

# SCHOOL OF ARCHITECTURE

DELHI TECHNICAL CAMPUS



Architectural Education
Bringing Synergies



## **MESSAGE**

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#### **EDITOR'S COLUMN**

This newsletter issue responds requirement the of for the appreciation construction subject. The building importance of construction cannot neglected or restricted to few sheets. It spills over to material knowledge, costing workmanship works, requirements and finally management on site. This and upcoming issues will address various building aspects.

#### From the Desk of the **Director Institute**

Prof. Ranjit Varma

# "The highest result of education is tolerance" – Hellen Keller

Education helps students in removing barriers and they can clearly see what's like in other situations, cultures and countries. You create a world that is more tolerant to differences.



Architecture is synergetic in nature which is why Architects are in charge of not only design and planning of the project but they are also responsible for the unique aesthetics of the constituent buildings and structures. The present state of construction is complex. There is a wide range of building materials and systems which are aimed primarily for a particular type of buildings. The design process for buildings is highly strategic and draws upon research establishments that study material properties, material performance, to enforce safety standards, etc during erection of the building which is also designed to meet specific needs of the user.

On the other hand the process of construction is highly organized; it includes the manufacturers of building products and systems, the craftsmen who assemble them on the building site, the contractors who employ as well as coordinate the work of the craftsmen, and consultants who specialize in such aspects as construction management, quality control, & insurance. An Architect is a person who has to coordinate with all and need to make sure that the construction should be as per his design and user needs. Thus it is important that the architectural education is balanced with life skills and technical aspects.

At School of Architecture, Delhi Technical Campus we make sure that the students not only get the theoretical knowledge but also they explore and learn about the new materials and technologies used on sites. The architect's education is incomplete without the technical skills of construction, services, drawings, cartography, urban planning, material science, etc. These diverse skills that one acquires during architectural education not only create opportunities for entrepreneurship but also open doors to pursue diverse interests or professions in the future.

I congratulate the school of architecture and wish the editorial team a success in their efforts.



## **MESSAGES**

Ar. Divay Gupta

SOA Director's Message

De Architectura, the first book on western architecture by Roman architect and engineer Vitruvius in 1st Cent BC lists three pillars of architecture, these are Firmitas (firmness and structural stability), Utilitas (functionality and services) and Venustas (aesthetics and beauty). These three principles are still relevant for determining a successful architecture even after more than 2000 years of their It also demonstrates that architecture is a combination distinct disciplines and sciences of engineering, services, planning and aesthetics.



Closer home the Indian treatise on architecture, the Vastu Shastra, considered to be more than 5000 years old, lists more than 20 subjects a person needs to master to be an architect. These include knowledge of astrology, astronomy, climatology, psychology, dance, music, religious studies besides engineering, mathematics, physics, chemistry, and the arts.

This also proves that architecture can not be seen or practiced in isolation or in silos. Rather, architecture is a process of integrating various aspects and diverse subjects in a creative and imaginative way to fulfill the aspirations beyond certain limitations and bring in synergies to create spectacular experiences for the users.

Architecture – A Confluence **Ar. Tanya Gupta** - SOA HOD'S Message

"Architecture is capable of absorbing anything, and hence tends to dissolve into everything." - Ole Bouman

Throughout the centuries, there has been desire among the researchers to identify architecture as technology, craft, science or art. Infact, architecture is a combination of all four related to each other within the scope of architectural education. In sense, architecture is a multidisciplinary, multi-skilled, multi-dimensional and multi-media practice and a self sufficient profession.









Architectural education, as one of the distinctive branches of education, requires the development of creative capabilities. The primary concern of architects is to produce three dimensional space and form to accommodate related human activities. Like other types of education, architectural education conveys, conserves, and transmits the values of the profession and society at large. Since humane environments are created in a field of tension between reason, emotion and intuition, architectural pedagogy should be viewed as training toward the manifestation of the ability to conceptualize, coordinate, and execute the idea of building rooted in humane tradition.

