SASTPN 3

SCHOOL OF ARCHITECTURE CEPT
SEM - I 1988-89

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PROGRAMME FOR STUDIO III

FORM AND DESIGN

INTRODUCTION :

Every building is composed of several types of 'forms' which are brought to-gether into a specific relationship expressive of the purpose for which the building stands for. Architecture is the art and the science which equips us with the requisite knowledge and skills to understand 'forms' and the way these could be 'related' to each-other for the specific purpose of building.

Architectural form results from the resolution of the purposive-intentions and its structural definitions. The way such 'forms' are brought to-gether in a specific relationship display 'organisation'. Forms are 'articulated' into a specific relationship of organisation fulfilling the purpose of building. Resolution of 'form' and developing 'an organisation' (PLAN) is Termed as 'design' - an activity to plan out.

Development of 'form' requires understanding the social back-ground of purpose and also structural engineering.
Developing a 'plan' or 'organisation' requires understanding of arts and nature which are prerequisites to 'design'.

Studio III at SA deals with issues related to Form and design. The study will focus on understanding form : evocative (purpose oriented) quality of space, structural basis of form in architecture (materials, construction, structural principles) and design : nature of art and artistic activity, its essential aspects and art in nature, how it is observed and percieved and its essentials for grasping such as drawing, modelling and analytical understanding to draw lessons in architecture - its form, organisation and the relationships which build up the overall expression.

STUDIO OUTLINE

A. **Methodology for Studio Instruction : Part I Developing Basis**

(1) **Objectives :**

1.1) Study of material + construction to develop an understanding of the **interelatedness** of material properties eg construction Tendencies.

1.2) Understanding form as the logical outcome of **structural principles** and **construction order.**

1.3) Plan reflecting dictats of structure and functional spaces articulated within this disciplines of structure. Freedom within an accepted **structural order.**

1.4) Revelant structural order of Plan organisation congruent to **functional order** (Major functions eg flow/circulation)

(2) **Methods :**

2.1) Study of a built-example by measured drawing to understand FORM - STRUCTURE - CONSTRUCTION ORDER - Construction Technic - material.

2.2) Analytical studies focussing on each of the above to expand the understanding of revelant theory through appropriate methods of studio work.

(3) **Studio Work :**

3.1) **Form** : to be documented for its overall profiles through projected views and scale models.

3.2) **Structure** : principles involved to be abstracted ep demonstrated through structural models and diagrams.

3.3) **Construction Order** : Through abstracted diagrams by segmanting components of forms identifying various parts of forms e.g. supports, roofs etc- examining possibilities.

3.4) Construction Technics : Through scale drawings and the minaturized modelling Technics also drawing parallel examples and examining hints of technics.

3.5) Material : Insight into properties which govern the usage of material in a specific construction situation. Nature of material and its appropriation as an unit of construction order.

B. **Methodology of Studio Instruction : Part II Design Exercise**

(1) **Objectives :**

1.1) To appraise of the knoweledge gained in Part I and to try and develop a studio Design project reflecting one's attitude to DESIGN with sufficient sensitivity to issues related to FORM and DESIGN.

1.2) To present the design exercise in one's own Technique using graphical and modelling methods as a means to express one's ideas.

(2) **Methods :**

2.1) Instructions will be offered to develop one's own methods to problem solving, however, individual efforts will have to be explained in dealing with the programme of design project.

2.2) Instructions will focus on actually reverse approach to Part - I i.e. structural principle - form - construction order - material - techinique in a cyclic process catching the cycle at any preferrde point of begining. Totality being the result of a balanced interdependant realisation.

2.3) Modelling as an aid to concieving will be stressed.

(3) **Studio Work :**

3.1) Understanding programme of the design project

3.2) developing a 'space programme' & ideas about materials

3.3) exploring 'space' concepts through volumetric studies

3.4) Understanding form and structural principles and revelant construction order

3.5) Developing a 'PLAN' expressive of FORM & STRUCTURE based on modelling studies

3.6) Presentation of the Part II studio work will consist of the actual studio work outlining students individual work methods explain their PROCESS OF DESIGNING with the end product as an outcome of one's THINKING.

C **Study Areas - Part I**

MATERIAL	TYPES OF BUILDINGS	BASIC FORMS | COMPONENTS	NATURE OF SPACE	RESULTANT PLAN
1)	Masonry **Houses**	Brick walls & Brick vaults | ceramic tubes	Linear closed sides open ends	Continous side supports |
2)	Masonry **Religious Building**	Stone Trabeated construction of Dome	centric closed | open	continous peripheral supports | point corner supports
3)	Timber			
4)	Composites **Pavilion** Uni-Campus UMPS	RCC cantilevered roof + frame supports	Directional	pointsupports on sides
5)	Composites Space frame **Calico dome-shop**	Steel tubes Tetra grid Large spans	Flexible	Flexible point supports

D **Study Areas**

Design Exercise : **(1)** Major programmatic considerations

- Function : Education for children
- Context : Fine climatic contexts
- Materials : available in Fine contexts
- Construction traditions appropriate to context

(2) Approach to design : Identifying functions & form possibilities

: Identifying construction order \| materials

: Evolving concepts of relationships on Plan

E Schedule Of Studio Work

Part I Developing Basis

July 05 to 14th	: Documentation of Examples
July 19 to 11th August	: Understanding the examples and relevant aspects of its Form
August 16 to 26th	: Scale model work shop

Part II Design Exercise

September 02 to 10th	: Design Exercise, Basic programming
September 10 to 07th October	: Design development and related issues
October 11 to 21st	: Work on presentation of Studio work

F Schedule Of Outstation Visits

July 29 - Visit 01	: Brisk Manufacturing Unit near Baroda, light weight block manufacturing unit near Baroda
August 26 - Visit 02	: Stove mines of Dhrangadhra and construction site
September 28 - Visit 03	: 15th century architecture of Gujarat visit to Cambay and Dholka

G Schedule Of Studio Lectures :

July 08	: Introducing lecture	- FORM & DESIGN - general basis
July 14	: Lecture - 1	- Learning from Nature - 1
July 22	: Lecture - 2	- Learning from Nature - 2
July 28	: Lecture - 3	- Building Materials & construction - 1 Basic Materials
August 05	: Lecture - 4	- Building Materials & construction - 2 Basic Materials
August 11	: Lecture - 5	- Building Materials & construction - 3 Timber
August 19	: Lecture - 6	- Building Materials & construction - 4 composites
August 25	: Lecture - 7	- Building Material & construction - 5 composites

September 02 : Lecture - 8 - Regional architecture indegenous materials/methods/ forms
September 10 : Lecture - 9 - Regional architecture indegenous materials/methods/ forms
September 16 : Lecture - 10 - Regional architecture indegenous materials/methods/ forms
September 24 : Lecture - 11 - Regional architecture indegenous materials/methods/ forms
September 30 : Lecture - 12 - Regional architecture indegenous materials/methods/ forms
October 07 : Lecture - 13 - Changing attitudes to materials & Technology & new expression in architecture
October 13 : Lecture - 14 - Survey of New expressions
October 21 : Appraisal of studio learning

H **Schedule Of Seminar Sessions**

July 15th : Seminar 1 - Basic Issues related to studio
August 12th : Seminar 2 - Nature of Basic Forms (role of material and structure as determinents)
August 30th : Seminar 3 - Developments in structural forms (Principles and Know how)
September 14th : Seminar 4 - PLAN as a GENERATOR
October 11th : Seminar 5 - Articulation of material/structure/ construction Design as Synthesis