





Indian Institute of Technology Ropar



# **IIT Ropar & CII announces admission**

# 2nd Batch

# Online Postgraduate Professional Development Program in Corrosion Management and Technology

Academic Session (July 2023 – April 2024) Weekend Online Classes, Every Friday & Saturday, 6 PM to 8 PM

"An Industry Oriented Online Continuing Education Program under Collaboration of Indian Institute of Technology Ropar, Punjab and Confederation of Indian Industry, Corrosion Management Division, Chandigarh

Accelerate Your Career Growth in Corrosion Management

" Last Date to Apply 30th May 2023" (Limited Seats)

#### Voice of Candidates (Previous batch, July 2022 - April 2023)



I have learnt more through this course than attempts made to learn online. Corrosion Engineering is a vast field encompassing many aspects of engineering from, electrical, chemistry, metallurgy, environment etc. The faculty of CII have taken all care to combine all of those through easily understandable Presentations and Lectures for ease of understanding and to deliver online to a diaspora that has connected from all over the world. I would like to advise this course to all budding corrosion engineers to learn as well as seasoned corrosion engineers to refresh their knowledge.

Mr. V.K.N. Umasankar, Lead Integrity and Reliability, Antonoil Services DMCC, Majnoon Oilfield - Iraq



"The program is designed in such a manner that almost all the concepts in Corrosion are covered and taught, from Protective Coatings to Cathodic Protection, Material Selection to Design, and Chemical Inhibitors that are applicable to industries such as Oil/Gas, Petrochemical, Paper/Pulp, Roadways, Automotive, Nuclear, Infrastructure, Airlines, etc. The course is designed to enhance knowledge in the field of Corrosion and its Control, Management including Sustainability. The tutors/mentors are highly experienced, and the lectures presentations are helpful at any instance that can be used as a guide in real-life and/or work/job scenarios and the mentors encourage the participants to ask/send emails regarding their doubts in their respective work fields."

#### Mr. Sivakumar Venkatesan, Offshore Inspector, FPSO Baobab-MODEC



"This course is very well designed for the corrosion engineering professional as well as for design engineering professionals. By attending this course and interacting with various industries stalwarts in the field of corrosion engineering and inspection, helps to understand the mechanism of corrosion, metallurgy, and inspection techniques to restrict the corrosion problems in the petrochemical, refinery and other chemical industries. This course has helped me a lot in my day-to-day engineering work to cater the corrosion first at design stage only. The tremendous effort for designing this course to suit the industries and extended efforts on weekends to provide us a learning a platform, enhances the cutting-edge corrosion knowledge of people like us.

#### Mr. Manish Darji, DGM, Piping Material Engineering, Reliance industries Ltd



For Process Industries, the key factor of profit generation is directly linked with maintenance cost on unaccounted reasons. In Industries, a large part of maintenance, replacement or breakdown cost related to corrosion may be due to lack of technical knowledge or expertise on corrosion. The designed course has renowed faculties from more than 20 Industries including experts on topics such as Protective Coatings to Cathodic Protection, Material Selection to Design, and Chemical Inhibitors. The total execution of this program is Excellent as regular classes, assignment after each session and periodic evaluation and project are conducted which are very useful for any candidate to enhance knowledge and expertise. My sincere thanks to CII- IIT Ropar team for this excellent initiative.

Mr. Rajiv Bhatnagar, Chief General Manager (QMS), J K Tyres & Industries



The Program was truly informative and engaging. The program consisted of sessions held by industry specialists and eminent faculties on Corrosion overview & mechanism, cathodic protection, etc. whose expertise is invaluable. I appreciate the great efforts taken by Dr. Jaspreet Kaur Madam in organizing and coordinating such a comprehensive course, accommodating evening timings of VCs for everyone to attend, and recording study material and lectures and making it available for all. Overall, I have learned a lot from the course, and it has enhanced my knowledge in the field of corrosion management and technology. I would like to express my sincere gratitude to IIT Ropar and CII for organizing such an informative and well-structured program.

