

Professional Certificate Program

# Lean Construction

Concepts and Tools for Young Professionals



Two-Day | On Campus | 08 & 09 June 2024

**CPP** | CEPT  
UNIVERSITY

# CEPT PROFESSIONAL PROGRAMS

CEPT Professional Programs (CPP) aims to bridge the gap between academics, practice, policy-making, and implementation through short certificate programs. The mission of CPP is to support individual and organizational learning by creating opportunities to acquire new skills and capabilities, thus allowing professionals to stay relevant in the current knowledge based global context. It will achieve this by offering professional development, continuing education, and up-skilling opportunities for professionals and in-service persons across disciplines concerned with urban development and the built habitat.

CPP draws from the expertise and capacity of the accomplished faculty at CEPT University, enhanced further by experts and practitioners from the field. Its programmes are built on deep research, vast consultancy projects and innovative pedagogies. CPP offers a repertoire of short programs and topic focused programs across disciplines of architecture, design, planning, and management with immersive learning approaches combining interactive lectures, case studies, and peer-to-peer exchanges.

# ABOUT THE PROGRAM

The lean philosophy holds a promise of bringing transformation in construction industry with reduced wastes, on time and within budget delivery of projects, value maximization for the clients and culture of collaboration and respect. At global as well as at India level, the lean construction has already started attracting the attention of Architecture, Engineering and Construction (AEC) professionals involved in construction project delivery. The concepts of lean construction differs substantially from the traditional processes, methods and culture of construction. The knowledge of lean concepts and lean tools is necessary for tapping fullest potential of lean in real life construction projects.

This program aims to improve understanding of construction industry professionals about the various concepts and tools associated with lean construction. The lean simulation games are used extensively worldwide for giving first-hand experience about lean concepts. This professional program would conduct prominent lean simulation games for improved understanding of terms like pull vs push, waste, value and continuous improvement. The lean concepts are operationalized in project delivery with diverse lean tools, hence, this program will impart the knowledge about these tools and equip the professionals for real life application of lean tools. The real-life examples from Indian construction industry, discussing application of lean tools, would be deliberated in this program for improved analysis of construction processes. Overall, this professional program would equip the construction industry professionals to apply lean concepts in real life construction projects.

# PROGRAM STRUCTURE

The program will be conducted over two days with focus on the following:

## DAY - 1

### Session 1

This session will discuss the conceptual foundation of lean project delivery. Further to this, it will focus on various concepts like pull, waste, variability, overburden, and so on.

### Session 2

This session will involve playing of "Airplane Game" to experience lean concepts. After the conduct of this simulation game, the discussion will focus on connecting learnings from the simulation game to the onsite practices and further areas of improvement.

### Session 3

Lean project delivery involves the application of lean tools for process improvement. Value stream mapping is a prominent lean tool for the identification of waste in the project delivery process and for coming up with areas of improvement for waste elimination. This session will provide the background and steps involved in the application of value stream mapping and case studies showcasing the implementation of the VSM tool in real-life construction projects.

## Day - 2

### Session 1

In this session, the lean tool of Foreman Delay Survey will be discussed with an emphasis on onsite data collection and analysis, and steps required to improve on-site activities.

### Session 2

The session involved experiencing 5S - Lean Tool with the help of a lean simulation game. Further, the discussion will also focus on the application of 5S in real-life construction projects.

### Session 3

The reduction in variability and ensuring flow in the construction process are important facets of lean project delivery. The lean tool – Last Planner System® is popularly used for planning and executing construction projects in India. This session will discuss the step-by-step approach involved in the application of the last planner system in a construction project.

### Session 4

The lean project delivery is prominently used across the world. This session would share this international experience with the adoption of lean principles in construction projects.

# PROGRAM FACULTY



**Ganesh Devkar**  
Program Director

Ganesh Devkar, PhD is a senior associate professor at the Faculty of Technology at the CEPT University, Ahmedabad, India. He holds a Doctorate in Construction Management from the Indian Institute of Technology Madras (IIT Madras). His doctoral work focuses on competencies in urban local bodies for implementing water, sanitation, and solid waste management public private partnership (PPP) projects in India. During his doctoral research work, he was involved in research projects for Tamil Nadu Urban Development Fund; the Ministry of Urban Development; and the Institute of Water Policy, National University of Singapore. Ganesh teaches construction quality and safety management, project appraisal, lean construction, and public private partnerships. He has been researching in the area of public private partnerships, lean construction, and mega projects. He has participated in four systematic reviews focusing on the delivery of infrastructure like water supply, sanitation, hygiene, telecom, electricity, and transport. He received the “Young Research Scholar Award” from the Project Management Institute, India, in 2014.

