SAVITRIBAI PHULE PUNE UNIVERSITY

REVISED SYLLABUS FOR

BACHELOR OF DESIGN

(To be implemented w.e.f. A.Y. 2024-25)

CREDIT STRUCTURE & SUBJECT LIST

SECOND YEAR & THIRD YEAR

BOARD OF STUDIES IN DESIGN

FACULTY OF SCIENCE AND TECHNOLOGY

Bachelor of Design

Credit Structure

Second Year- Interior Design

Semester 3

S. No.	Course Code	Course name	L	St	CH	Cr	Th	SS	SV	Total Marks
1	22024101	Design Project 1	2	8	10	6	–	–	200	200
2	22024102	Elements of Space Design 1	2	4	6	4	–	–	150	150
3	22024103	Interior Drawings & Graphics1	1	4	5	3	–	100	–	100
4	22024104	Material & Construction Techniques 1	2	4	6	4	–	–	100	100
5	22024105	History of Interior Design1(P)	2	–	2	2	100	–	–	100
6	22024106	History of Interior Design1	–	2	2	1	–	–	–	–
7	22024107	Electives1 - (*Computer Aided Drawing)*	1	2	3	2	–	50	–	50
			10	**24**	**34**	**22**	**100**	**150**	**450**	**700**
ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects										**Total Marks = 700**

Semester 4

S. No.	Course Code	Course name	L	St	CH	Cr	Th	SS	SV	Total Marks
1	22024108	Design Project 2 (P)	2	–	2	2	100	–	–	100
2	22024109	Design Project 2	–	8	8	4	–	–	200	200
3	22024110	Elements of Space Design 2	1	4	5	3	–	–	150	150
4	22024111	Interior Drawings & Graphics 2	1	2	3	2	–	100	–	100
5	22024112	Material & Construction Techniques 2	1	4	5	3	–	–	100	100
6	22024113	Interior Services 1 (P)	2	–	2	2	100	–	–	100
7	22024114	Interior Services 1	–	2	2	1	–	100	–	100
8	22024115	History of Interior Design 2 (P)	2	–	2	2	100	–	–	100
9	22024116	History of Interior Design2	–	2	2	1	–	–	–	–
10	22024117	Electives 2	1	2	3	2	–	50	–	50
			10	**24**	**34**	**22**	**300**	**250**	**450**	**1000**
ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects										**Total Marks = 1000**

Bachelor of Design

Credit Structure
Second Year- Product Design

Semester 3

S. No.	Course Code	Course name	L	St	CH	Cr	Th	SS	SV	Total Marks
1	22024201	Design Project 1	2	8	10	6	–	–	200	200
2	22024202	Elements of Form 1	1	4	5	3	–	–	150	150
3	22024203	Ergonomics 1 (P)	2	–	2	2	100	–	–	100
4	22024204	Ergonomics 1	–	2	2	1	–	100	–	100
5	22024205	Technical Drawing 1	1	4	5	3	–	100	–	100
6	22024206	Material & Processes 1	1	2	3	2	–	100	–	100
7	22024207	History of Product Design 1 (P)	2	–	2	2	100	–	–	100
8	22024208	History of Product Design 1	–	2	2	1	–	–	–	–
9	22024209	Electives1 - (*Computer Aided Drawing)*	1	2	3	2	–	50	–	50
			10	**24**	**34**	**22**	**200**	**350**	**350**	**900**

ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects.

Total Marks = 900

Semester 4

S. No.	Course Code	Course name	L	St	CH	Cr	Th	SS	SV	Total Marks
1	22024210	Design Project 2 (P)	2	–	2	2	100	–	–	100
2	22024211	Design Project 2	–	8	8	4	–	–	200	200
3	22024212	Elements of Form 2	1	4	5	3	–	–	150	150
4	22024213	Ergonomics 2 (P)	2	–	2	2	100	–	–	100
5	22024214	Ergonomics 2	–	2	2	1	–	100	–	100
6	22024215	Technical Drawing 2	1	2	3	2	–	100	–	100
7	22024216	Material & Processes 2	1	4	5	3	–	100	–	100
8	22024217	History of Product Design 2 (P)	2	–	2	2	100	–	–	100
9	22024218	History of Product Design 2	–	2	2	1	–	–	–	–
10	22024219	Electives 2	1	2	3	2	–	50	–	50
			10	**24**	**34**	**22**	**300**	**350**	**350**	**1000**

ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects.

