. Saptarshi Maiti** Manager - RTL Laboratory, R&D, Mageba Bridge Products Pvt. Ltd. **Mr. Chinmoy Ghosh** COO & Executive Member of the Board, Mageba Bridge Products Pvt. Ltd.	75 Minutes
12	Lecture 8: Installation & Requirement Clause 9: Installation Clause 10: Maintenance	**Mr. Chinmoy Ghosh** COO & Executive Member of the Board, Mageba Bridge Products Pvt. Ltd. **Mr. Arijit Ghosh** Mageba Bridge Products Pvt. Ltd.	75 Minutes
13	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 5

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 5 : (25th Oct. 2025) IRC:83 (Part-III) (Module 5C) (Time : 10:30 hrs. to 13:30 hrs.)			
14	Lecture 9: Broad Overview of the Code Introduction Clause 1: Scope Clause 2: Terminology Clause 3: Symbols & Notations Clause 4: Materials	**Mr. Santanu Majumdar** CEO & Executive Member of the Board, Mageba Bridge Products Pvt. Ltd.	75 Minutes
15	Lecture 10: Design Clause 5: Design Including Worked Examples	**Mr. Santanu Adhikary** Head Technical, Mageba Bridge Products Pvt. Ltd. **Mr. Santanu Majumdar** CEO & Executive Member of the Board, Mageba Bridge Products Pvt. Ltd.	75 Minutes
16	Q&A		30 Minutes
Day 6 : (31st Oct. 2025) IRC:83 (Part-III) continued (Module 5C) (Time : 10:30 hrs. to 13:30 hrs.)			
17	Lecture 11: Manufacture, and Acceptance Specification Clause 6: Manufactures Clause 7: Acceptance Specification	**Mr. Amit Kumar Mohanta** Deputy General Manager - Works, Mageba Bridge Products Pvt. Ltd. **Mr. Shibsankar Karmakar** Head (QA/QC), Mageba Bridge Products Pvt. Ltd.	75 Minutes
18	Lecture 12: Certification & Marking, Installation & Maintenance Clause 8: Certification & Marking Clause 9: Installation Clause 10: Maintenance	**Mr. Chinmoy Ghosh** COO & Executive Member of the Board, Mageba Bridge Products Pvt. Ltd. **Mr. Arijit Ghosh** Mageba Bridge Products Pvt. Ltd.	75 Minutes
19	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 5

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 7 : (1st Nov. 2025) IRC:83 (Part-IV) (Module 5D) (Time : 10:30 hrs. to 13:30 hrs.)			
20	Lecture 13: Broad Overview of the Spherical Bearings Definition Types of Bearings Pros & Cons Introduction to Spherical Bearings & its advantages Overview of Sliding Material, its application & developments Overview of IRC:83-2014 (Part IV)	**Mr. Jitendra Rathore** COO, MAURER-Sanfield (India) Limited	75 Minutes
21	Lecture 14: Discussion over the Code IRC-2014 (Part IV) Clause 1: Scope Clause 2: Product Definition, types & functions Clause 3: Terms of References Clause 4: Material Specifications Clause 5: Design of Spherical Bearings General, Rotation & Movement Capacities, Verification of Curved Sliding Surfaces, Compressive Stress Verification, Eccentricities: e1, e2, e3, e4, Separation Check, Design Verification of Backing Plates against Deformation	**Mr. Piyush Sen** Assistant Technical Manager, MAURER-Sanfield (India) Limited **Mr. Rohit Kumar** Assistant General Manager, MAURER Sanfield (India) Limited	75 Minutes
22	Q&A		30 Minutes
Day 8 : (7th Nov. 2025) IRC:83 (Part-IV) Continued (Module 5D) (Time : 10:30 hrs. to 13:30 hrs.)			
23	Lecture 15: Clause 6: Quality Control in Manufacturing Clause 7: Acceptance, Certification & Marking Clause 8: Packing, Transport & Storage Clause 9: Aspects Related to Bearing Performance Installation, Inspection, Maintenance	**Mr. Jitendra Rathore** COO, MAURER-Sanfield (India) Limited	75 Minutes
24	Lecture 16: Worked Example for Design of Spherical Bearings	**Mr. Piyush Sen** Assistant Technical Manager, MAURER-Sanfield (India) Limited **Mr. Rohit Kumar** Assistant General Manager, MAURER Sanfield (India) Limited	75 Minutes
25	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 5