# GUEST SPEAKERS



**Bhargav Dave**  
Guest Speaker

Dr. Bhargav is the Co-founder and CEO of VisiLean Oy, a Finnish start-up focusing on solving complex production management problems in construction with lean methods. With an early interest in computing, Bhargav started programming at the age of 11. The seeds of digitalising the construction industry were planted during his graduation in Construction Technology from CEPT University. Soon after, Bhargav's career focused on leading process improvement and lean implementation on projects. With a Masters and PhD in Digitising Construction, Bhargav's research explorations continued on in improving production on construction projects with lean construction methods aligned with information systems. During this time, he contributed to the original research behind integrating lean construction and BIM as well. As of today, Bhargav has authored over 45 publications and led several research projects in the area. Work aside, he has a keen interest in photography, reading and travelling during his spare time.



**Kalyan Vaidyanathan**  
Guest Speaker

Kalyan Vaidyanathan, Director of Business Development at Bentley Systems India Ltd., boasts 25 years of experience in construction project management and enterprise software development. His accolades include the 2015 Technologist Innovator award from the Construction Industry Development Council, Government of India, and the Entrepreneur of the Year 2014 title from CII, Chennai. Vaidyanathan has authored numerous papers on modern construction technology and lean construction, including a recent chapter on "Cloud-based Collaboration and Project Management" in the Construction 4.0 book. Formerly, he co-founded and served as CEO of Nadhi Information Technologies Pvt. Ltd., which was acquired by Bentley. Prior to that, he held positions as Product Line Manager at i2 Technologies and Senior Engineer at Simpson Gumpertz and Heger Inc. Vaidyanathan holds an M.S. in Structural Engineering from Cornell University and a B. Tech in Civil Engineering from IIT Madras.

# PROGRAM CALENDAR

The program will be conducted on the CEPT University campus in an in-person mode with a focus on the following:

- 1) Understanding and experiencing the lean concepts
- 2) Application of lean tools and International Experience

Days / Sessions	Content
DAY 1	08 June 2024
12:00 PM – 01:40 PM	Understanding the Concept <ul style="list-style-type: none"><li>• What is the genesis of lean?</li><li>• What are the lean principles?</li><li>• What are the core concepts of lean project delivery?</li></ul>
01:40 PM – 02:25 PM	<i>Lunch Break</i>
02:25 PM - 04:25 PM	Experiencing the Concepts with Lean Simulation Game Airplane Game <ul style="list-style-type: none"><li>• Lean Concepts: Push, Pull, Kanban, Takt Time</li><li>• Application of Concepts in Construction Projects</li><li>• Discussion</li></ul>
04:25 PM - 04:40 PM	<i>Tea / Coffee Break</i>
04:40 PM – 06:10 PM	Application of Lean Tool <ul style="list-style-type: none"><li>• Value Stream Mapping</li></ul>
06:10 PM - 06:40 PM	Discussion Session

# PROGRAM CALENDAR

Days / Sessions	Content
DAY 2	09 June 2024
09:00 AM - 10:30 AM	Application of Lean Tool <ul style="list-style-type: none"><li>• Foreman Delay Survey</li></ul>
10:30 AM - 10:50 AM	<i>Tea/Coffee break</i>
10:50 AM - 12:30 PM	Experiencing the Lean Concepts with Lean Simulation Game <ul style="list-style-type: none"><li>• 5S Number Game</li><li>• Lean Concepts: 5S</li></ul> Application of Concepts in Construction Projects <ul style="list-style-type: none"><li>• Application of 5S Lean tool</li><li>• Discussion</li></ul>
12:30 - 01:15 PM	<i>Lunch Break</i>
01:15 PM - 02:45 PM	Application of Lean Tool <ul style="list-style-type: none"><li>• Last Planner System</li></ul>
02:45 PM - 03:45 PM	Lean: International Experiences
03:45 PM - 04:00 PM	Certification and Feedback Session
04:00 PM Onwards	<i>High Tea</i>



# ADMISSIONS AND APPLICATIONS

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Application Process

Online applications have already commenced. To apply to the program visit the CPP website <http://cpp.cept.ac.in/>

Applicants should complete the online form and attach their CV/resume.

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Application Deadline

10 May 2024

(The deadline for this program is indicative. All applications will be considered as they are received, and seats will be allotted on a first come first serve basis. Admissions will be closed once all seats are full)

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Program Dates

08 & 09 June 2024  
(On-Campus)

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Who can Apply?

The program is open for Professionals including Construction Project Managers, Engineers, Planning Engineers, Execution Engineers, Project Management Consultants and Professionals in Real Estate Development or any other allied field.

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Fees

INR 13,500/-+ GST

(The program fee is inclusive of the welcome kit and working lunch on both days of the program.)

The program fee is exclusive of travel costs, and accommodation of the participants)

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Certificate

Participants will receive a certificate from CEPT University on successful completion of the program.

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CEPT University

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