

MBS School of Planning and Architecture

PSP Area, Dwarka Sector- 9, New Delhi- 110077

Affiliated to GGSIPU and approved by COA & AICTE

Event Report

Value Added Program:

“Conventional Building Material – Bricks for Construction”

Date	2-09-2024 and 3-09-2024
Type of event	Value Added Program
Topic	Conventional Building Material – Bricks for Construction
Venue	MBS College - Construction Yard
Proposed For	B.Arch 4 th year and 5 th year students
Resource Person	(Day-1 & Day -2) Er. Ajay Negi

Introduction

A Value-Added Program was organized for the 1st Year students of MBS SPA. MBS School of Planning and Architecture has always taken an initiative to provide students with interesting, interactive learning sessions with hands on experience.

Architecture is a discipline that blends creativity, science, and practical knowledge. Understanding **building materials**—their properties, applications, and limitations—is fundamental to designing safe, sustainable, and aesthetic structures. Among the most ancient and enduring building materials, **bricks** hold a special place in the study of architecture due to their versatility, durability, and cultural significance in construction practices across the world. To bridge the gap between theoretical learning and real-world application, **hands-on exercises** provide architecture students with direct experience in handling, testing, and utilizing bricks..

Objectives

The main goals of conducting hands-on exercises on conventional building material—bricks—are to:

1. Provide **practical exposure** to various types of bricks and their applications.
2. Develop **skills in masonry techniques**, brick bonding patterns, and wall construction.
3. Enable students to **analyze material properties** such as strength, density, and water absorption.
4. Encourage **innovative use of traditional materials** in modern design contexts.
5. Promote **sustainability awareness** through the study of eco-friendly and value-added brick alternatives.

Through such experiential learning, students gain an in-depth appreciation of material behavior and its direct impact on architectural form and function.

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DAY 1

Overview of Conventional Building Material – Bricks

Bricks are small rectangular blocks typically made from **clay**, although other variants like **fly ash bricks**, **cement bricks**, and **hollow blocks** are now widely used. The basic functions of bricks include:

- Providing **load-bearing capacity** in walls and columns.
- Acting as **thermal mass** for insulation.
- Serving as **aesthetic and decorative** elements in facades.
- Forming **structural components** such as arches, domes, and vaults.

Understanding these properties helps architecture students make informed design and material choices during the planning and construction phases of a building project.

Hands-on Exercises :

Exercise 1: Identification and Classification of Bricks

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Objective: To understand different types of bricks and their physical characteristics.

Activity: Students examine samples of common burnt clay bricks, fly ash bricks, hollow bricks, and concrete blocks.

Learning Outcome: Ability to distinguish materials based on color, texture, size, weight, and soundness when struck together.

Exercise 2: Dimensional and Visual Quality Assessment

Objective: To assess standard dimensions and visual appearance of bricks.

Activity: Students measure brick dimensions (length, width, height) using calipers and check conformity with IS:1077 standards. They inspect for cracks, chips, or warping.

Learning Outcome: Understanding of quality control in material selection.

Exercise 3: Compressive Strength and Water Absorption Test

Objective: To determine the structural performance of bricks.

Activity: Students conduct laboratory tests to measure compressive strength using a compression testing machine and calculate water absorption by weighing bricks before and after soaking.

Learning Outcome: Ability to evaluate strength, durability, and suitability of bricks for different types of construction.



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DAY 2

Exercise 4: Brick Bonding and Masonry Work

Objective: To learn practical bricklaying techniques.

Activity: Under supervision, students construct small wall panels using different **brick bonds** such as stretcher bond, header bond, English bond, and Flemish bond.

Learning Outcome: Hands-on understanding of structural stability, alignment, and aesthetics in masonry work.

Exercise 5: Mortar Preparation and Joint Finishing

Objective: To learn the correct proportioning and mixing of mortar.

Activity: Students prepare cement-sand mortar of various ratios (1:3, 1:4, 1:6) and apply it during wall construction, experimenting with joint thickness and finishing styles.

Learning Outcome: Practical understanding of bonding strength, workability, and finishing aesthetics.