The balanced integration of artistic sensibility and scientific methodology as it applies to designing buildings and their environments is essential to creating great architecture. The Art Science Museum, Singapore is perfect example of a confluence of art, science, culture, and technology—what every building wishes to be! The Museum is a beautiful culmination of the efforts and ideas of world-renowned architect 'Moshe Safdie'.

Acclaimed as the 'Welcoming hand of Singapore', this lotus-shaped interactive museum is a part of the Marina Bay Sands Resort project, in the Downtown Core of Central Singapore.



# **ARTICLES**

# Architects are Technologists!!!

Ar. Swati Punyal – Assistant Professor

Architecture is known to be an art & science of built environment, which is reflected in all the various domains, be it artistic, socio-political, or cultural environment of a particular society in space and time. And if we talk about a good holistic architectural education, it is a combination of various skills, information, as well as values, which makes Architecture education somewhat "unique". The process of architectural education includes the traditional means of assessment which is continuous in nature, the training in architectural education consists of varied interrelated parts-theory, field visit and studio/workshop. Therefore, Students of Architecture / Future Architects tend to become "technologists!".



As said by Professor Christopher Charles Benninger, "what we do in our studios is laboratory work: analysing rational functions and logical interconnections; studying the measurable site and climatic conditions; stating problems clearly and making the hypothesis of possible options to resolve those problems; defining performance criterion, and evaluating which design option best provides the answers to questions posed by the client. We study engineered materials and structural systems that support and span a variety of spaces. We analyse enclosing envelopes, applying systems analysis, to select the "best fit" simulating hundreds of components, elements and parts!". From being a faculty's perspective, the very subjective nature of Architectural Education provides numerous opportunities as well as challenges at the same time for both students and faculty members, in terms of acquiring all the relevant skills for the architectural Students in the 5 years of course, and the necessity to update and upgrade ourselves continually with the changing pace for the Faculty members.

# Architectural Synergy: A Lifelong Learning In Academics And Profession Ar. Preeti Nair - Associate Professor

From the earlier times, a disconnect has existed between the academics and profession of architecture. Architectural education has long prided itself on the beliefs and value of creative problem-solving, research, and the fine arts. In contrast, the practice of architecture has evolved to emphasize technical knowledge, specialization, communication, business, and collaboration. This disconnect has led education to miss opportunities to teach students business skills and knowledge required for the workplace, and allowed practice to lose sight of the importance of artistry and research.



Architecture educators, students, and practitioners each have a unique set of knowledge and skills to offer the other, and a corresponding set of need and challenges which must be addressed for the profession's continued success. By analysing history, current debates in the field, and case studies of current innovative practices and educational models, this thesis addresses these issues with a new model of architectural synergy, embodied through a facility for lifelong learning in architecture. vi the primary goal of this building is to inspire integrative and collaborative processes between students, researchers, educators, and practitioners to address the current disconnect between them. Through this facility, each group will have the opportunity to leverage their unique strengths and successes to help the others. This collaborative model will allow each role mutually beneficial opportunities for lifelong learning through the exchange of knowledge, ideas, and processes between different groups.



## **ARTICLES**

# Structural Melodies, Structural Poetry & Structural Analysis: The Structure and Architecture Synergy Framework (SAS)

Er. Parvez Alam - Assistant Professor

Building structure is the design made for people, the product of which should be reliable, affordable, sustainable, and comfortable and aesthetically appealing whereas each forms of nature have architecture. The astonishment of nature is that it has a great capability to acclimatize to generate new configurations, structures and properties from existing ones (Weinstock, 2010). The Structure and Architecture Synergy Framework (SAS) focuses on the relationship between architecture and structures and emphasizes a designing process that is highly creative in nature.



The SAS framework is based upon the concepts of "Structural Melody", "Structural Poetry", and finally "Structural Analysis". These are the key gears of the SAS framework along with building information modeling (BIM) as the framework enabler.

