



K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION



5 Day Online Faculty Development Program on
Building Services and their Implementation in Architectural Design
conducted by K. R. Mangalam University in Collaboration with COA-TRC,
Bhopal.

Target Group: Academicians/Professionals, UG, PG and PhD Students

Coordinator: Ar. Manika Goel

Chief Coordinator: Prof. Hemani Singh

Online Coordinator: Ar. Nishant Arora

Ar. Poorva Priyadarshini

Date and Time: 22nd to 26th August 2022

Venue: Online Mode via zoom meeting platform

Introduction

Building services are the systems installed in buildings to make them comfortable, functional, efficient and safe. These not only include plumbing, drainage, electrical, HVAC, and mechanical services but also contemporary ways of resource management.

These aspects are integral to the design of contemporary buildings. Architectural education needs to ensure that this integration of building services happens at the design stage for students of Architecture. To facilitate this integration and enhance the knowledge of all faculty members, this FDP has been proposed. The FDP intends to understand, evaluate and assess the academic curriculum module of Building Services in relation to the Architecture Profession. It will give participants a platform to understand the services and relate them better to Architectural Design.

Objectives

- Promoting knowledge on building services in the field of Architecture and Planning
- To relate academics with professional practice through a deeper understanding of building services

Content

The 5 day long Online Faculty development Program (22 August 2022 – 26 August 2022) organized by School of Architecture and Design, K.R. Mangalam. University Gurgaon was structured by COA on Building Services and their implementations in Architectural Design.

DAY-1 (22 AUGUST, 2022)

Inauguration-

The FDP started with the welcome address was given by Ar. Manika Goel, assistant professor at School of Architecture and Design of K.R. Mangalam. University Gurgaon and note by Ar. Hemani Singh, Dean at School of Architecture and Design of K.R. Mangalam. University, Gurgaon followed by opening address by Hon. Director of COA- TRC, Bhopal Dr. Navneet Munoth.

Session-1

Use of Solar Energy in Buildings

The first session was handled by Dr. Amitava Sarkar. The presentation showed the application of solar passive design recommendations in an office building located at Mandi, Himachal Pradesh with composite climate. It discussed about the application of solar air-heating panel for solar passive heating in a building project. The presentation further enumerates the assessment of thermal performance after incorporating the solar passive features in the building design. It also presented a methodology for designing roof-top solar photo-voltaic panels for generation of electricity to achieve net-zero energy building. Overall, the discussion highlighted the significance of incorporating solar passive design recommendations in the architectural projects for thermal comfort and energy efficiency in the given climatic condition.

Recording Original Sound: Off

Proposed Solar Passive Features...

- ▶ Evacuated Double glazing are proposed for windows on northern wall with 6mm clear glass+12.5mm air gap+6mm clear glass for fixed portion and with double shutter for operable portion, with proper sealing, to prevent heat loss in winters.
- ▶ Double doors are provided in the labs-entry to maintain air-lock conditions inside reducing heat losses due to frequent opening of doors.
- ▶ To maintain proper natural ventilation in the building, operable vents (with louvers) are proposed to be fixed on top of doors of rooms opening to corridor.

Amitava Sarkar, SPA Vijayawada 19

Fig 3- Session 1: Proposed Solar Passive Feature by Dr. Amitava Sarkar

Session-2

Airport Services

The second session was handled by Ar. G. Srilata Ram Kumar who discussed about the understanding of various aspects of Airport and deeper insights and holistic understanding on the subjects. This one-hour session on airport services is an overview on the subject with a brief sneak peek into various aspects with special reference to terminals. Several illustrative examples that helped the audience to get a vivid picture.

The sessions of Day 1 ended with a summarization and vote of thanks.

Airport Stakeholders can be Internal and External, and may include

- Passengers
- Airlines
- Employees
- Tenants
- Government authorities
- Local communities
- Suppliers
- Media and unions
- Others



Airport Stakeholders Meeting

Airports by their nature are complex facilities that involve a wide range of stakeholders who often have differing objectives.

Fig 4- Session 2: Airport design and stakeholders by Ar. G. Srilata Ram Kumar

Zoom Meeting

Recording Original

Hemant Singh, HR21 | Ar. Mansha Samreen | G. Srilata Ramkumar | Manika Goel | Amol Chougule | Dr. Amitava Sarkar

Envisioning the Design of Airports Holistically

Terminal, Landside, Airside: Meaning & Context

An **Airport Terminal** is a building within an Airport where passengers go to depart on a flight, or the building at which they arrive upon landing.

- Passenger Terminal
- Cargo Terminal

Landside of the Airport Terminal is the area towards city. It has access to the city roads and it contains parking area as well as Public transport area.

Airside of the Airport include all areas accessible to Aircraft, including Runways, Taxiways, Aprons, ramps

Manchester Airport, UK

34°C
Cooled

14:35
22-06-2022

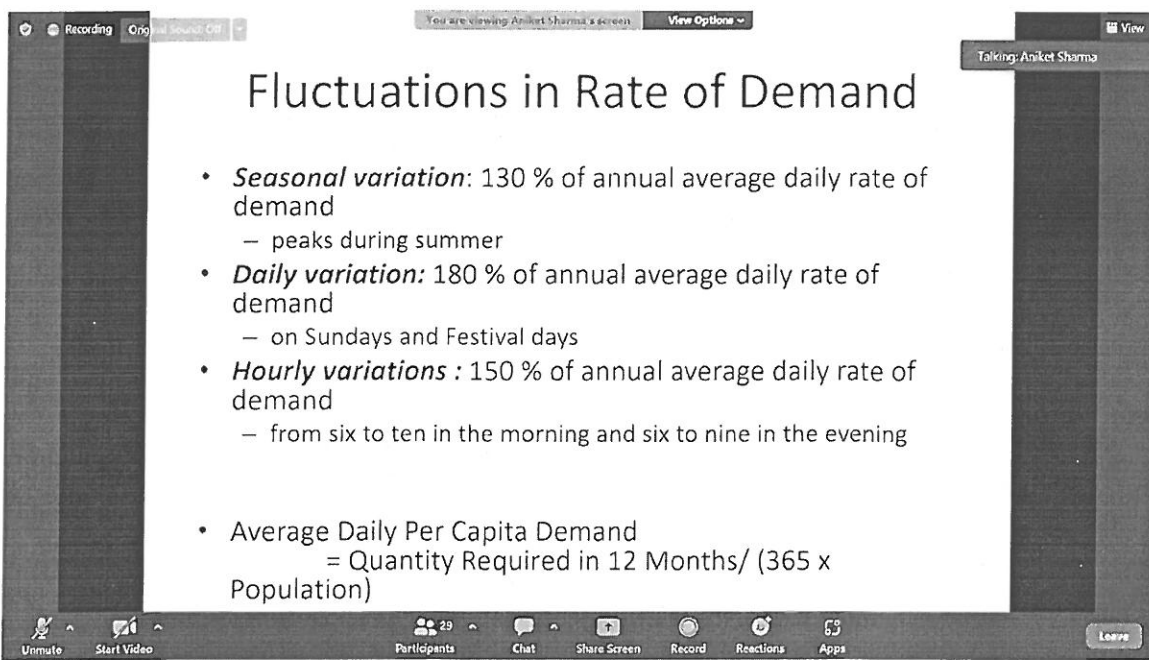
Fig 5- Session 2: Airport terminology by Ar. G. Srilata Ram Kumar

DAY-2 (23 AUGUST, 2022)

Session-1

Water supply design in the residential building

The first session was handled by Dr. Aniket Sharma, who discussed the water quantity estimation at an urban scale and at building level was discussed. Further, a hands-on exercise to design a water supply system was undertaken, in which the sizing of Underground tank, overhead tank and pump was discussed.



The screenshot shows a Zoom meeting interface. At the top, there's a status bar with 'Recording', 'Original Sound: Off', and 'You are viewing Aniket Sharma's screen'. Below this is a title bar with 'View Options' and a 'View' button. The main content area displays a presentation slide titled 'Fluctuations in Rate of Demand'. The slide lists four bullet points: 'Seasonal variation: 130 % of annual average daily rate of demand' (with a sub-point 'peaks during summer'), 'Daily variation: 180 % of annual average daily rate of demand' (with a sub-point 'on Sundays and Festival days'), 'Hourly variations : 150 % of annual average daily rate of demand' (with a sub-point 'from six to ten in the morning and six to nine in the evening'), and 'Average Daily Per Capita Demand = Quantity Required in 12 Months/ (365 x Population)'. At the bottom of the Zoom window, there's a toolbar with icons for 'Unmute', 'Start Video', 'Participants' (29), 'Chat', 'Share Screen', 'Record', 'Reactions', 'Apps', and a 'Leave' button.