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 9 : (8th Nov. 2025) IRC:SP:69 (Module 5E) (Time : 10:30 hrs. to 13:30 hrs.)			
26	Lecture 17: Introduction and Broad Overview of Expansion Joints 1. Introduction 2. Requirements & Duties of Expansion Joints 3. Various Types of Expansions and Their Suitability 4. Expansion Joint details for curved and skewed bridges	**Mr. Santanu Majumdar** CEO & Executive Member of the Board, Mageba Bridge Products Pvt. Ltd.	75 Minutes
27	Lecture 18: "Design of Expansion Joint - Basis for Selection of Type of Joints - Design & Detailing of Expansion Joints (Single, Modular, etc.) - Quality Control Requirements for Expansion Joints"	**Mr. Chinmoy Ghosh** COO & Executive Member of the Board, mageba Bridge Products Pvt. Ltd.	75 Minutes
28	Q&A		30 Minutes
Day 10 : (14th Nov. 2025) IRC:SP:69 Continued (Module 5E) (Time : 10:30 hrs. to 13:30 hrs.)			
29	Lecture 19: Necessary Considerations for Seismic Application 1. Design aspects to cater for Seismic Movements and application for Structures with Seismic Isolation 2. Seismic Fuse for Expansion Joints 3. Special Testing and Acceptance for Seismic Application	**Mr. Santanu Majumdar** CEO & Executive Member of the Board, Mageba Bridge Products Pvt. Ltd. **Mr. Chinmoy Ghosh** COO & Executive Member of the Board, Mageba Bridge Products Pvt. Ltd.	75 Minutes
30	Lecture 20: Handling and Installation 1. Handling, Transportation and Storage of Expansion Joints 2. Installation and Maintenance of Expansion Joints	**Mr. Arijit Ghosh** Mageba Bridge Products Pvt. Ltd.	75 Minutes
31	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 5

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 11 : (15th Nov. 2025) Isolation Bearings for Bridge (Module 5F) (Time : 10:30 hrs. to 13:30 hrs.)			
32	Lecture 21: The principles of base isolation and seismic protection of structures 1.1 Seismic Action 1.2 Damping 1.3 The damping effect on the seismic action 1.4 Anti-seismic strategies	**Dr Agostino Marioni** Chairman, Hirun International	75 Minutes
33	Lecture 22: Base Isolators and energy dissipators 2.1 Lead Rubber Bearings 2.2 High Damping Rubber Bearings 2.3 Sliding Pendulum Isolators 2.4 Hysteretic Dampers 2.5 Hydraulic Devices	**Dr Agostino Marioni** Chairman, Hirun International	75 Minutes
34	Q&A		30 Minutes
Day 12 : (21st Nov. 2025) Isolation Bearings for Bridge (Module 5F) (Time : 10:30 hrs. to 13:30 hrs.)			
35	Lecture 23: Anti-seismic Standards worldwide 3.1 The European Standard EN 15129 3.2 Indian Standard IRC:SP:114 3.3 Comparison with other standards: AASHTO, ISO 3.4 Testing requirements of the anti-seismic devices	**Dr Agostino Marioni** Chairman, Hirun International	75 Minutes
36	Lecture 24: Simplified computation of a base isolated bridge 5. Seismic retrofitting of bridges 5.1 Retrofitting by Dynamic Connectors or Viscous Dampers 5.2 Retrofitting by base isolation 6. Examples of application	**Dr Agostino Marioni** Chairman, Hirun International	75 Minutes
37	Q&A		30 Minutes