Structural melody explores how linear, non-linear, planar and volumetric structural elements can be orchestrated to create spatial order in architecture using BIM tools. Structural poetry is a creative exercise to provide structural systems using structural vocabulary and melodies in order to organize and stabilize architectural spaces. In a more general sense, structural poetry signifies structural creativity and spatial thinking to develop a complete structural solution. It resembles the natural growth process of living objects (Nawari & Kuenstel, 2015b). Structural poetry is thus an art that is an essential part of building design, which embellishes with engineering knowledge. After completing structural melody and poetry phases, BIM models are subjected to structural analysis. Various analysis tools within BIM platforms are introduced. BIM tools used in this phase are principally the beam, truss, frame simulation, the load takedown, and the integration with Robot Structural Analysis. The approach utilizes nature as a stimulus for discoveries and the model of learning to generate innovative bionic structural patterns.

## Making way for Psychologists in the Design Team

Ar. Richa Singh- Assistant Professor

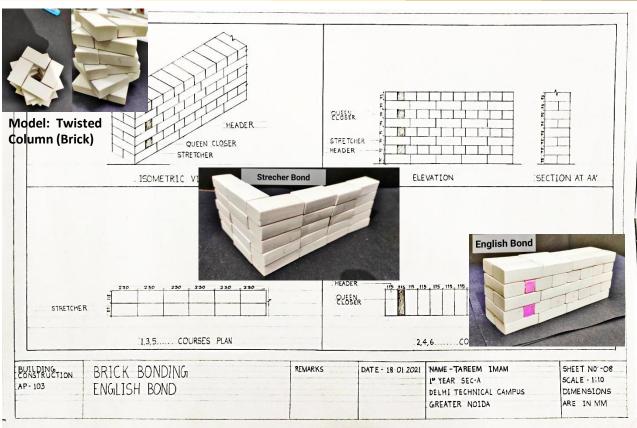
The moment we are talking about architecture, we are talking about the built environment. This built environment is just a part and parcel of our own subconscious mind. The way we built or prefer to or chose to live in this built environment is constantly influencing us and we ourselves are molding it. Architecture is no longer considered to be building shelter or just adding function and facility. It has extended its branches to the fact that it can affect the behavior from individual to a collective



conscious of neighborhood or of a city. Architecture is no longer just confined to the brackets of art and science it has added psychology of spaces to its domain. Psychology is simply a response or experience of the physical environment. We humans have surrounded ourselves with more of built environment than the natural one. Clearly we are being shaped by the space we occupy. This is why our design case studies and practice is only fruitful when one can understand this. Design community is not just designing elements of convenience but is also indirectly propagating a good or bad, safe or secure, happy or sad emotions. The relationship of Architecture and psychology is not an simple inversely proportional one, but it has also added cultural aspect into the equation. This can simply be explained by the fact that different people may perceive different design ideas uniquely based on their social and cultural imprints. More and more design projects around the world are including anthropologists and psychologist in their team to come up with acceptable design.