Fluctuations in Rate of Demand

- **Seasonal variation:** 130 % of annual average daily rate of demand
 - peaks during summer
- **Daily variation:** 180 % of annual average daily rate of demand
 - on Sundays and Festival days
- **Hourly variations :** 150 % of annual average daily rate of demand
 - from six to ten in the morning and six to nine in the evening
- Average Daily Per Capita Demand
= Quantity Required in 12 Months/ (365 x Population)

Fig 6- Sessions 1: Functions in Rate of demand by Dr. Aniket Sharma

Capacity of overhead tank

- The hours of supply at desired pressure
- Frequency of refilling during 24 hrs.
- Pattern of demand
- Fire fighting requirements
- Capacity of overhead tank for general use excluding flushing

S. No.	Type of building	Storage in litres per head
1	Dwelling houses	70
2	Hostels	90
3	Hotels	135
4	Commercial building without canteen	35
5	Comm. + Canteen	45
6	Restaurants	7
7	Day schools	25
8	Boarding schools	90

Fig 7- Sessions 1: Capacity of overhead tank by Dr. Aniket Sharma

Session-2

Rainwater Harvesting – “Harvest the Rain; Reap The Gain”

The second session was handled by Ar. Manisha Gotmare who discussed due to varying climatic and rainfall patterns in different regions, it had observed that while some areas are experiencing devastating floods, others are experiencing drought. Such are the water crisis in India. it is important to understand the monsoon and the water cycle to tackle these problems and have enough water for everyone’s consumption. Understanding and learning the traditional rainwater harvesting techniques and improvising them in the current urban scenario is of utmost important.

The sessions of day 2 ended with a summarization and vote of thanks.

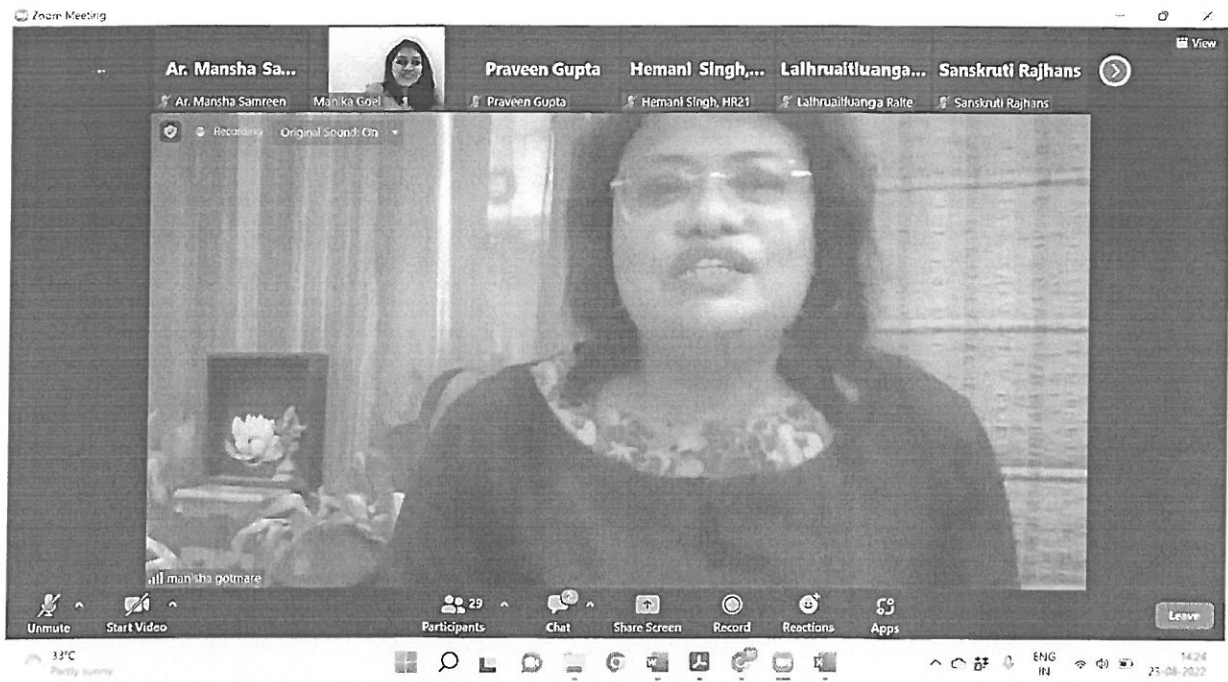


Fig 8- Sessions 2: Ar. Manisha Gotmare discussing about various climatic and rainfall patterns in different regions

