



**Outreach & Dissemination Services Office CSIR – Central  
Building Research Institute Roorkee – 247667 (UK)**

**Skill Development Program on  
'Advanced Construction technologies & RCC Mix Designs'  
March 11-12, 2025**

Outreach & Dissemination Services at CSIR-CBRI, Roorkee organized a Two day skill development training program on "Advanced Construction technologies & RCC Mix Designs" from March 11-12, 2025 under the aegis of CSIR Integrated Skill Initiative. conducted for Assistant Engineers (A.E), Junior Engineers (J.E) and Executive Engineer from the Military Engineer Services (MES), BRIDCUL and Public Works Department (PWD) of Uttarakhand . A total of 45 participants attended the program, gaining valuable insights and skills for. Advanced Construction technologies & RCC Mix Designs

Er. Ashish Pippal, Sr. Scientist extended a warm welcome to all participants and provided an overview of the training program, emphasizing its significance in promoting Advanced Construction technologies & RCC Mix Designs He also welcomed the esteemed guests on the dais, including Dr. Ajay Chourasia, Dr. Chanchal Sonkar, Prof. S.K. Singh. Additionally, he acknowledged the presence of other colleagues and staff members, appreciating their contributions to the successful organization of the program.

Dr. Ajay Chourasia, Chief Scientist, emphasized that safety is the most important criterion in construction, particularly in disaster-prone areas. He highlighted that while houses and structures can be rebuilt, human life is irreplaceable and must always come first. He further spoke about advancement in Construction technologies like 3D Printing in Construction, Geopolymer Concrete, Green Construction & Sustainable Technologies ,etc.

Prof. S.K. Singh, Chief Scientist He spoke about the importance of Concrete Mix Proportioning, Quality Control, and Advancements in Mix Design. He further discussed the Laboratory and Field Tests on Concrete Mix. He also gave a brief on repair and rehabilitation techniques for restoring aging structures.

Dr. Chanchal Sonkar, Sr. Scientist He is also the coordinator of this training programme and explains the benefits of using Light Gauge Steel in place of Hot Rolled Steel. He further discusses the advantages of retrofitting in assessing the condition of old structures.

A total of 9 sessions were delivered by CBRI scientists, covering various aspects on Advanced Construction technologies & RCC Mix Designs. The program also included a visit to the R&D laboratories, providing participants with hands-on exposure to cutting-edge research and technologies.

The Two-day program concluded with a valedictory ceremony, where certificates were distributed to the participants in recognition of their active participation and learning. During the ceremony, participants shared their experiences and insights gained throughout the training program, reflecting on the knowledge they acquired. The program successfully concluded with a deeper understanding of Advanced Construction technologies & RCC Mix Designs, equipping participants with the tools and knowledge to implement these practices in their respective regions.

**Glimpses of Program**

**Inaugural Ceremony**



**Class Room Lecture**



**R&D Labs & Demo Park Visit**





### Certificate Distribution Course Content

Hours	March 11, 2025	March 12, 2025
9:30-10:00	Registration & Inauguration	Advanced Construction Technologies: <ul style="list-style-type: none"><li>• 3D Concrete Printing- <b>Dr. Ajay Chourasia</b></li><li>• Climate Resilient Building- <b>Dr. Chanchal Sonkar</b></li><li>• Quality Control of Buildings: <b>Er. Ashish Pippal</b></li></ul>
10:00-11:00	Risk Assessment of Existing Buildings and Retrofitting of Masonry Building <b>Dr. Ajay Chourasia</b>	
11:00-11:15	<b>High Tea Break</b>	
11:15-12:15	Advanced Construction Technologies: <ul style="list-style-type: none"><li>• Use of Light Gauge Steel- <b>Dr. Chanchal Sonkar</b></li><li>• 3S Technology- <b>Dr. Ajay Chourasia</b></li><li>• Dry Construction Technique- <b>Dr. Kishor S. Kulkarni</b></li><li>• Bamboo Construction- <b>Er. M.M. Dalbehera</b></li></ul>	Presentation on DPR preparation for Building Constructed using Advanced Construction Technologies <b>Participants</b>
12:15-13:15		
13:15-14:15	<b>Lunch Break</b>	
14:15-15:15	Concrete Mix Proportioning, Quality Control and Advancements in Mix Designs <b>Prof. S. K. Singh</b>	Repair & Retrofitting of RCC Buildings <b>Dr. Chanchal Sonkar</b>
15:15-16:15		Green Retrofitting of Buildings <b>Dr Kishor Kulkarni</b>
15:15	<b>Tea Break</b>	
15:45-17.30	Laboratory Visit & Hands on Experience in Concrete Mix Design <b>Concrete Testing Lab.</b>	Feedback, Discussion & Valediction