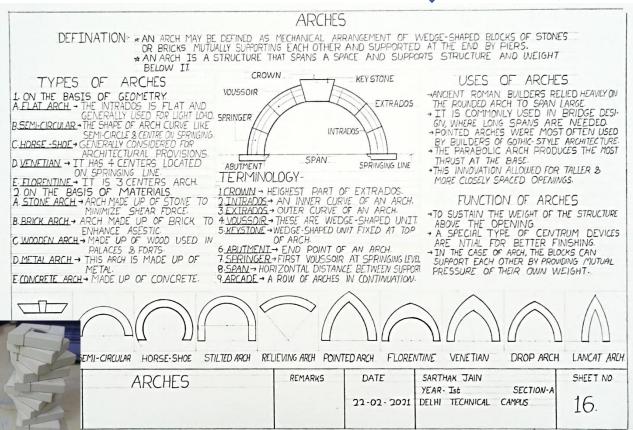


# **FIRST YEAR WORKS**



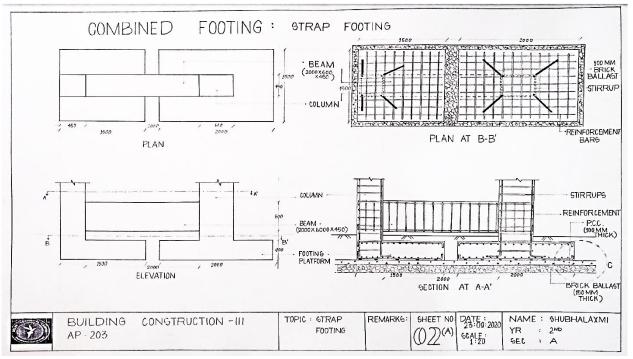
Tarim Imam, 1st Yr, B. Arch

Sarthak Jain, 1st Yr, B. Arch

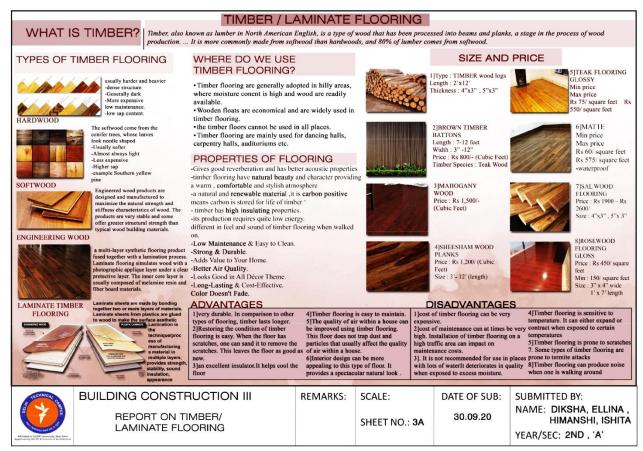




# **SECOND YEAR WORKS**



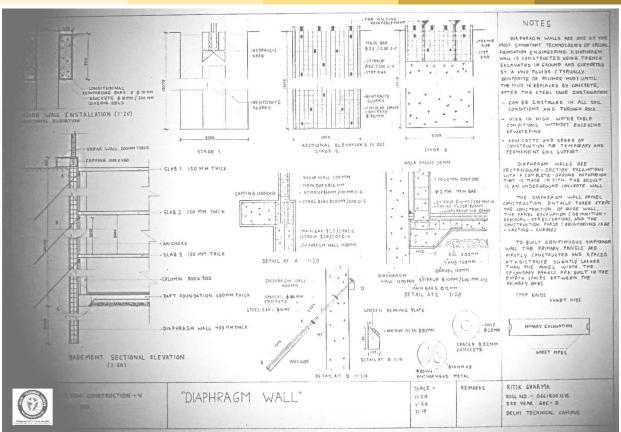
Shubhlaxmi, 2nd Yr, B. Arch



Building Material - Group work, 2nd Yr, B. Arch

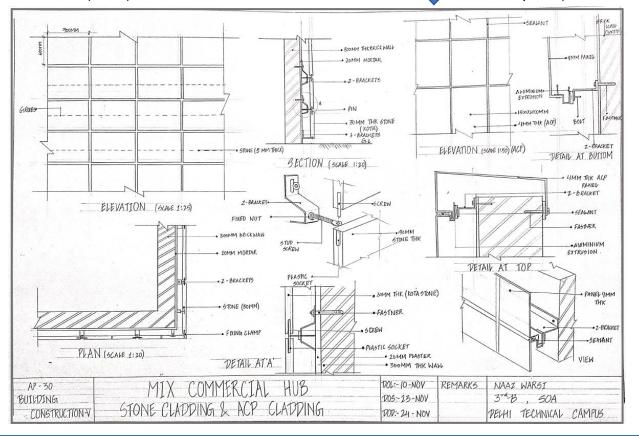


# **THIRD YEAR WORKS**



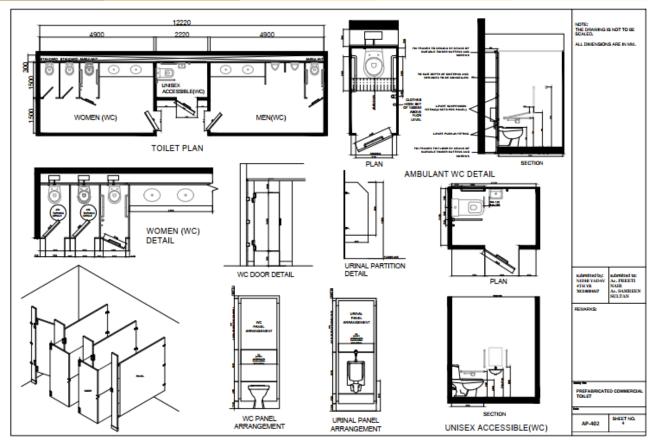
Ritik Sharma, 3<sup>rd</sup> Yr, B. Arch



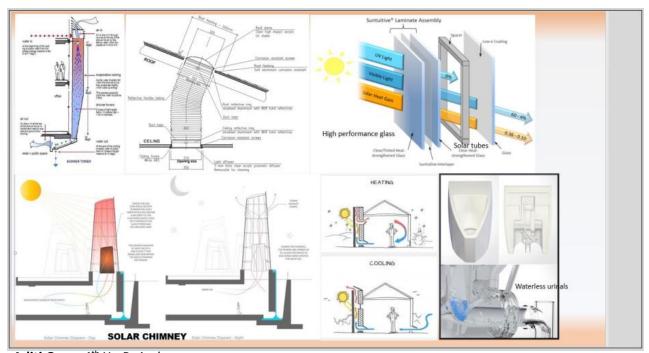




# **FOURTH YEAR WORKS**



Nidhi Yadav, 4th Yr, B. Arch



Aditi Gang, 4th Yr, B. Arch



## **EVENTS AND ACTIVITIES**

SCHOOL OF

#### Orientation day for Batch 2020-2025

ORIENTATION day for the first year students of batch 2020-25 in the session 2020-21 was conducted on **30**<sup>th</sup> **December 2020**. The orientation marked the beginning of the 5 year Degree course, 1<sup>st</sup> semester and a new life experience at school of architecture, Delhi technical campus for the new students.

# AKCHITECTURE DELHITECHNICAL CAMPUS WELCOMES BATCH OF 2020-2025 WEDNESDAY, 30.12.2020 FROM 10:30 AND ON THE STARTING FROM ONLINE EDUCATION

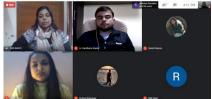
Delhi Technical Campus

THE RESERVE TO SERVE THE RESERVE THE RESERVE

THE B.ARCH ORIENTATION DAY

### Alumni Talk



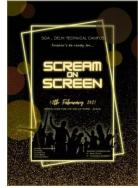