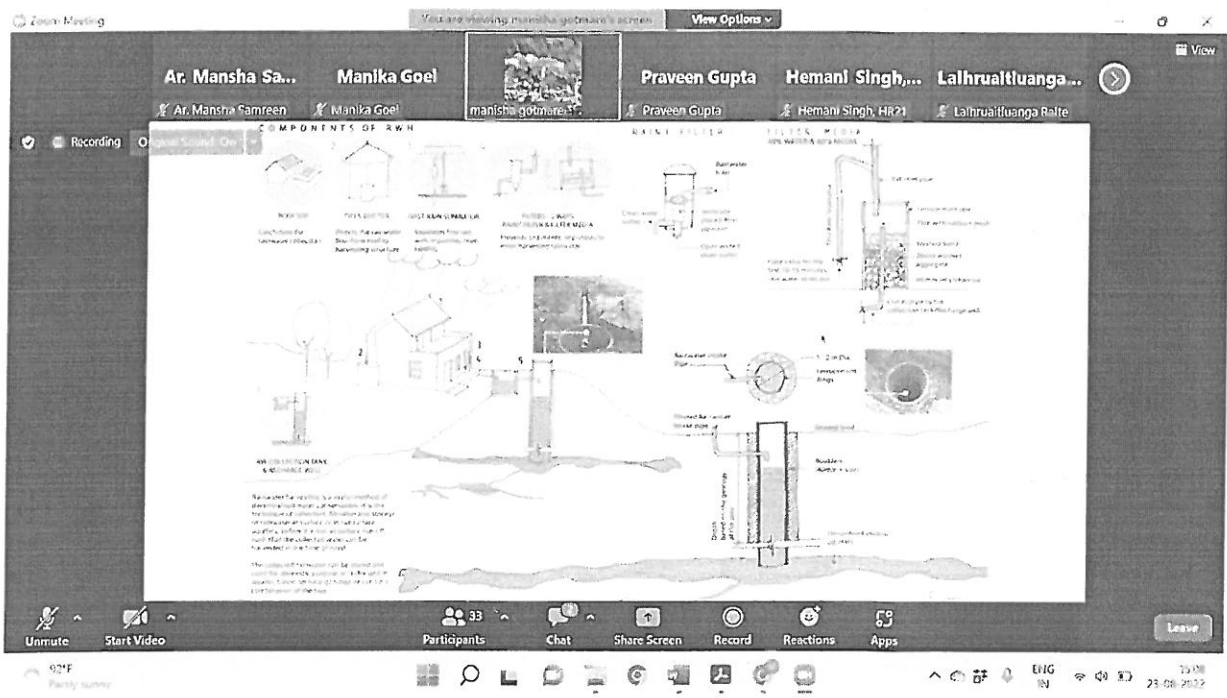


Fig 9- Sessions 2: Water cycle and components of RWH by Ar. Manisha Gotmare

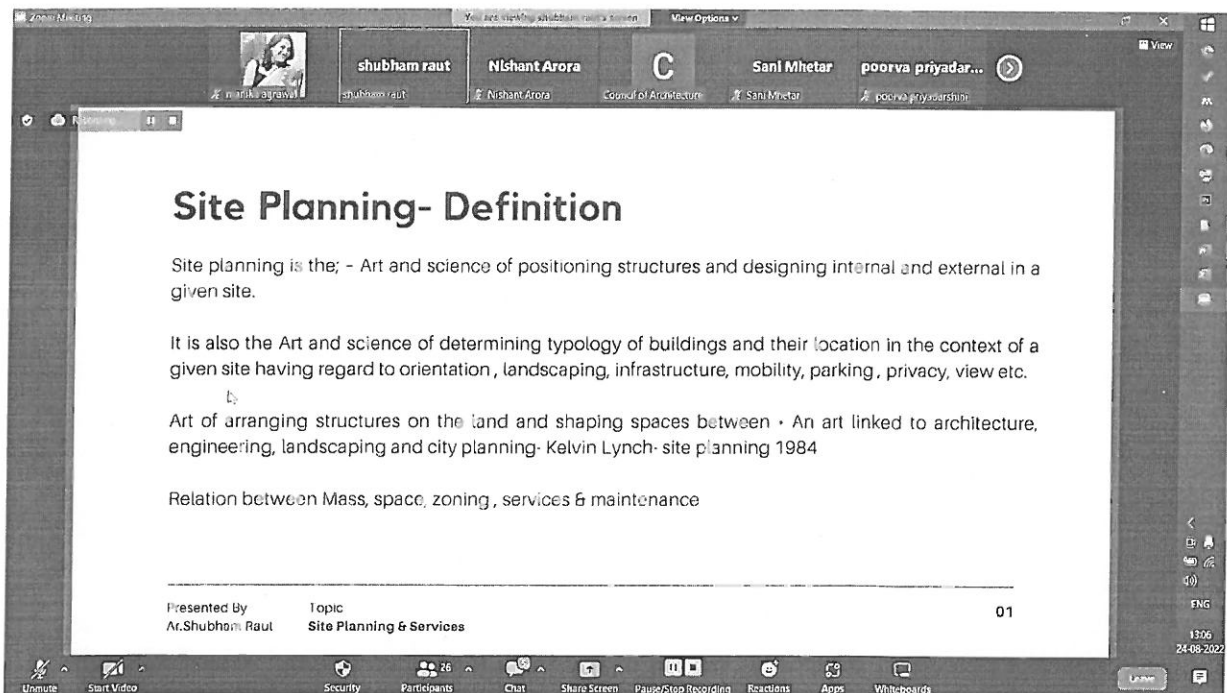
DAY-3 (24 AUGUST, 2022)

Session-1

Site Planning and Services

The first session was handled by Ar. Shubham Raut, who discussed about how Site planning is one of the most important aspects in architecture as it deals with various aspects like slopes, soil type, hydrology, type of vegetation, orientation, sun path, wind direction, connectivity, neighborhood analysis etc. which are important for developments going to happen further. Going through a thorough analysis of the feasibility of developing a site allows the architect to determine strengths and limitations of the site in study and helped them design/develop/plan activities more efficiently.

For once this would have seemed like a time-consuming process to analyses all the aspects mentioned above. But there are ways to make this interesting, time saving and yet accurate by making use of open-source information available abundantly on the internet.



The screenshot shows a Zoom meeting interface. At the top, there is a header bar with the text 'You are viewing shubham raut's screen' and 'View Options'. Below this, a row of participant names is visible: 'shubham raut', 'Nishant Arora', 'Sanj Mhetar', and 'poorva priyadar...'. The main content area displays a presentation slide titled 'Site Planning- Definition'. The slide text reads: 'Site planning is the; - Art and science of positioning structures and designing internal and external in a given site.', 'It is also the Art and science of determining typology of buildings and their location in the context of a given site having regard to orientation, landscaping, infrastructure, mobility, parking, privacy, view etc.', 'Art of arranging structures on the land and shaping spaces between • An art linked to architecture, engineering, landscaping and city planning- Kelvin Lynch- site planning 1984', and 'Relation between Mass, space, zoning, services & maintenance'. At the bottom of the slide, it says 'Presented By Ar. Shubham Raut' and 'Topic Site Planning & Services'. The Zoom interface includes a bottom toolbar with icons for 'Unmute', 'Start Video', 'Security', 'Participants', 'Chat', 'Share Screen', 'Pause/Stop Recording', 'Reactions', 'Apps', and 'Whiteboards'. The bottom right corner shows the date '24-08-2022' and time '13:06'.

Fig 10- Sessions 1: Basic of site planning by Ar. Shubham Raut

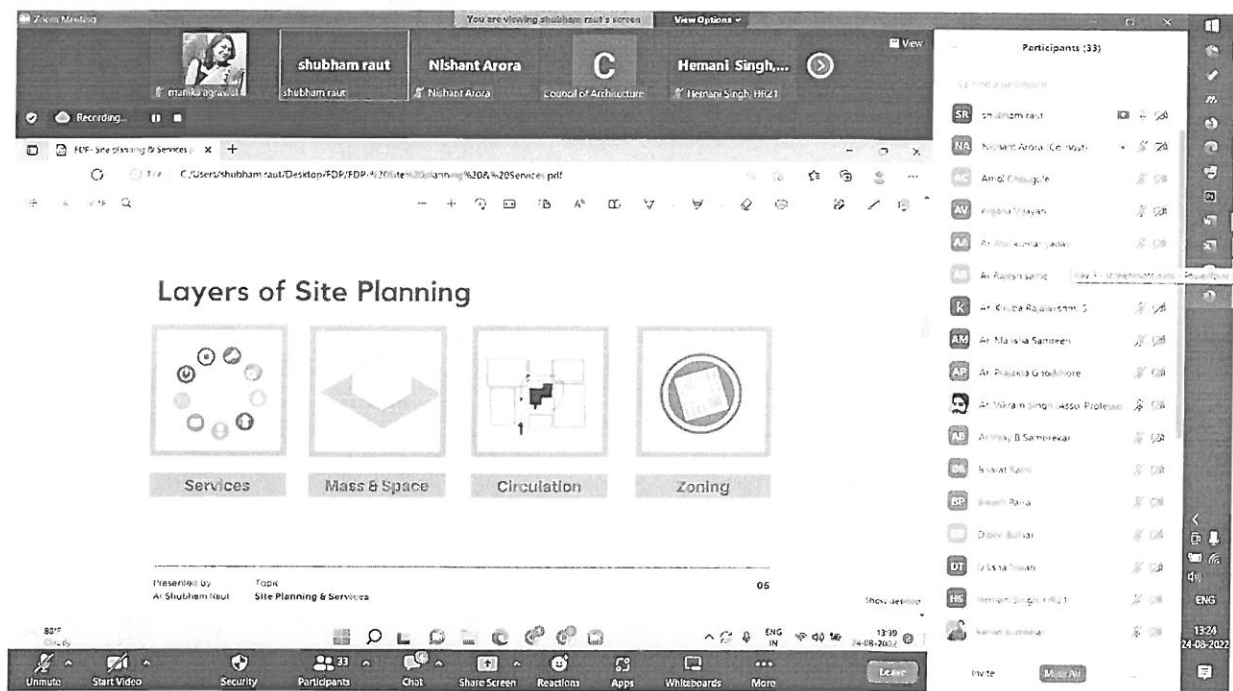


Fig 11- Sessions 1: Layer of site planning by Ar. Shubham Raut

Session-2

Building Automation and HVAC

The second session was handled by Ar. Sawant Goswami who discussed how building automation and AI was done. It discussed about physical property of refrigerants and evaporators. The ideal property of an ideal refrigerant. The difference between conditioned air and return air were also discussed and how to avoid common mistakes during the process of segregation.

The sessions of day 3 ended with a summarization and vote of thanks.