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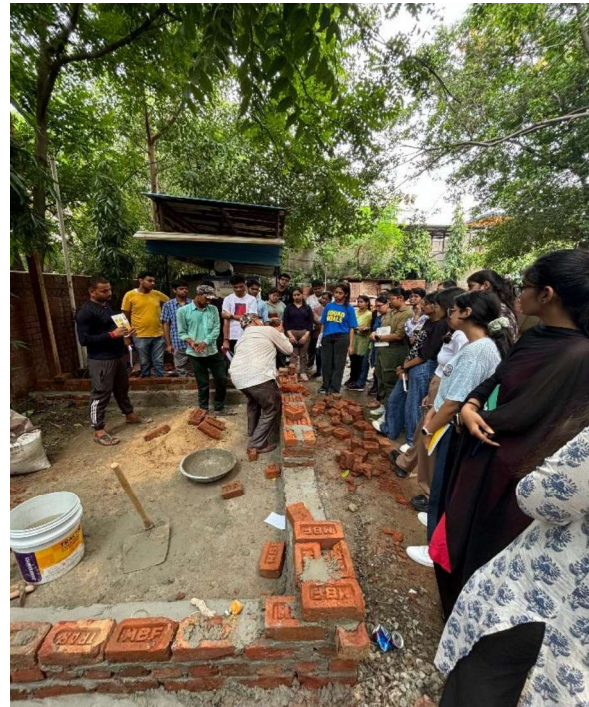
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Learning Outcomes and Skill Development

After completing these exercises, students are able to:

1. **Identify and select appropriate brick types** based on functional and aesthetic requirements.
2. **Interpret material properties** and test results for practical application.
3. **Construct small-scale masonry elements** using correct techniques.
4. **Incorporate sustainability principles** through efficient use of materials.
5. **Relate theoretical knowledge** from architectural design and building construction courses to practical field experience.



Conclusion

Hands-on exercises on conventional building material—**bricks for construction**—play a crucial role in developing material intelligence among architecture students. They foster a deep connection between **design thinking and construction practice**, allowing future architects to make responsible, sustainable, and creative use of one of the most fundamental materials in architecture. Through such experiential learning initiatives, students not only gain technical proficiency but also appreciate the cultural and environmental dimensions of traditional materials. In the long run, these practical engagements help shape architects who can blend innovation with heritage, ensuring that brick—the humble yet timeless building block—continues to inspire generations of architectural practice.

Sign and Date

Ar. Toshi Dube
Associate Professor
Chair- Person (Academic Co-Curricular)

Director



Transition from technical roles to managerial leadership positions within the Construction, Real Estate, Infrastructure, and Project (CRIP) & Built Environment sector.

conducted by

MBS School of Planning and Architecture, New Delhi

in Collaboration with

NICMAR (National Institute of Construction Management and Research – Pune, Hyderabad, Delhi-NCR, Mumbai)



Date-

December 16th and 17th, 2024

Time-

10:30 am Onwards

The primary goal of this program is to:

- Equip students with the knowledge and skills required to transition from technical roles to managerial leadership positions in the CRIP & Built Environment sector.
- Provide an understanding of the emerging trends and opportunities in the industry.
- Offer career guidance and practical insights on how to navigate the challenges of managing large-scale projects, leading teams, and delivering results.
- Share best practices and real-world examples from industry experts and NICMAR alumni.



Speaker-

Dr. Binaya Patnaik, Associate Professor
NICMAR, Delhi-NCR, Bahadurgarh, Haryana
PMP Certified

Post Doc (Civil Engineering) ,Ph.D. (Civil Engineering)
M.E, (Structural Engineering) , B.E, (Civil Engineering)



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Event Report

Value Added Program: “Transitioning from Technical Roles to Managerial Leadership positions in CRIP and built environment sector”

Date	16-12-2024 and 17-12-2024
Type of event	Value Added Program
Topic	“Transitioning from Technical Roles to Managerial Leadership positions in CRIP and built environment sector”
Venue	Online
Proposed For	B.Arch 4 th year and 5 th year students
Resource Person	Session-1 (Day-1) Dr. Binaya Patnaik Session-2 (Day-2) Dr. Saurabh Jindal

Introduction

A Value-Added Program was organized for the 4th and 5th-year students of MBS SPA. The program focused on a critical topic for students preparing to enter the professional world: the transition from technical roles to managerial leadership positions in the **Construction, Real Estate, Infrastructure, and Project (CRIP) sector**. The session was presented in collaboration with **NICMAR (National Institute of Construction Management and Research)**.