Alumni talk was arranged for 2<sup>nd</sup>,3<sup>rd</sup>,4<sup>th</sup>,5<sup>th</sup> year students on **16<sup>th</sup> of January 2021**. The resource persons were two alumni of school of architecture *Ar.Tanya Gupta and Ar.Sakshi Saxena* from the first batch to brief students about the options for further higher studies in Indian and foreign universities. The objective of the talk was to introduce the students about the higher studies after completing B.Arch. This was one of the first to many more alumni interaction in the coming days.

#### Fresher's Meet 2021

To break the ice between the seniors and juniors, School of Architecture organized Fresher meet on 12<sup>th</sup> February 2021, Friday with a whole bunch of events planned up for first year students "FRESHERS" starting with a welcoming introduction from seniors along with a bunch of fun games which were followed by the most important event of the day, Mr. & Miss. Fresher without which Fresher's seems incomplete. The students were required to creatively adhere to the Dress code given for the Freshers - "BLACK". And the journey of friendships begins.







# **EVENTS AND ACTIVITIES**

#### The Synergy of Structure and Form in Architecture

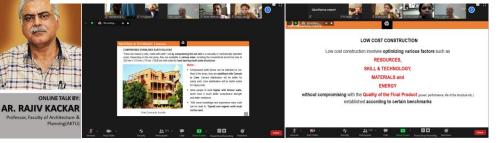
A special lecture by DR.ER.AR.S.P.ANCHURI was organized on 19th Feb 2021. The Lecture focused on the relationship between structure, form architecture, basic of structural forms, their properties, material used. There were various topics covered with number of case studies to understand the application of structure principles in building form. Students of all batches and faculty attended the lecture.