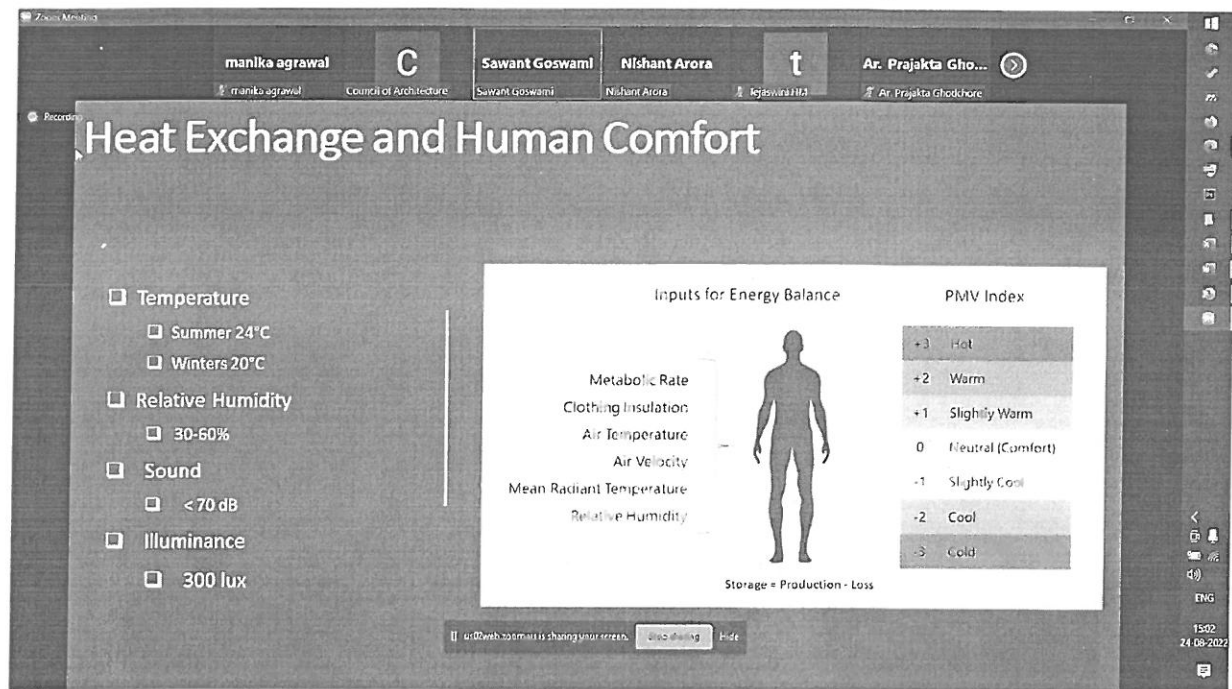


Fig 12- Sessions 2: Heat exchange and human comfort by Ar. Sawant Goswami

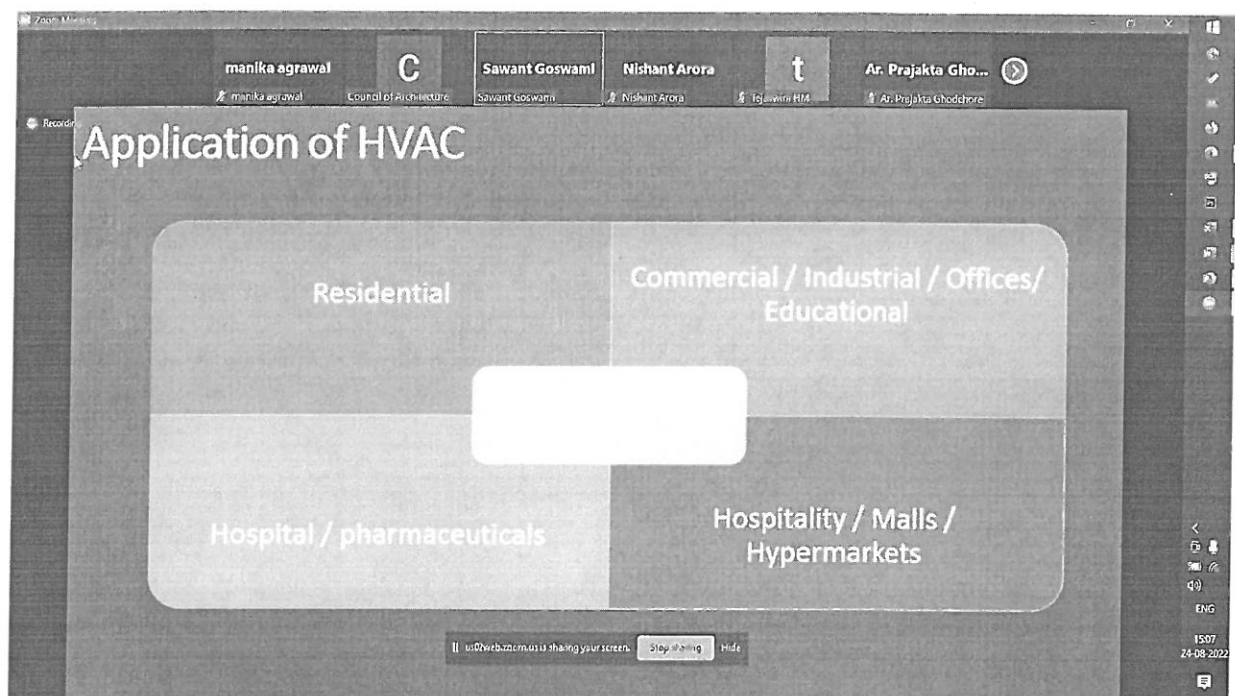


Fig 13- Sessions 2: Application of HVAC by Ar. Sawant Goswami

DAY-4 (25 AUGUST, 2022)

Session-1

Mechanical Services (Lifts and Escalators)

The first session was handled by Dr. Rajeev Garg and in the session, discussion was held on how Building Services is inevitable for architects. Integration of building services with architectural design is a challenge for the architects. In this session, participants became familiar with the terminology and architectural aspects related to planning of Lifts in Buildings. The use of escalators and their types with bifurcation in company, speed, distance etc.