Mr. Bhupendra Dewangan, Assistant Manager, HPCL

#### Background

What is so important about corrosion? The global cost of corrosion is estimated to be US\$2.5 trillion, which is equivalent to 3.4% of the global GDP (2013). These costs typically do not include individual safety or environmental consequences. Through near misses, incidents, forced shutdowns (outages), accidents, etc., several industries have come to realize that lack of corrosion management can be very costly and that, through proper corrosion management, significant cost savings can be achieved over the lifetime of an asset. It has significant costs to society. Besides the direct monetary loss to corrosion, it can compromise people's safety and life of infrastructure. It is in the country's best interest that corrosion be mitigated as much as possible.

**Domain Experts and Professionals are needed to mitigate the menace of corrosion** so that assets can have a safe, reliable, and longer service life. Since corrosion engineering is an emerging & niche field, it can accelerate career growth of working professionals as well as new job openings are expected.

Engineers, Corrosion Auditors, and Technologists are employed in the field of corrosion engineering & management. Completing a four-year degree in a relevant engineering discipline is usually the first step towards a career in corrosion engineering. Engineering disciplines typically involved in the industry are mechanical engineering, civil engineering, chemical engineering, electrical engineering, materials engineering, marine engineering, metallurgical engineering, and corrosion engineering. Those trained in corrosion engineering are employed in industries where corrosion is a particularly significant safety or economic issue. The professionals are mostly found in the oil and gas industries, manufacturing, EPC & civil infrastructure, marine industries and as Corrosion Experts & Auditors with consulting agencies and Corrosion Technology providers. The corrosion engineering industry is a fascinating option worth checking out. It could be the career path you've been looking for.

With the objective of competence development and enhancing job prospects in corrosion engineering and management and to create world class leaders into the domain, CII jointly with Indian Institute of Technology Ropar, Punjab have designed the "Online Postgraduate Professional Development Program in Corrosion Management and Technology". The course aims at creating world class professionals in Corrosion Engineering and Management Domain by facilitating industry oriented online continuing education program for working professionals, Fresh Graduates / Post Graduates and for those who wish to build their career in corrosion management field.



Program Highlights	Career Prospects
<ul> <li>Managed Jointly by IIT Ropar and CII Corrosion Management Division, Chandigarh.</li> </ul>	<ul> <li>Opportunity to pursue and upgrade career as Corrosion Manager/Corrosion Professional</li> </ul>
<ul> <li>Industry Oriented Advanced Program for Working Professionals helping in career growth and better job prospects for Young Engineers.</li> <li>Learning and Mentorship from Eminent Experts in Corrosion</li> </ul>	<ul> <li>Highly Job Oriented Course for Engineering Graduates/ Master of Science or Engineering Diploma holders to pursue career as Corrosion Engineer/ Corrosion Analyst/ Corrosion Auditor in India &amp; sharead</li> </ul>
Management, Technology and Asset Management. • Exposure to Industrial Best	abroad. • Professionals to Build Proficiency in Corrosion Management.
<ul> <li>Practices and Case Studies</li> <li>Highly interactive virtual classrooms</li> </ul>	<ul> <li>Opportunities for start-ups in emerging field of corrosion audit and management.</li> </ul>

<ul> <li>Working professionals from PSUs/ Industry/ Consulting Firms/ Oil &amp; Gas &amp; Process Sector, EPC Sector/ Defense/ Shipping/ Railways etc.</li> <li>Practicing Corrosion Management and Asset Management Professionals</li> <li>Production/Maintenance/Design/Project /EHS/Quality Engineers/Managers</li> <li>Fresh Engineering Graduates &amp; Postgraduates / Postgraduates in Science Streams</li> <li>Minimum qualification required: <ul> <li>Bachelor's Degree in Engineering</li> <li>Master of Science or Diploma with at least 2 years of work experience</li> </ul> </li> </ul>	Who Should Join?	Eligibility :
	<ul> <li>Industry/ Consulting Firms/ Oil &amp; Gas &amp; Process Sector, EPC Sector/ Defense/ Shipping/ Railways etc.</li> <li>Practicing Corrosion Management and Asset Management Professionals</li> <li>Production/Maintenance/Design/Project /EHS/Quality Engineers/Managers</li> <li>Fresh Engineering Graduates &amp;</li> </ul>	required: • Bachelor's Degree in Engineering OR • Master of Science or Diploma with at least 2
	<b>C C</b>	