# SCHOOL OF ARCHITECTURE elhi Technical Campus, Gr. Noida BRICK TO BUILDING Low cost building construction 25th MARCH 2021, Thursday 1:00 - 2:30 pm IST Facebook Live

#### **Brick to Building: low Cost Building Construction**

A webinar titled "Brick to Building: Low cost Building construction" was organized on 25.03.2021 at School of Architecture, Delhi Technical Campus. The participants included students of all batches & faculty of SoA and Alumni of AKTU as well. Prof. Rajiv Kacker, faculty AKTU was the guest speaker for the webinar. Prof: Kacker divided the presentation in two part: 1) Material and 2) Techniques with some examples of the usage in reputed projects of Ar. Laurie Baker.



#### **Farewell celebration in Festive Spirit**

School of Architecture organized a Farewell party (24.03.21) for Prof. Sushma Garg with a Festivity spirit of Holi. The event was filled with emotions and memories. The event was graced with the presence of Prof Ranjit Verma (Director institute) and Prof Dr. Pranay Tanwar (Dean Academics) Delhi Technical Campus. The Faculty shared their experiences with and learnings from Prof. Sushma Garg. The spirit of Holi was evident in the dress code and best dressed was awarded.









## **RESEARCH WORK**

# Concrete: redefining the 'ethics and aesthetics' in contemporary 'isms' of architecture (Lovejit Singh Saka guided by Ar Charu Jain)

#### Abstract

Alberto Giacometti - one of the most important sculptors of the 20th century - while working precisely on decoding the proportions of a human head, replied citing André Breton's - "Everybody knows what a head is and how it looks like!" - "No, I don't know what it is. I'm interested to know!"

I interpret this, in context of concrete - since, "Everybody knows what concrete is. And what it does"; I believe

-"I don't really know what it is. Perhaps, I'm interested to know. And I won't offer too rare to analyze the capabilities of concrete" This research paper is a 'celebration of concrete'. It's about millennials of evolutionary changes of the material - which is often questioned at being a material - still struggling to get itself defined; getting better, and perhaps new. The paper represents the developments and evolution in concrete, in relation to concrete being the material, which has been at the core of contemporary discussions and experiments leading to avant-garde horizons exhibiting its capabilities and possibilities. It's about knowing the 'whats' of concrete and an attempt to provoke discussion and study of the material. Further, the objective is to establish a relation between the developments in concrete, and the developments in architectural languages and philosophies generating the so-called contemporary 'isms' of architecture with redefined 'ethics and aesthetics' of the material. The analysis contributes valuable sagacity into concrete's prolonged trajectory as an architectural material and is an insight of what the future for such an ancient material looks like.

Keywords- Concrete, architecture, evolution, philosophies, material, contemporary, experimentation, aesthetics, technology, future

# Bio-concept, Light-form and Adaptable function, a Co-related Approach for Cultural Space **Development** (Neha Singh guided by Ar. Amitesh Vijay)

#### Abstract

Culture is one of the basic frameworks for development and architecture has always been a reflection of culture and art; hence developing a cultural space with an innovative approach not only enhances the beauty of the space but also adds a value in surrounding development. The building cannot be studied in isolation; it has a direct connection with the built and natural environment. This research paper centers on a co-related approach of functional adaptation in a light-form to design an efficient bio-inspired socio-cultural space, which not only balances built and unbuilt surrounding but also makes the space ready for the future. The study focuses on different methodology to derive bio-concept for cultural space in context to its surrounding and develop the design with versatile technique and suitable light-weight structure.