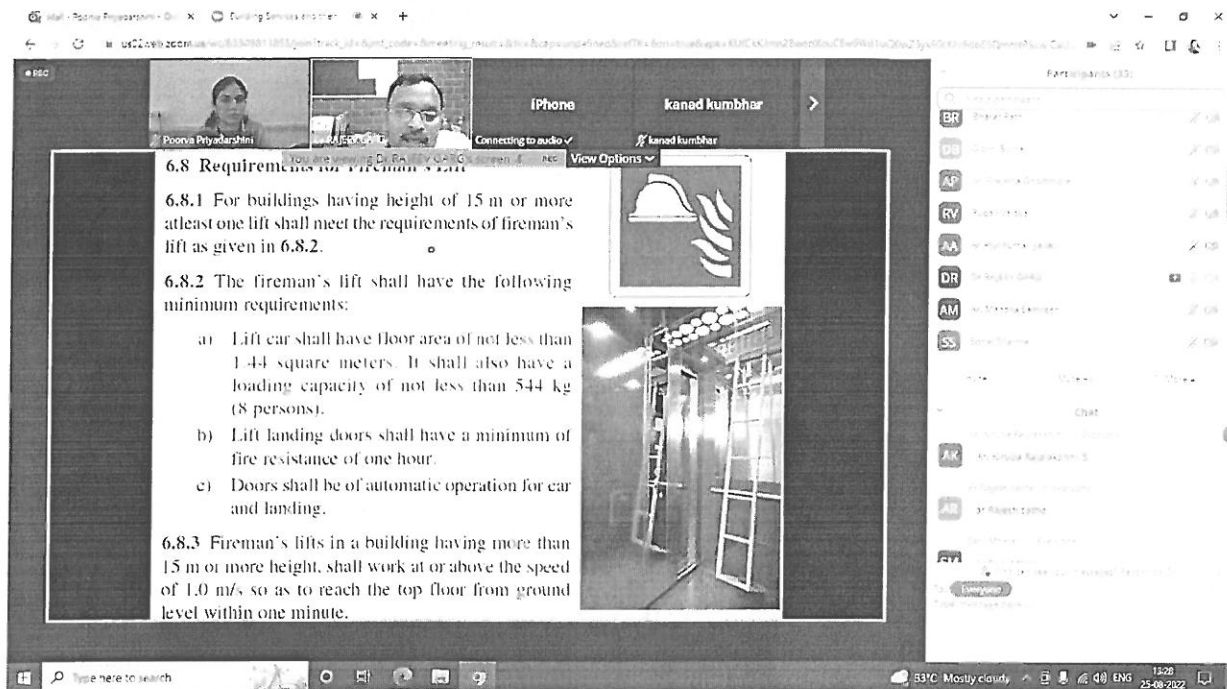


Fig 14- Sessions 1: Requirements of Functional Lifts by Dr. Rajeev Garg

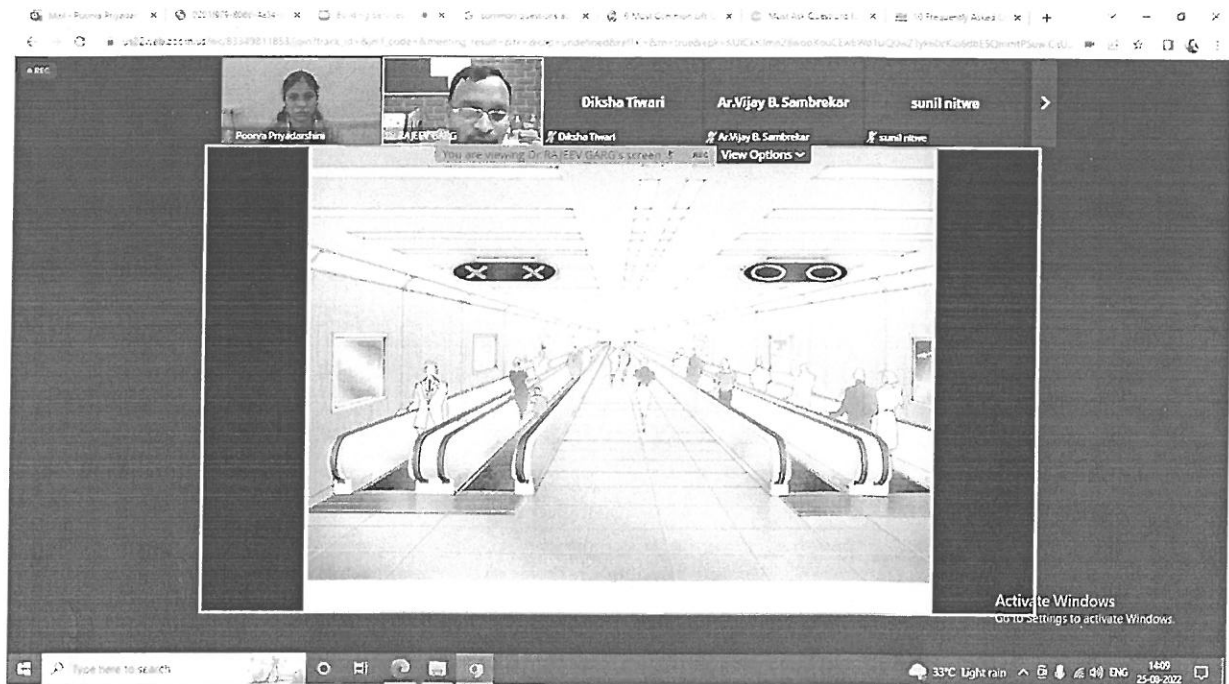


Fig 15- Sessions 1: Difference in escalators by Dr. Rajeev Garg

Session-2

Strategies for the design of buildings in Hill regions

The second session was handled by Dr. Ashwani Kumar. The session aimed to highlight the specific/contextual challenges faced while carrying out any developmental activity in Indian Hill Areas. The various issues and problems associated with urban development, design, and construction of buildings in hill regions were highlighted in presentation. It provided an overview of the method of site development and design of buildings in hill areas. Important learning from traditional and vernacular practices and selected contemporary buildings were also included in the presentation.

The sessions of day 4 ended with a summarization and vote of thanks.

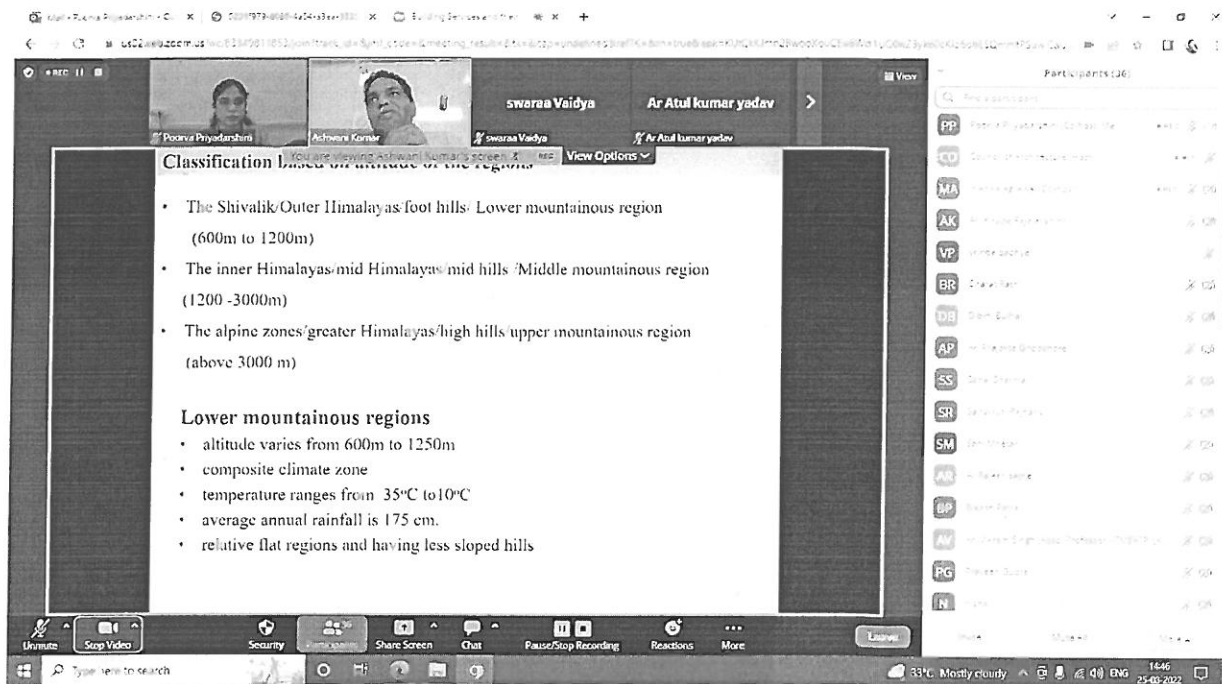


Fig 16- Sessions 2: Difference in regions and heights in Hilly areas Dr. Ashwani Kumar

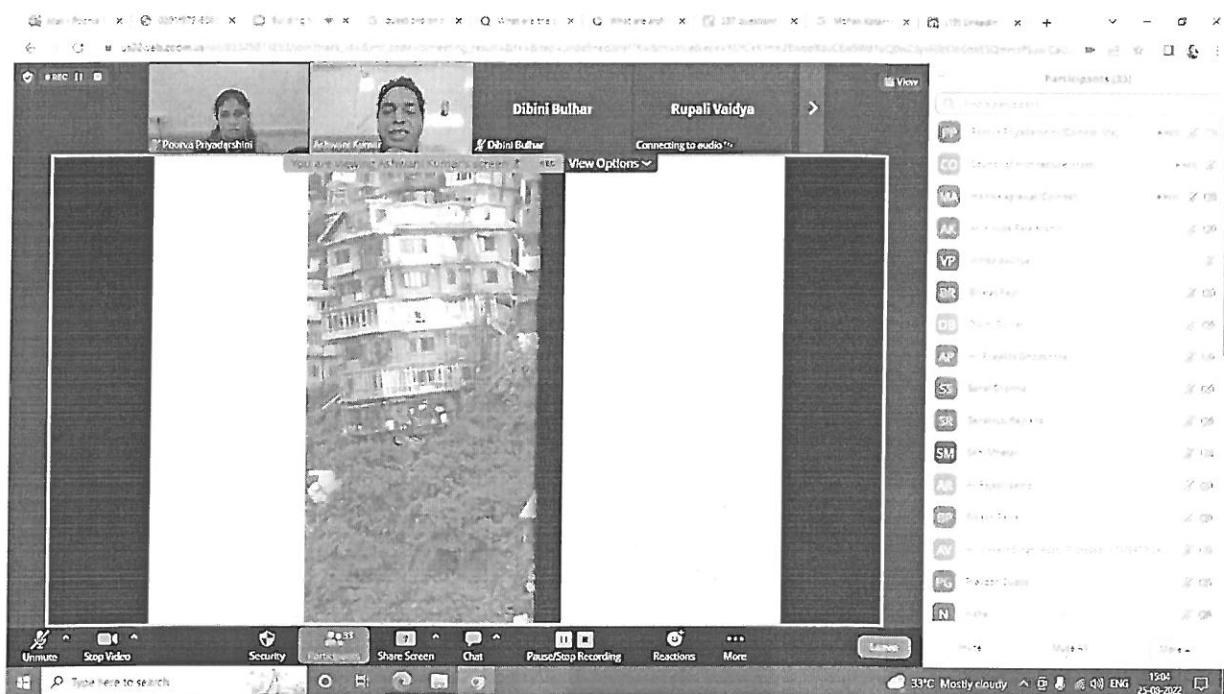


Fig 17- Sessions 2: Presentation on landslides in hilly areas by Dr. Ashwani Kumar

DAY-5 (26 AUGUST, 2022)

Session-1

Industrialized way of constructing a building – Precast Technology

The first session was handled by Mr. Shabbir Lokhandwala. The session was about the components and process of precast materials. Also discussed, how to achieve architectural features and design in elevation using precast technology and parametric design elements.



