



# CONNECT<sup>2</sup> INDUSTRY

## For Civil Engineering Students

"Creating a seamless bridge between academia and industry is imperative for producing engineers who are not only well-versed in theoretical knowledge but also possess practical skills essential for the workforce."



## INFRASTRUCTURE SKILL DEVELOPMENT ACADEMY

[An Institution dedicated for bridging the gap between Academia and Industry]

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## About the Scheme

In an era marked by a growing chasm between academia and industry, a critical challenge emerges: the surplus of engineers ill-equipped for the demands of today's job market. Addressing this predicament head-on, the Infrastructure Skills Development Academy (ISDA) has devised a pioneering initiative known as **"Connect 2 Industry"**. This visionary program is meticulously crafted to equip students with practical insights into the real-world applications of their academic knowledge, fostering invaluable connections with industry experts, and instilling a profound understanding of the professional landscape and its expectations. While the program's core delivery takes place in the digital realm, it also offers unique opportunities for face-to-face interactions and hands-on experiences within live projects—an invaluable blend of virtual and tangible learning experiences.

## Pedagogy

The "Connect 2 Industry" program follows a meticulously designed pedagogical approach tailored to meet the specific needs of final year civil engineering diploma/degree students. It aims to provide them with a comprehensive understanding of the operational intricacies within the construction sector and how to effectively apply their academic knowledge in a professional setting. Recognizing the demands of tight academic schedules, the program predominantly employs an online delivery mode, complemented by face-to-face sessions and immersive visits to live projects. Spanning duration of three months, the curriculum encompasses a diverse range of components:

**Eligibility** - "Connect 2 Industry" is optimally tailored for final-year civil engineering diploma and degree students seeking to augment their comprehension of the operational dynamics within the construction sector. It serves as a bridge, illuminating how their academic acumen seamlessly translates into practical application within a professional context.

**Delivery Mechanism** - Duration - Three months (two lectures on each weekend).

**Online Lectures:** Consisting of 20-24 sessions, each spanning two hours, with a dedicated focus on not only technical aspects but also soft skills and personality development, accounting for four sessions.

**Face-to-Face Interaction:** Participants are afforded a valuable one-day opportunity for direct engagement with multiple expert faculties.

**Guided Site Visits:** Over two days, participants gain hands-on experience through supervised visits to live projects, offering a tangible understanding of on-ground operations.

**Performance Assessment:** After each lecture, participants receive immediate feedback through a Google questionnaire, enabling them to gauge their performance in real-time.

**Final Evaluation:** Culminating in a comprehensive online examination, successful participants receive a certificate upon completion, marking their proficiency in the program's curriculum. This holistic approach ensures a well-rounded and practical education for aspiring engineers seeking to excel in the construction sector.

***"Embarking on this program not only promises a journey of skill enhancement, but also comes with the added bonus of earning an official internship certificate upon successful completion."***

**Construction Industry Updates** - The most neglected aspect at college level shall be duly covered under this program and participants will get regular updates on construction sector functioning in India.

This knowledge not only enriches their academic foundation but also equips them with a forward-looking perspective crucial for success in the field.

**Placement Assistance** - ISDA will help deserving candidates in preparation for interviews, share the available job opportunities, resume preparation guiding about different job portals and arranging interviews.



## Program Fee:

The "Connect 2 Industry" program offers an accessible opportunity for participants, with a modest fee of Rs. 7500/- (GST, as applicable, will be charged separately) due at the time of registration. It's important to note that this fee covers the program itself, and any additional expenses incurred by participants for attending face-to-face workshops or live project exposures are not included.

## The Technical Lecture Series

Within the "Connect 2 Industry" program offers a comprehensive exploration of critical subject's imperative for budding engineers to effectively apply their academic knowledge in practical settings. These lectures are divided into five distinct groups, each containing subgroups that collectively cover a broad spectrum of essential topics.

### Group 1: Construction Materials

"Construction Materials: Explores foundational elements crucial for projects. Topics include new materials, sustainability, concrete tech, and construction chemicals. Equips participants to make informed, durable, sustainable material choices."

**New Materials:** Cutting-edge substances reshaping construction practices for improved strength, durability, and sustainability.

**Green & Sustainable Materials:** Eco-friendly alternatives and practices, reducing environmental impact in construction.

**Advanced Concrete:** State-of-the-art formulations like self-healing and ultra-high-performance concrete, enhancing strength and versatility.