**Keywords**- Socio-cultural space, bio-inspired, versatile, surrounding, light-weight

# Make the lifeline stronger through integrated riverfront development (Mohammad Sarim guided by Ar. Tanya Gupta)

#### Abstract

River is an important element of any area. It not only makes an area more ecologically sound but also can help in making it more social. There can be a various amount of development going into the treatment of the river. But at times a small amount of development or a specific type of development restricts the potential of river that could have had been extended. Introduction: A blend of different sorts of stream front advancement is known as coordinated riverfront improvement. This is significant as it assists with investigating the maximum capacity of a stream in different ways. An integrated riverfront can be a blend of different sorts of individual riverfront advancement relying on the planner of the territory. In this exploration I have joined environmental, social, and metropolitan riverfront advancement. Bank of Yamuna stream is wealthy in social variety as it is viewed as a blessed waterway in India. Individuals from pretty much all aspects of India visit the stream to perform different ceremonies on factor events. The portion of Yamuna taken up for this examination houses the acclaimed winged animal haven. Yamuna is a characteristic boundary between the capital and Uttar Pradesh so there is a great deal of metropolitan improvement occurring at present around it. This is the explanation behind adopting up a strategy towards coordinated stream front turn of events.

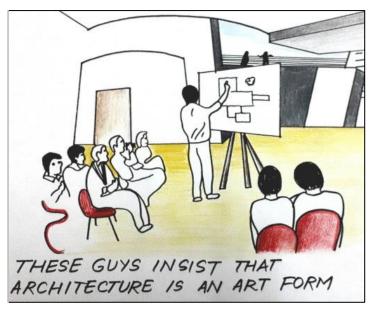
**Keywords**- riverfront, riverfront development, integrated riverfront development



## STUDENTS CORNER

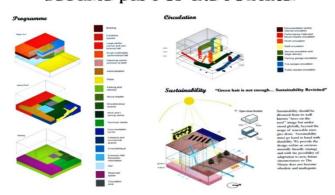
Ayushi Jangid, 1st Yr, B. Arch

Architectural education has long prided on the values of creative problem solving, research and the fine arts. In contrast the practice of architecture has evolved to emphasize technical knowledge, specialization, communication, business, and collaboration. This disconnect has led education to miss the opportunities to teach students business skills and knowledge required for the workplace and allowed practice to loose sight of the importance of artistry and research. Architecture educator, students and practitioners, each have a unique set of knowledge and skills to offer the other and a corresponding set of need and challenges which must be addressed for the profession's continued success.



# ARCHITECTURAL EDUCATION: BRINGING SYNERGY

After studying the brief of the competition, it was a surprise not to encounter the word Icon once. The brief talks about a strong presence, a recognisable character, an exceptional architecture ...but also about banning words such as: rigidity, routine, or static. The current architecture production of icons has resulted in rigid and static buildings that somehow quickly became part of the routine.



The architecture of The House should not impose, restrict, limit, or confine any potential of creativity. It should allow maximum flexibility, a vibrant image, and it should represent the dynamism of Art and Culture in Beirut day after day.

Saloni Karak, 1st Yr, B. Arch



## STUDENTS CORNER

Hybridized Pedagogies in Architectural Education- Bringing Synergies. Shubham Kr. Sagar – 2<sup>nd</sup> yr, B.Arch

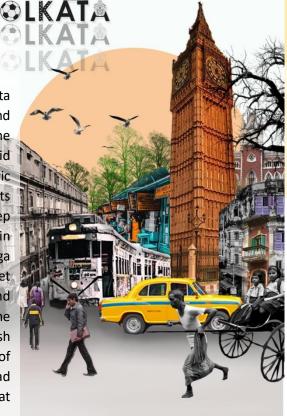
Architectural education being one such field which has always been planned in the context of the physical classroom and in itself is deeply rooted in the physical coexistence of students and professors. of course, excluding a few examples such as Susan Yee's MIT successful attempts which coordinated to form interdisciplinary transcontinental synergies between architectural Institutions. and However, in this period of time where digital media has infiltrated the architectural practices and imagining this discipline without Technology would be