Fig 18- Sessions 1: Presentation on Industrialized way of constructing a building – Precast Technology by Mr. Shabbir Lokhandwala

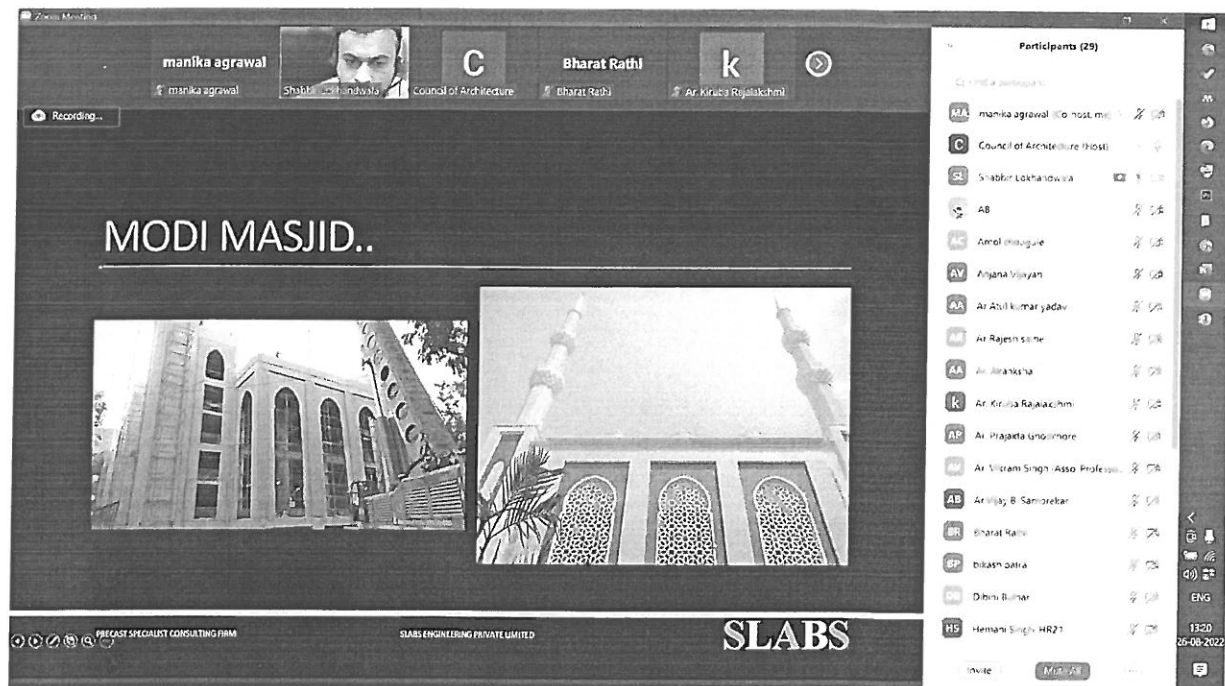


Fig 19- Sessions 1: Presentation on Industrialized way of constructing a building – Precast Technology by Mr. Shabbir Lokhandwala

Session-2

Sanitation in Built Environment

The second session was handled by Dr. Rajeev Garg. The session discussed about how Architects are expected to create built environment in which people live, work, play, entertain, pray, study and perform so many other activities. Building Services are “What makes a building come to life”. This presentation was related to the aspects of Sanitation in Built Environment covering Principles of Sanitation, types of Traps and Sanitation Systems, Design of Sanitation and Sizing of Pipes for Sanitation, Sewage Treatment and Rain Water Harvesting.

The sessions of day 5 ended with a summarization and vote of thanks.

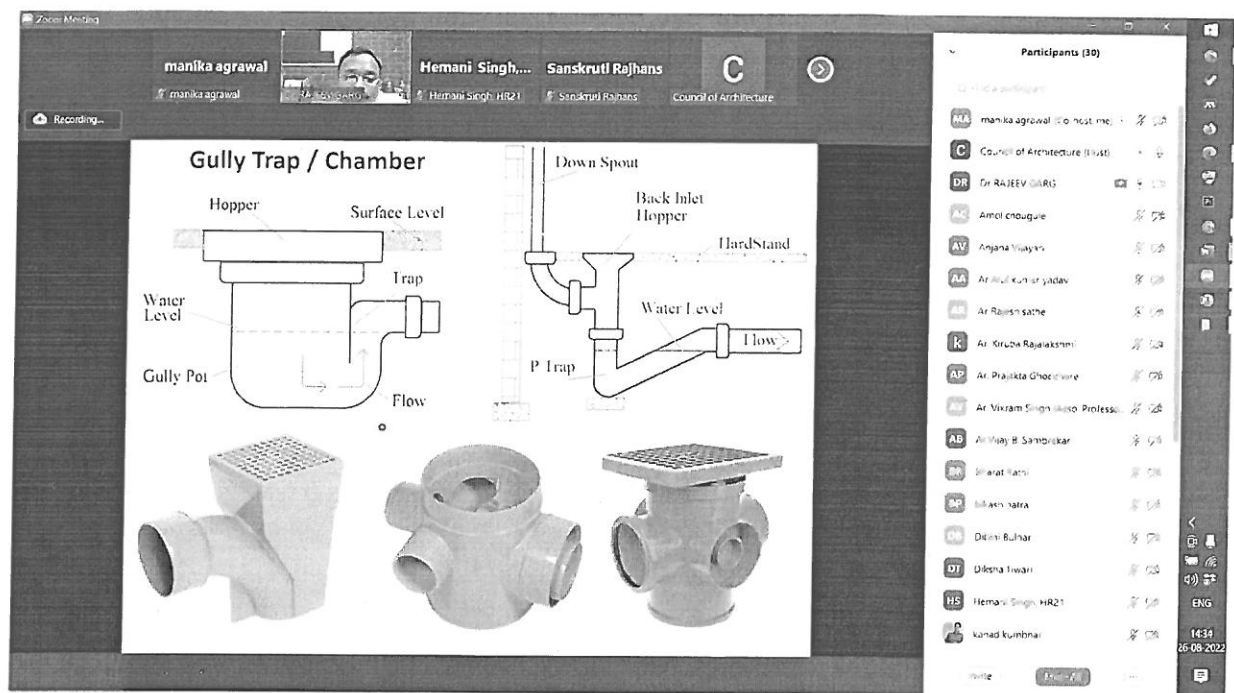


Fig 20- Sessions 1: Presentation on Sanitation in Built Environment by Mr. Shabbir Lokhandwala