#### Program Structure:

The program comprises of virtual classroom, assignments, and Project work. Recordings of all the lectures/classes would be available for the reference. Course would mainly focus on practical case studies, analysis of corrosion failures, practical project work and assignment based on practical aspects, corrosion audits etc. Focus of the course would be to develop an understanding of corrosion, its mitigation & management and technology at global level, country level, industry level and as professionals with an aim to create corrosion expertise & leadership. Every subject would have experts' lectures from globally renowned experts, IIT faculty members, CII – CMC, professionals including CEOs, MDs, and Heads of various business segments.

## Part I: July - October

- Understanding Corrosion
- Materials and Corrosion
- Microbiologically Influenced Corrosion and its Control, Water Treatment Chemistry
- Protective Paints & Coatings
- Approach to Corrosion Management

## Part II: December - April

- Corrosion Inhibitors Application, High Temperature Corrosion, Pipeline Corrosion
- Cathodic Protection, Corrosion of Steel in concrete structure
- Corrosion Management of Process Industry & Failure Analysis
- Technology and Innovations in Corrosion Management
- Industrial Project

#### **Program Fee \***

## For Indian Participants: Rs. 55,000 + 18% GST, For International Participants: US \$ 1100

Fee can be paid in following two modes:

## a) Lump sum fee at the time of registration: Rs. 52,000 + 18% GST Or US \$ 1050

## b) Program Fee in Installments –

1st Installment during program registration: Rs 15,000 + 18% GST Or US \$ 300 2nd Installment within two weeks of registration: Rs 20,000 + 18% GST Or US \$ 400 3rd Installment before 2nd Semester by (Dec 2023): Rs 20,000 + 18% GST Or US \$ 400 \***Program fee is non- refundable** 

# Admission Process:

Corporate nominations can be submitted by HR/Training department. Other individuals may register through online registration link or by email nomination. The admission to the program shall be done on first come first serve basis, subject to fulfilling the eligibility criteria. Program fee can be paid through NEFT, IMPS, UPI, Debit/Credit card or Netbanking.

- Corporate discount -
- 3 to 5 nominations = 5%
- 6 to 10 nominations = 7%
- More than 10 nominations = 10%

## Bank details for NEFT/ IMPS:

Bank Name: ICICI Bank Ltd, Address: Sector-28, Chandigarh, A/C Name: Confederation of Indian Industry, A/C No: 096405000413, IFSC Code: ICIC0000964

# **Required Documents:**

Scanned copies of,

- Aadhar Card/ PAN Card/ Any other National Identify Card
- Graduation Degree/ Provisional Completion Certificate
- High School Certificate/ Mark-sheet
- Passport Size Photograph

## **Important Dates:**

Last Date for Registration: 30 May 2023 Program commencement: July 2023

# Steps of Online Registration:

#### 1. Online registration link-

https://cam.mycii.in/ORNew/Registration.html? EventId=E000061796

 Select Participant type- Mode of Fee (Lumpsum or 1st Installment)
 Mention details like Name, Designation, organisation, address, Contact details etc
 Mention Educational Qualification and Professional Experience (in Years)
 Select GST: For Billing on GST Number and Company Name (Address should be billing address of company)
 OR Select PAN: For Individual/ Self-Sponsored Candidate (Correspondence Address of candidate)

6. Select Currency (INR/ USD)

7. After completing the payment process, a system generated confirmation mail will be sent to registered email address.

8. CII would send communication for the submission of soft copies of required documents.

9. Participants will receive the registration number after document submission and verification.

# Program Certificate

The evaluation will be based on assignments, project work and examinations. Candidates completing the program with satisfactory performance in evaluations will be awarded with Certificate of Completion jointly by IIT Ropar & CII Certificate of Participation will be awarded jointly by IIT Ropar & CII to the candidates for completing the program, to whom certificate of completion cannot be awarded.