**Construction Chemicals & Waterproofing:** Additives, sealants, and coatings ensuring longevity and protection against environmental factors.

### Group 2: Construction Technologies

Construction Technologies revolutionize building and infrastructure processes. They use engineering, materials science, and digital tools for efficiency, safety, and sustainability. Examples: pre-cast tech for faster assembly, green building for eco-friendly practices. Pre-engineered buildings and composite construction enhance performance and speed. Integration leads to efficient, cost-effective, eco-conscious solutions.

**Pre-cast Technology:** Fabricating building components off-site for efficient assembly, reducing on-site labor needs and ensuring quality control.

**Composite Buildings:** Integrating materials like steel and concrete for versatile, cost-effective structural solutions, optimizing performance.

**Pre-Engineered Buildings:** Using pre-fabricated components manufactured off-site to speed up construction, commonly applied in warehouses and commercial structures.

**Green Building Concept:** Prioritizing sustainability through energy efficiency, eco-friendly materials, and efficient building systems, aiming for minimal environmental impact and occupant well-being.





## Group 3: Project Implementation & Construction Quality/Safety

Project Implementation begins with thorough planning, conducting feasibility studies, and obtaining necessary approvals. Budgeting and financing are crucial. The procurement phase involves issuing tenders and selecting qualified contractors. During construction, quality control, safety measures, and compliance with regulations are paramount. Finally, post-project evaluation and documentation ensure a successful handover of the completed project. Adaptability and problem-solving skills are crucial for addressing unforeseen challenges.

**Multistoried Building Project Execution:** Covers planning, coordination, procurement, and quality control for successful completion.

**Large Highway Project Case Study:** Analyzes planning, execution, resource allocation, and risk management.

**Construction Quality Assurance:** Focuses on ensuring standards through quality control methods and testing.

**Safety Management in Construction:** Emphasizes risk assessment, compliance, and safety protocols for worker protection.

## Group 4: Digital Construction

The digital technology is fundamentally changing the construction industry by improving efficiency, accuracy, safety, and sustainability. It's enabling a shift towards more collaborative, data-driven, and technologically advanced construction practices.

**Building Information Modeling (BIM):** Enhances collaboration and decision-making with 3D models and data.

**3D Printing in Construction:** Allows for layer-by-layer creation of complex structures for cost savings and speedier construction.

**Volumetric Building Manufacturing:** Off-site fabrication of building modules for streamlined construction and improved quality control.

**Intelligent Buildings:** Incorporates automation, energy efficiency, and advanced technologies for occupant comfort and security.

## Group 5: Contract Management

Each type of contract has its own advantages and challenges, and the choice depends on the nature of the project, the risk allocation preferences of the parties involved, and the regulatory environment. Additionally, legal and financial advisors often play a crucial role in structuring and negotiating these contracts to ensure the interests of all parties are protected.

**Contracting Basics (CPWD, MES, Railway):** Familiarizes with fundamental principles in specific government organizations.

**NHAI Contracting on PPP Mode Case Study:** Examines a real PPP project undertaken by NHAI, analyzing structure and outcomes.

**EPC Contract Case Study:** Explores Engineering, Procurement, and Construction contracts in large-scale projects.

**International Competitive Bidding:** Covers bidding procedures, compliance with international regulations, and successful strategies.



## Industry Experts

The program would involve Industry Experts coming from large and medium size Infrastructure Companies, Research and Development Organisations, leading Consulting Organisations, Professional Associations and Material Manufacturing Organisations. As per need of the program experts will be invited to share their knowledge and guide the young Engineering students about how the academic knowledge will effectively be utilised in field Operations.

## National Advisory Committee

The program is designed, developed and implemented under the mentorship of Senior industry experts serving some of the largest construction companies like- Tata Projects, JMC Projects, Shapoorji and Paloonji, HCC, Patel Engineering, G R Infrastructure India Limited, Ahluwalia Construction India Limited, Tandon Consultants, CRRI and BRIDCUL, Government of Uttarakhand and many more.....for complete details visit our website [www.isdadelhi.com](http://www.isdadelhi.com)

### Payment ( Bank Transfer-RTGS/IMPS)

Bank : **The Federal Bank Ltd**  
 Branch : **Nehru Place, New Delhi - 110019**  
 Account Name : **Infrastructure Skill Development Academy**  
 Account No. : **13025500062833**  
 IFSC No : **FDRL0001302**  
 GSTIN : **07AADCI2907A1Z5**  
 Pan No : **AADCI2907A**



**Click Here for Registration**



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