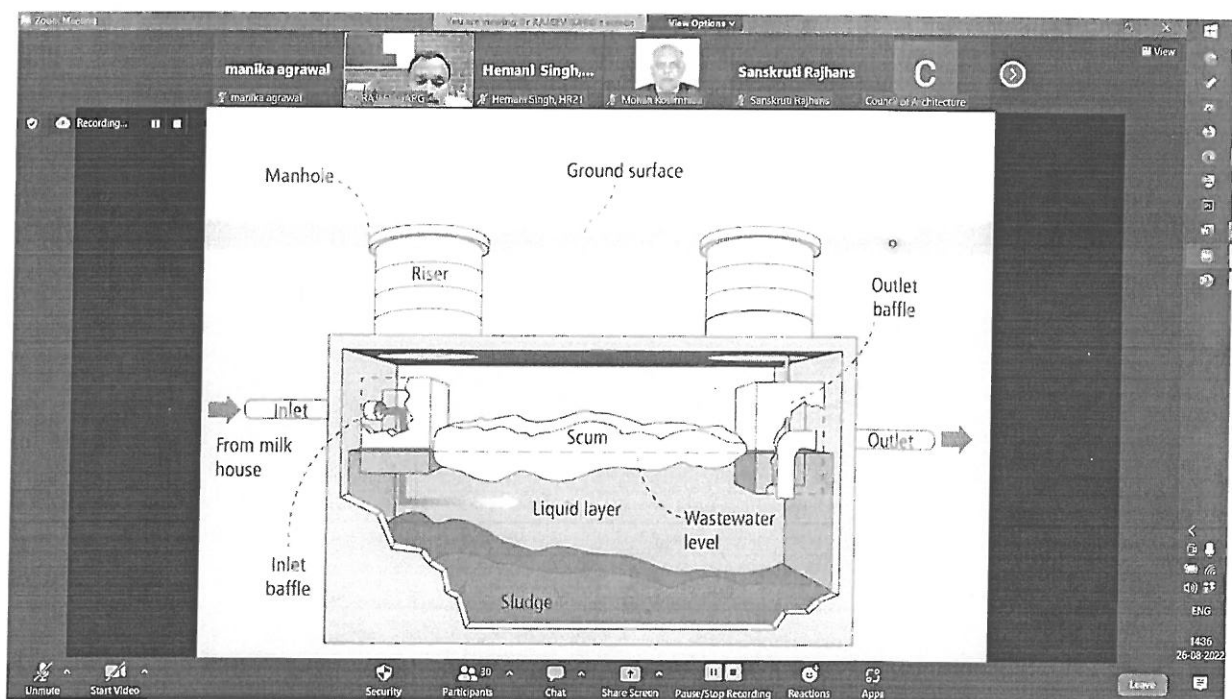


Fig 21- Sessions 1: Presentation on Sanitation in Built Environment by Mr. Shabbir Lokhandwala

Attendees

Table 1: List of Participants

S No	Name	COA Registration Number	Institute/ College Code	City
1	Amol Bhupal Chougule	CA/1999/25229	MH24	Sangli
2	Bikash Patra	CA/2002/29820	AP11	Visakhapatnam
3	Anjana Vijayan	Civil Engineer	SVNIT, Surat	Surat
4	Atul kumar yadav	CA/2015/67386	672	Lucknow
5	BHARAT RATHI	Civil Engineer	SVNIT, Surat	Surat
6	Dibini Bulhar	CA/2008/42455	KL05	Thrissur
7	Diksha Tiwari	CA/2021/129181	Profesonal	Chandigarh
8	K.Mohan	CA/1988/11827	AP11	Visakhapatnam
9	Kanad Rajendra Kumbhar	CA/2018/91408	MH24	Sangli
10	KAVITA REVO	Civil Engineer	176	NEW DELHI
11	KIRUBA RAJALAKSHMI S	CA/2014/66226	SNEHA COLLEGE OF ARCHITECTURE, PALAKKAD	PALAKKAD
12	Lakshmi A.	CA/2008/41907	KL01	Thiruvananthapuram
13	Lalhruaitluanga Ralte	CA/2017/86859	MZ01	Aizawl
14	Prajakta Ghodchore	CA/2021/139421	SVNIT, Surat	Surat
15	Rajesh Vishwanath Sathe	CA/1994/17231	MH24	Sangli
16	Rupali Abhijit Vaidya	CA/2002/29739	389	Panvel
17	Sani Elahi Mhetar	CA/2015/70860	MH24	Miraj
18	Sanskriti Rajhans	CA/2014/64184	BVCOA	Navi Mumbai
19	Tejaswini H. M.	CA/1995/19117	MH14	Navi Mumbai
20	Usha Pattabhi	CA/1994/17757	RNS School of Architecture	Bengaluru
21	Vijay Baburao	CA/2003/32567	MH24	Sangli

	Sambrekar			
22	VIKRAM SINGH	CA/2010/49386	UP-15	lucknow
23	VRINDA SHARDUL PADHYE	CA/2010/48093	389	Panvel
24	Ar. Mansha Samreen	CA/2010/50487	KRMU	Gurugaon
25	Ar. Akanksha Singh	CA/2012/55723	KRMU	Gurugaon
26	Ar. Nisha Sharma	CA/2014/64364	KRMU	Gurugaon
27	Praveen Gupta	CA/2012/56165	KRMU	Gurugaon
28	Sonal Sharma	AR/2021/130063	SVNIT, Surat	Surat

Experts

Table 2: List of Experts

National Online Faculty Development Program					
22nd August to 26th August 2022					
Organized by COA-TRC Bhopal and K.R.Mangalam University, Gurugram					
Topic: Building Services and their implementation in Architectural Design					
S.NO.	Name of Expert				
	22nd August DAY 1	23rd August DAY 2	24th August DAY 3	25th August DAY 4	26th August DAY 5
1	Dr. Amitava Sarkar	Dr. Aniket Sharma	Ar. Shubham Raut	Dr. Rajeev Garg	Mr. Shabbir Lokhandwala
Affiliation	Associate Professor, Department of Architecture, School of Planning and Architecture Vijayawada,	Assistant Professor, Department of Architecture, NIT Hamirpur	Research Associate, CEPT Research & Development Foundation, Ahmedabad	Professor, Department of Architecture, DIT University Dehradun	Managing Director, SLABS Engineering Private Limited, Pune
Topic	Use of Solar Energy in Buildings	Water supply design in the residential building	Site Planning and Services	Mechanical Services (Lifts and Escalators)	Industrialised way of constructing a building
2	Ar G Srilata Ram	Manisha	Ar. Sawant	Dr Ashwani	Dr. Rajeev Garg

	Kumar	Gotmare	Goswami	Kumar	
Affiliation	Director, E&A Design Consultants LLP, Gurgaon	Gotmare and Associates, Nagpur	Assitant Professor and Consultant, School of Planning and Architecture, Bhopal	Assistant Professor, Department of Architecture and Planning, Malaviya National Institute of Technology, Jaipur	Professor, Department of Architecture, DIT University Dehradun
Topic	Airport Services	Rainwater harvesting : Harvest the rain, reap the gains	Building Automation and HVAC	Strategies for the design of buildings in Hill regions	Sanitation in Built Environment

Poster

**COUNCIL OF ARCHITECTURE
TRAINING & RESEARCH
CENTRE, BHOPAL**

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collaboration
with**

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THE COMPLETE WORLD OF EDUCATION**

ABOUT FDP

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These aspects are integral to the design of contemporary buildings. Architectural education needs to ensure that this integration of building services happens at the design stage for students of Architecture. To facilitate this integration and enhance the knowledge of all faculty members, this FDP has been proposed. The FDP intends to understand, evaluate and assess the academic curriculum module of Building Services in relation to the Architecture Profession. It will give participants a platform to understand the services and relate them better to Architectural Design.