considered nothing more than a joke, there surfaces a unique synergy in the architectural disciplines which can be considered a bit more inclusive towards amalgamation of new ideas with the traditional ones and is resulting an opportunity that does not limit the practices or education to a particular circle of repetitive patterns but, in contrast is welcoming towards new ideas, experimentation and practices as such. Also, the web of this newly developed process of learning and teaching which is interlinked to each other whether we talk about "online activities", "workshops" or, "research works" which are documented very precisely through the use of "google documents" or, "google classrooms" has now presented an alternative which is in contrast to what was considered practical and more perfect system of education and has in itself a message that when it is about a discipline as such as architecture limitations and obstacles only creates an opportunity of betterment and improvement. And of course in the midst of all these a new hybrid pedagogical system is achieved which is itself inclusive, solution to many and to somewhat a perfect system for a discipline as such as architecture which brings many diverse practices in practicality.

## **Kolkata – A merger of Architecture and Culture** Diksha Dey - 2<sup>nd</sup> yr, B.Arch

Nestled on the eastern banks of the River Hooghly, lies Kolkata a bustling metropolitan city steeped in history, arts, and culture. Calcutta, renamed as Kolkata in 2001, is the amalgamation of its colonial past indigenous culture and rapid urbanization. Streets are an integral part of the urban fabric and set the stage for interactions between the city and its football having deep people. The craze, youngsters conversations about politics and liberal socialism in coffeehouses, Dhakchis marking the commencement of Durga Puja drumming their dhaks in the streets ,Robindro Sangeet playing everywhere in the radio, the old Victorian buildings and haath rickshaws; People coming at you from all angles at the tram crossing. Kolkatas street culture never ceases to astonish travel freaks like me! A day in the streets of Kolkata was one of the best travel experiences that I've had. This trip had connected me with the very soul of the amazing city that Kolkata is! I felt Home!





## **STUDENTS CORNER**

Changes Over The Course; Mohammad Sarim, 4th Yr, B. Arch

Is someone a one-man army? No, not really. Can a single man produce the best of the creations alone...maybe yes, but a group of individuals can? Architecture is something like that a single person cannot produce perfect things till the time there is a team behind him. Architectural education gets a lot of individuals together that work together and produce an output together. Not everyone is erect in everything and you know when groups help the most when they cover-up stuff for the other mates too. Right from day one of my student life till the final year of my college something that I have observed reckless times is the group work makes a difference; definitely in terms of load distribution as well as the final production.

Yes, I know a lot of people aren't great when it comes to working as a team even though I was one of them, but today if I sit down and look back, yes, something I realize for sure is things can change over a course.



Priyanshi Sharma, 4th Yr, B. Arch

As said and experienced by a person who is connected to architecture can definitely agree that architecture is "a jack of all trades and master of none", and me being a 4<sup>th</sup> year student agrees to this whole heartedly. Like nature is composed of components of a variety of animate and inanimate factors, all of which play a unique role in shaping up not only built and unbuilt spaces but also a person's experience of it. I can imagine & sum up all my experience as a student that while we grow with time, we learn new subjects every year, acquire them in a thought to utilize every detail during our thesis project.



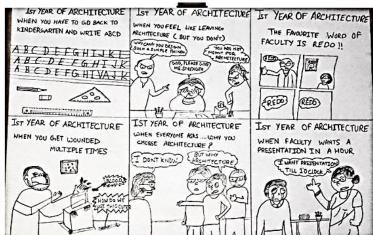
If architecture is a visual art, the nature is our canvas, and building materials, our medium. Our design ideas are the brushes we wield across this canvas, to create a masterpiece. Hence, the idea of the creation has to be bigger than all of the rest, and it must be our capability to master these mediums in order to create.



## **Monthly Student Activity**

Selected works from the students submissions for the activity: Competition Winners











Shivam-First Prize, Section B









Architecture is an intensive experience, but who you surround yourself with can make that experience enjoyable. The online experience with teachers has been different. Making the journey more memorable School of Architecture planned an online competition on topics: "Caricatures of your experience in Architecture" "Caricatures of famous /funny quotes of