DETAILS OF TRAINING SCHEDULE: MODULE 6

COURSE COORDINATOR AND MODERATOR: ER. M. V. JATKAR

Sl. No.	Title of Presentation	Faculty	Duration of Lectures
Day 1 : (5th Dec. 2025) Inaugural Session and Introduction to IRC:87 (Module 6) (Time : 10:30 hrs. to 13:30 hrs.)			
1	Inaugural Session	- President, CEAI - Course Co-Ordinator & Moderator	30 Minutes
2	Lecture 1: Introduction to IRC:87-2018 – Scope, Background & Procedures	**Mr. MV Jatkar** Director, GILCON Project Services Ltd.	60 Minutes
3	Lecture 2: Design of temporary structures, Formwork, Falsework	**Mr. Sameer Malvankar** AGM, Transrail Lighting Ltd.	60 Minutes
4	Q&A		30 Minutes
Day 2 : (6th Dec. 2025) IRC:87 Continued (Module 6) (Time : 10:30 hrs. to 13:30 hrs.)			
5	Lecture 3: Special Formworks	**Mr. Sameer Malvankar** AGM, Transrail Lighting Ltd.	75 Minutes
6	Lecture 4: A Draft IRC:SP xxx "Guidelines on Planning, Design, Fabrication and Operation of Bridge Deck Construction Equipment"	**Mr. Ramnath Bhat** Partner, AR Engineers and Consultants	75 Minutes
7	Q&A		30 Minutes

CERTIFICATION

Participants who attend all the lectures in a training module will receive a CEAI Academy Certificate of Participation for that module.

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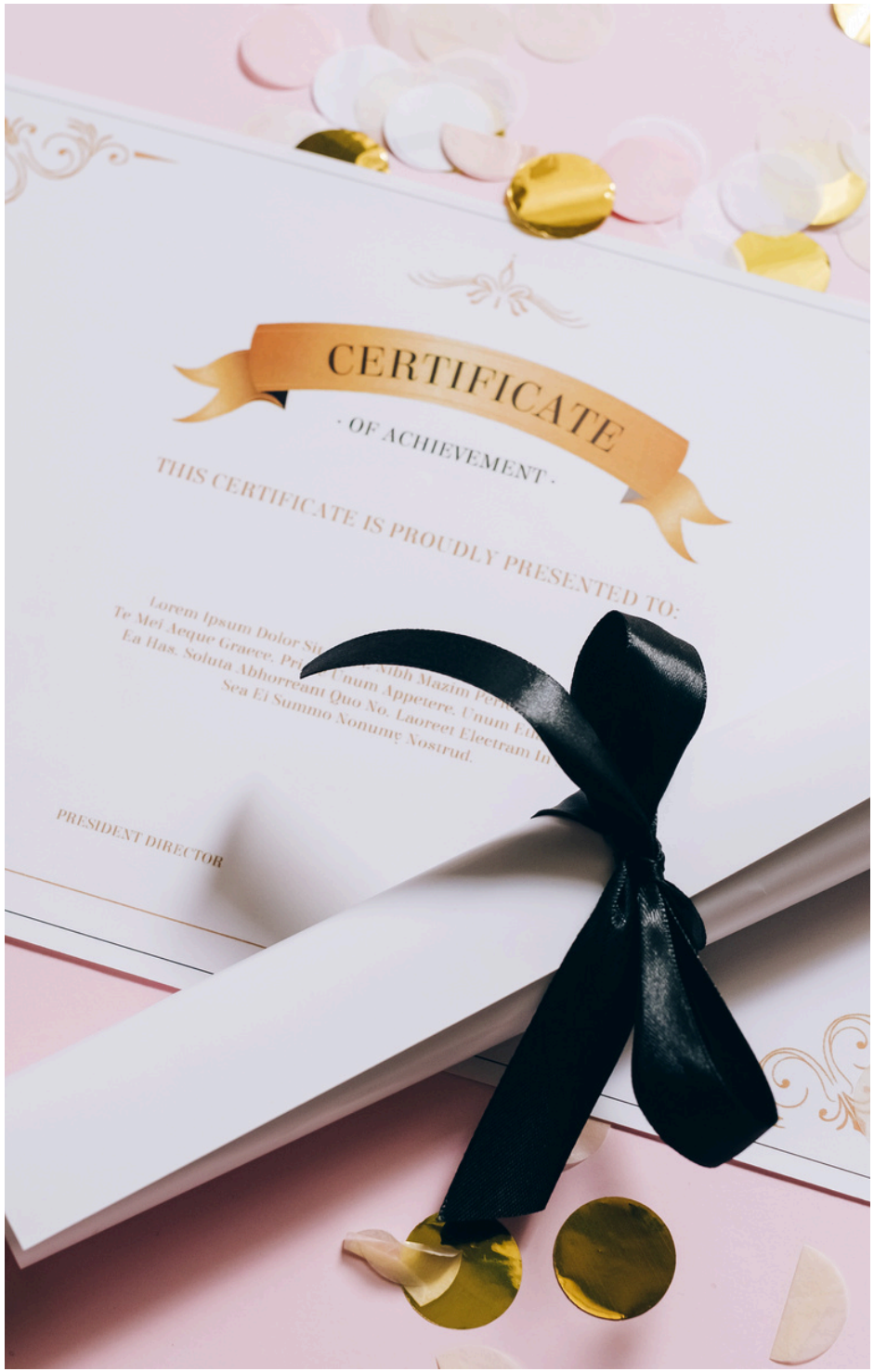
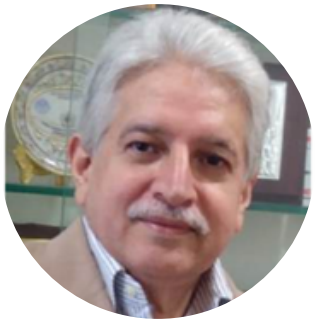