Convened by
Dr. Navneet Munoth
Honorary Director
COA-TRC Bhopal

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Asst. Prof. Manika Goel
7506009705
soad.krmu@gmail.com

Chief Coordinator
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Dean, SOAD
soad.krmu@gmail.com

Online Coordinators
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soad.krmu@gmail.com
Ar. Poorva Priyadarshini
9699161917
soad.krmu@gmail.com

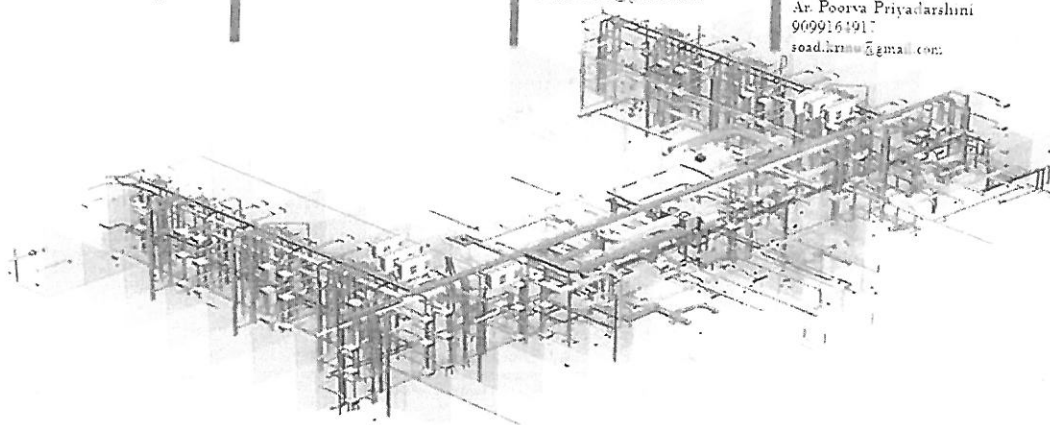


Fig 21- Page 1 of the Poster



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THE COMPLETE WORLD OF EDUCATION

Building Services and their implementation in Architectural Design

5 Day Online Faculty Development Program

22nd to 26th August 2022

Last date to register: 21st August 2022

LIST OF SPEAKERS



Dr. Amitava Sarkar
Use of Solar Energy
in Buildings



Dr. Rajeev Garg
Mechanical Services
(Lifts and Escalators)



Dr. Ashwani Kumar
Building Design
and Services in Hill
Areas



Manisha Gotmare
Rainwater
harvesting : Harvest
the rain. reap the
gains



Savant Goswami
Building Automation
and HVAC



Shubham Raut
Site Planning and
Services



Dr. Aniket Sharma
Water supply
design in the
residential building



Shabbir Lokhandwala
Industrialised way of
constructing a building
- Precast Technology



Mrinal Mathur
Sewage treatment
technology and
role of Architects



G. Srilata Ram Kumar
Airport Services

Registration Fee:

For Academicians
Professionals - INR 3000/-
UG, PG and PhD students: Rs.
2000/- (below 40 yrs of age)
The image of proof of payment
at: coatrtrc.bhopal@gmail.com to
confirm registrations.

*MCQ test [conducted
on the last day].
- MCQ time 4:30 pm to
5:30 pm

*Virtual meeting link [Zoom Platform] will be shared after registration by email.

*E- Certificate of the Faculty Development Program shall be sent by email on registered email id of the participant upon successful completion of the program i.e., by attending all sessions and completing

REGISTRATION LINK:- <https://forms.gle/gKPTGip6Hq6jHyZKA>

PAYMENT LINK: <https://eazypayicibank.com/eazypayLink?PI=sRvz9kTACsNePnR3I+VJaQ==>

Fig 22- Page 2 of the Poster



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Building Services and their implementation in Architectural Design

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Dr. Amitava Sarkar is an Associate professor at SPA, Vijaywada. After completing Masters in City Planning from IIT Kharagpur, he did PhD from Jadavpur University. He has published several research papers on Climate Responsive Architecture and Thermal performance.

Sawant Goswami completed post graduation in Sustainable Environmental Design from Architectural Association School of Architecture, London. He is currently working as Assistant Professor at School of Planning and Architecture, Bhopal. His expertise is in the field of Sustainable Urban Design, Interior and Architectural design, Digital visualization and regulatory compliance.



Manisha Gotmare is a assistant professor at IDEAS college, Nagpur and has done Masters in Environmental Architecture. She is practicing at her own firm Gotmare And associates, nagpur. She has designed and execute many projects of diverse scales and nature and has expertise in Green Building Design and Audit.



Dr. Rajeev Garg, a graduate (B. Arch.) of Lucknow University and Doctorate (Ph.D.) from IIT Roorkee is a seasoned academician and professional having experience of more than two decades in the field of architecture. Dr Garg has served leading National and International corporates (TATA Consulting Engineers Limited and JACOBS Engineering) in various capacities.



Shabbir Lokhandwala is a Professional structural engineer with vast experience in design of high-rise buildings comprising of hotels, residential apartments and mixed use buildings. Also designed bridges and precast structures in Middle East and India.

Dr. Ashwani Kumar is working as an Assistant professor at Malaviya National Institute of Technology Jaipur from the year 2013 and has total teaching experience of 10 years. His research interest includes appropriate development in hill regions, building regulations, vernacular architecture, development in disaster-prone areas, and sustainable development.



Sridata Ram kumar is an International Airport Professional with 15 plus years' experience in Airport Master planning, Design, Planning Interiors Finishes, Art & Architecture, including all the Ancillary, Utility and Airport Buildings, with holistic understanding of all Landside and Airside requirements, their Design, Development, Maintenance and Operations.



Dr. Aniket Sharma, presently Assistant Professor, Department of Architecture, NIT Hamirpur has an experience of 13 years in the field of Architecture, Teaching and research and 2 years in architectural consultancy and Project Management.



Shubham Raut is GIS Analyst, with M. Tech in geomatics from CEPT University, Ahmedabad. Shubham is an architect with expertise in Geo-visualization, Geospatial Analytics and Modeling and GIS for Governance.

Mrinal Mathur has experience of over 18 years in Environment and Planning. She worked for the environment agency of the UK, World Bank, UN and TERI on environment and water issues. She is an architect by training and has a Masters in Environment Planning from School of Planning and Architecture, Delhi.



Fig 23- Page 3 of the Poster

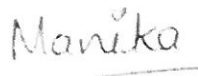
Conclusion

A week-long Faculty Development Programm concluded with plenty of learning and experiences for the participants who were faculties from Institutions across the different States. The goal of the programm was to enhance Knowledge about building service and their implementation in buildings. All the Attendee attended the sessions showed great enthusiasm throughout the week.

Further Scope

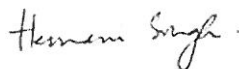
Building services and their Implementation in building will help the Participants in their practicing days to make the client understand the need and importance of building services in building.

Coordinator:



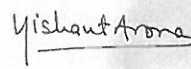
Ar. Manika Goel

Chief- Coordinator:



Prof. Hemani Singh

Online -Coordinator:



Ar. Nishant Arora
Ar. Poorva Priyadharshini

National Online Faculty Development Program						
22nd August to 26th August 2022						
Organized by COA-TRC Bhopal and K.R.Mangalam University, Gurugram						
Topic: Building Services and their implementation in Architectural Design						
S No	Name	Day 1	Day 2	Day 3	Day 4	Day 5
1	Amol Bhupal Chougule	Present	Present	Present	Present	Present
2	Bikash Patra	Present	Present	Present	Present	Present
3	Anjana Vijayan	Present	Present	Present	Present	Present
4	Atul kumar yadav	Present	Present	Present	Present	Present
5	BHARAT RATHI	Present	Present	Present	Present	Present
6	Dibini Bulhar	Present	Present	Present	Present	Present
7	Diksha Tiwari	Present	Present	Present	Present	Present
8	K.Mohan	Present	Present	Present	Present	Present
9	Kanad Rajendra Kumbhar	Present	Present	Present	Present	Present
10	KAVITA REVO	Present	Present	Present	Present	Present
11	KIRUBA RAJALAKSHMI S	Present	Present	Present	Present	Present
12	Lakshmi A.	Present	Present	Present	Present	Present
13	Lalhrualtuanga Ralte	Present	Present	Present	Present	Present
14	Prajakta Ghodchore	Present	Present	Present	Present	Present
15	Rajesh Vishwanath Sathe	Present	Present	Present	Present	Present
16	Rupali Abhijit Vaidya	Present	Present	Present	Present	Present
17	Sani Elahi Mhetar	Present	Present	Present	Present	Present
18	Sanskriti Rajhans	Present	Present	Present	Present	Present
19	Tejaswini H. M.	Present	Present	Present	Present	Present
20	Usha Pattabhi	Present	Present	Present	Present	Present
21	Vijay Baburao Sambrekar	Present	Present	Present	Present	Present
22	VIKRAM SINGH	Present	Present	Present	Present	Present
23	VRINDA SHARDUL PADHYE	Present	Present	Present	Present	Present
24	Ar. Mansha Samreen	Present	Present	Present	Present	Present
25	Ar. Akanksha Singh	Present	Present	Present	Present	Present
26	Ar. Nisha Sharma	Present	Present	Present	Present	Present
27	Praveen Gupta	Present	Present	Present	Present	Present
28	Sonal Sharma	Present	Present	Present	Present	Present