#### Program Benefits

Learning from the program will upgrade existing industry professionals to an expert in the field of corrosion management. For fresh graduates/post graduates this program will be highly beneficial to get in-depth knowledge on corrosion management and technology domain and to start their career journey into corrosion management.

Participants will also get complementary registration in flagship events and conferences of CII like CII National Corrosion Circle Competition, Corrosion Summit, Conference on Addressing Corrosion in Auto & Auto Component Industry, and other virtual training programs related to corrosion.

# Candidates Profiles from Previous Batch of 2022-2023





Indian Institute of Technology Ropar ranked The Confederation of Indian Industry (CII) among the top 25 Engineering institutions in works to create and sustain an environment India, being ranked 22nd in NIRF 2022 conducive to the development of India, rankings. The Institute has been also ranked in the Overall Category, bagging 35th rank in India. IIT Ropar has been ranked in top 100 universities, scoring 81st young Rank, adjudged by the Times Higher Education Young University Rankings 2022. We have been ranked 68th in Asia University Rankings among top 100 Institutions in Asia. IIT Ropar charts change by working closely with has been ranked on Top globally in Graduate Government on policy issues, interfacing Quality Index as measured by Federal with Reserve Bank of Minneapolis in their working efficiency, competitiveness, and business paper on "The Global Distribution of college opportunities for industry through a range graduate quality" in which the 3300 colleges of specialized services and strategic global in 66 countries were evaluated. IIT Ropar's linkages. research quality and impact can be ascertained from the average citation per paper, which stands at 17.75 with an H-Index of 84. This is the highest but one among all the young generation IITs as per recent Scopus data.



partnering industry, Government, and civil society, through advisory and consultative processes. For more than 125 years, CII has India's been engaged in shaping development journey and works proactively transforming Indian on Industry's engagement in national development. CII thought leaders, and enhancing



#### **CII – Corrosion Management Division**

CII initiated a service on Corrosion Management with the objective of helping organisations in addressing the adverse effects of corrosion. As one of initiatives to network expertise related to corrosion available in India, the Centre formed a "Corrosion Management Committee" (CMC) in the year 2004 under the Chairmanship of Late Dr. Baldev Raj, Distinguished Scientist & Former Director, Indira Gandhi Centre for Atomic Research (IGCAR). The CII – CMC is presently by Dr. U Kamachi Mudali, Vice chaired Chancellor, VIT Bhopal University & Formerly Distinguished Scientist, Department of Atomic Energy, Chairman & Chief Executive, Heavy Water Board.

**Key Impact of CII Corrosion Management Services** 

- 50+ training Programs Pan India. Impacting nearly 1500 organisations and 2500 **Managers & Engineers**
- 21 organisations benefitted from Corrosion Audits
- 26 Industry specific booklets on **Corrosion Management** available
- 1000+ people trained as **Corrosion Managers**

Launch of National Mission on "War Against Corrosion" and establishment of CII Corrosion Management Division (CII - CMD): With more industrialization, growth in public infra-structures, initiatives like Smart City, Solar Mission, Energy & Resource Efficiency, Sustainability etc would call for better management of corrosion so that the life expectancy, safety, reliability etc can be enhanced and overall life cycle cost can be reduced. Towards this, corrosion and mitigation of corrosion loss will have a major share in the social and economic growth of the country. Considering the widespread problems of corrosion and corrosion-related failures, CII supported by Jindal Stainless established CII - CMD with a purpose of facilitating in minimising the corrosion related losses and achieve status of world class corrosion managed country. In line with the CII National mission on War Against Corrosion, , CII – CMD works towards developing a structured plan to mitigate the losses caused by corrosion impacting the Indian economy.

#### Key services of Corrosion Management Division

- Corrosion Survey, Audits and Failure Analysis
- Training Courses/ Conferences/Summit
- Booklets and Publications
- Long-term Continuing Education Program jointly with Institutions





# For further details, Please Connect:

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