DAY-1 Session Overview

Transitioning from Technical Roles to Managerial Leadership

A key focus of the session was on how professionals can transition from technical roles to leadership positions within the CRIP sector. Dr. Binaya Patnaik, the guest speaker, highlighted several aspects of this transition.

- **Skills Development:** Transitioning from a technical expert to a managerial leader involves developing new skills such as communication, team management, financial acumen, and strategic thinking.
- **Mentorship and Training:** The importance of seeking mentorship and engaging in continuous learning to build leadership competencies was emphasized.
- **Leadership Focus:** Moving from task-oriented execution to leadership requires an understanding of broader organizational goals and the ability to manage cross-functional teams and diverse stakeholders.

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The session also covered the importance of **Agile** and **Predictive Management** methodologies in this transition. These approaches are crucial in managing large-scale projects in the CRIP sector, enabling professionals to balance flexibility and structured planning.

Example of Agile and Predictive Management: Elon Musk's Approach

Dr. Patnaik drew a comparison between the application of **Agile Management** principles in industries like technology and their potential adaptation in the construction sector. He cited **Elon Musk's approach** in managing projects where Agile methodologies are employed to maintain flexibility and adaptability in project execution.

- **Agile Management in Technology:** Musk's leadership style embraces flexibility, allowing teams to adapt quickly and innovate. This approach enables real-time problem-solving and faster decision-making.
- **Application to Construction:** Dr. Patnaik discussed how these principles could be applied to the CRIP sector. For example, construction projects often face changing conditions, delays, and unforeseen risks. Adopting Agile management practices, such as iterative development and constant stakeholder feedback, can help ensure the project stays on track despite challenges.
- **Predictive Management:** Alongside Agile, **Predictive Management** was discussed as an essential strategy for large-scale construction projects. This method involves careful forecasting, data analysis, and risk management to predict potential challenges and proactively address them, ensuring smoother project execution.

Day 1- Conclusion

The Value-Added Program provided valuable insights into the challenges and opportunities associated with transitioning from technical roles to managerial leadership roles within the CRIP sector. Dr. Patnaik's expert guidance and practical examples from industries helped students understand how **Agile** and **Predictive Management** techniques can be applied to improve project management practices in construction and infrastructure projects.

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The top screenshot shows a presentation slide titled "PROJECT MANAGEMENT 2.0 'AGILE PROJECT MANAGEMENT'". The slide content includes:

- Predictive Project Management:**
 - It is a traditional project management approach that involves
 - detailed planning and forecasting to define a project's scope, schedule, and budget.
 - It's also known as "conventional", "traditional", or "Waterfall" project management.

The bottom screenshot shows a presentation slide with a diagram of "Waterfall Project Management". The diagram illustrates a sequential process flow from "Requirements" to "Analysis", "Design", "Implementation", and "Maintenance".

Day-2 Session Overview:

Day 2 of the Value-Added Program was an informative session led by Dr. Saurabh Jindal.

Key Highlights from Dr. Saurabh Jindal's Session:

- Navigating the Transition from Technical to Managerial Roles:** Dr. Jindal initiated the session by providing a detailed analysis of the challenges and opportunities that professionals face when transitioning from technical roles (e.g., engineering, design, and project management) to managerial and leadership positions. He emphasized the importance of shifting from a focus on specialized technical knowledge to a broader understanding of organizational strategy, team management, and business development.
- Industry-Specific Dynamics:** One of the core topics discussed was the unique nature of the CRIP sector, including the various intricacies of the built environment. Dr. Jindal outlined the evolving challenges and key trends that professionals must be aware of in the current market, such as regulatory changes, sustainability requirements, and

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stakeholder management. This focus provided a clearer picture of how managerial roles in the sector require an adaptable mindset to manage these complexities.