MEET THE COORDINATORS

MR. ALOK BHOWMICK
Managing Director, B&S
Engineering Consultants Pvt. Ltd.

A renowned Structural Engineer with 40+ years of experience in bridge and structural engineering. A Fellow of INAE and FIDIC Certified Consulting Practitioner, he actively contributes to IRC, BIS, IABSE, and several professional bodies, with 100+ technical papers and awards to his credit. He is a member of B-1, B-2, B-4, B-5, B-6, B-7, B-8 and B-9 Committee of IRC.



MR. VN HEGGADE
Founder & CEO of DECon
Complete Solutions

A leading Bridge & Structural Engineer with 40+ years of experience, is Founder of DECON. Formerly Executive Director at Gammon and CEO of STUP, he is an INAE Fellow, IABSE Prize winner, with 210+ publications and serves on key committees of IRC, BIS, fib, and IABSE.

MR. AMITABHA GHOSHAL
Advisory Consultant &
Past President - CEAI

A Civil Engineering graduate from Bengal Engineering College (now IIEST), he is a Fellow of IEI, ICE (UK), and IAStructE. He has contributed significantly to IRC and BIS codes, authored two books on Vidyasagar Setu and Howrah Bridge, and played a key role in engineering major cable-supported bridges in India. He has been a convener for B-5 Committee of IRC and is actively involved in formation and development of codes.

MEET THE COORDINATORS

MR. RS SHARMA
Ex President CEAI

With over 50 years of experience, he served in MoRTH and NHAI, and later as Secretary General of IRC. A former President and Treasurer of CEAI, he played a key role in code development and seminars. He received IRC's Lifetime Achievement Award in 2022 for his contributions. is an active member in a number of Committees of IRC.

MR. MV JATKAR
Director, GILCON Project Services Ltd.

A post graduate from COEP, worked for Gammon India Ltd. in design & construction engineering in various capacities before being appointed as Technical Director. He is now a Director of GILCON Project Services Ltd. & the co-convener of IRC B-7 committee on temporary structures.

MR. M M GHOSH
Consultant at INSDAG

A Civil Engineering graduate and MBA from Jadavpur University, has been with INSDAG since 2002 in structural steel design and training. Now a consultant post-retirement, he is a Chartered Engineer, BIS committee member, and Fellow of IIASTRUCTE, New Delhi, and Member of IEI.

FEE STRUCTURE

Module	IRC Codes Covered	Non-Member Fee (Without 18% GST)	Member Fee (Without 18% GST)	Student Fee (Without 18% GST)	International Participant Fee (Without 18% GST)
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Module 2	IRC:112	₹14,000	₹11,000	₹7,000	$200
Module 3	IRC:24, IRC:22	₹13,000	₹10,000	₹6,500	$175
Module 4	IRC:78 (Part 1 & 2)	₹11,000	₹8,000	₹5,500	$150
Module 5	IRC:83 (Part I, II, III & IV), IRC:IRC:SP 69, Design of Isolation Bearings for Bridges	₹17,000	₹15,000	₹8,500	$250
Module 6	IRC:87 - 2018	₹4,000	₹3,000	₹2,000	$75

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