3. **Adaptability and Flexibility:** The session emphasized adaptability as a key factor for success in managerial roles. Dr. Jindal noted that the CRIP sector is constantly evolving, requiring professionals to be versatile in their approach to problem-solving and leadership. Professionals must embrace change, whether in the form of technological advancements, new regulatory frameworks, or shifting market conditions.
4. **Technology Adoption in the CRIP Sector:** Dr. Jindal also stressed the increasing importance of technology in the CRIP and built environment sectors. From Building Information Modeling (BIM) to data analytics, AI, and digital project management tools, technological adoption is no longer optional but critical for efficient project delivery, cost management, and client satisfaction. For future managers, understanding how to integrate and leverage these technologies will be key to achieving success in a highly competitive market.
5. **Big Players in the Industry:** Another significant focus was the role of major players in the CRIP sector, including large construction firms, real estate developers, and government agencies. Dr. Jindal highlighted the competitive landscape and the influence these organizations have on shaping industry standards and driving innovation. He encouraged participants to stay informed about the industry's major players and to understand the strategic priorities of these organizations, as this knowledge will aid in their transition to managerial roles.

Day 2 Conclusion:

Day 2 of the program proved to be an enriching experience for all participants. Dr. Saurabh Jindal's session provided a comprehensive overview of the skills and knowledge required for successful career progression from technical to managerial roles in the CRIP and built environment sectors.

Learning Takeaways:

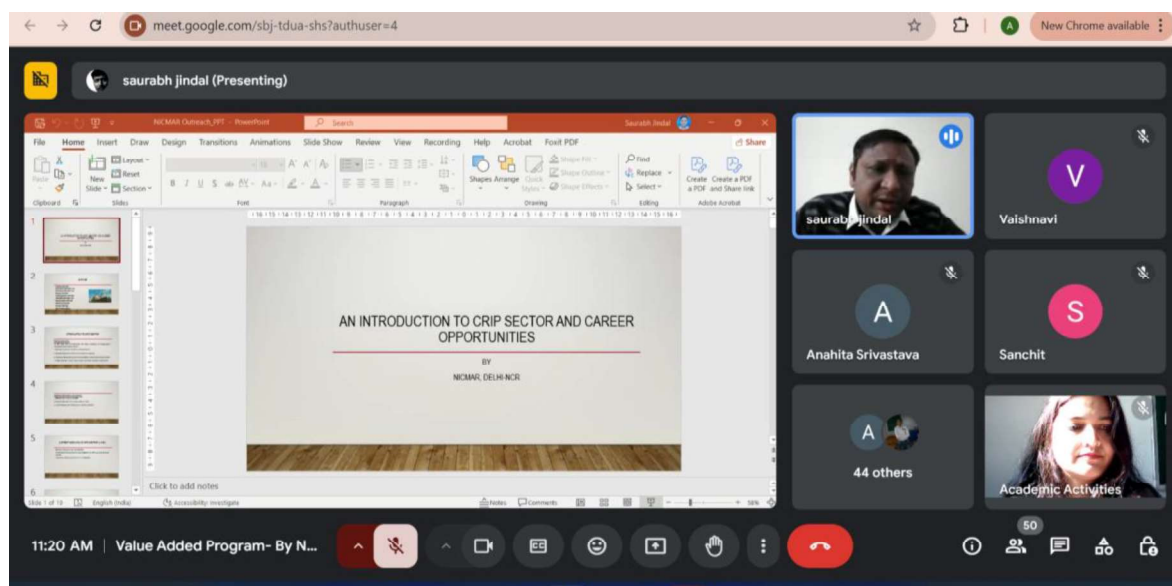
- **Shift in Skillsets:** The transition from technical to managerial roles requires a shift from specialized technical skills to broader leadership, communication, and strategic thinking abilities.
- **Technology as an Enabler:** Technology adoption will be a key enabler for success in the CRIP sector, with tools like BIM, AI, and data analytics reshaping project execution and delivery.

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- **Market Insights:** Understanding the evolving dynamics of the CRIP sector, including regulatory changes and the influence of major industry players, will be crucial for future managers to navigate challenges effectively.
- **Leadership and Adaptability:** Emphasis on developing leadership qualities and the ability to adapt to rapid changes in both technology and market conditions.



Sign and Date

Ar. Toshi Dube
Associate Professor
Chair- Person (Academic Co-Curricular)

Director