Total Marks = 1000

Bachelor of Design

Credit Structure
Second Year- Set Design

Semester 3										
S. No.	**Course Code**	**Course name**	**L**	**St**	**CH**	**Cr**	**Th**	**SS**	**SV**	**Total Marks**
1	22024301	Design Project 1	2	8	10	6	–	–	200	200
2	22024302	Elements of Form 1	1	4	5	3	–	–	150	150
3	22024303	Technical Drawing & Graphics1	1	4	5	3	–	100	–	100
4	22024304	Workshop & Miniature Making	1	4	5	3	–	100	–	100
5	22024305	Material & Construction Techniques 1	1	2	3	2	–	–	100	100
6	22024306	History 1(P)	2	–	2	2	100	–	–	100
7	22024307	History	–	2	2	1	–	–	–	–
8	22024308	Electives1- (*Computer Aided Drawing)*	1	2	3	2	–	50	–	50
			9	**26**	**35**	**22**	**100**	**250**	**450**	**800**
ILH = 5 Independent learning Hours should be allotted according to the academic requirement of respective subjects								**Total Marks = 800**		

Semester 4										
S. No.	**Course Code**	**Course name**	**L**	**St**	**CH**	**Cr**	**Th**	**SS**	**SV**	**Total Marks**
1	22024309	Design Project 2 (P)	2	–	2	2	100	–	–	100
2	22024310	Design Project 2	–	8	8	4	–	–	200	200
3	22024311	Elements of Form 2	1	4	5	3	–	–	150	150
4	22024312	Elements of Medium 1	1	2	3	2	–	–	100	100
5	22024313	Technical Drawing & Graphics 2	1	2	3	2	–	100	–	100
6	22024314	Material & Construction Techniques 2	2	4	6	4	–	–	100	100
7	22024315	History 2 (P)	2	–	2	2	100	–	–	100
8	22024316	History	–	2	2	1	–	–	–	–
9	22024317	Electives 2 -*(Visual Arts)*	1	2	3	2	–	50	–	50
			10	**24**	**34**	**22**	**200**	**150**	**550**	**900**
ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects									**Total Marks = 900**	

Bachelor of Design

Credit Structure
Second Year- Furniture Design

Semester 3										
S. No.	**Course Code**	**Course name**	**L**	**St**	**CH**	**Cr**	**Th**	**SS**	**SV**	**Total Marks**
1	22024401	Design Project 1	2	8	10	6	–	–	200	200
2	22024402	Elements of Form 1	1	4	5	3	–	–	150	150
3	22024403	Ergonomics 1 (P)	2	–	2	2	100	–	–	100
4	22024404	Ergonomics 1	–	2	2	1	–	100	–	100
5	22024405	Technical Drawing 1	1	4	5	3	–	100	–	100
6	22024406	Material & Processes 1	1	2	3	2	–	100	–	100
7	22024407	History 1 (P)	2	–	2	2	100	–	–	100
8	22024408	History 1	–	2	2	1	–	–	–	–
9	22024409	Electives1 - (*Computer Aided Drawing)*	1	2	3	2	–	50	–	50
			10	**24**	**34**	**22**	**200**	**350**	**350**	**900**
ILH=6 Independent learning Hours should be alloted according to academic requirement of respective subjects									**Total Marks = 900**	

Semester 4										
S. No.	**Course Code**	**Course name**	**L**	**St**	**CH**	**Cr**	**Th**	**SS**	**SV**	**Total Marks**
1	22024410	Design Project 2 (P)	2	–	2	2	100	–	–	100
2	22024411	Design Project 2	–	8	8	4	–	–	200	200
3	22024412	Elements of Form 2	1	4	5	3	–	–	150	150
4	22024413	Ergonomics 2 (P)	2	–	2	2	100	–	–	100
5	22024414	Ergonomics 2	–	2	2	1	–	100	–	100
6	22024415	Technical Drawing 2	1	2	3	2	–	100	–	100
7	22024416	Material & Processes 2	1	4	5	3	–	100	–	100
8	22024417	History 2 (P)	2	–	2	2	100	–	–	100
9	22024418	History 2	–	2	2	1	–	–	–	–
10	22024419	Electives 2	1	2	3	2	–	50	–	50
			10	**24**	**34**	**22**	**300**	**350**	**350**	**1000**
ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects.									**Total Marks = 1000**	

Bachelor of Design

Credit Structure

Third Year - Interior Design

Semester 5										
S. No.	**Course Code**	**Course name**	**L**	**St**	**CH**	**Cr**	**Th**	**SS**	**SV**	**Total Marks**
1	32025118	Design Project 3	2	10	12	7	–	–	250	250
2	32025119	Material & Construction Techniques 3	2	4	6	4	–	–	100	100
3	32025120	Interior Services 2 (P)	2	–	2	2	100	–	–	100
4	32025121	Interior Services 2	–	2	2	1	–	100	–	100
5	32025122	Craft & Cultural Documentation	1	4	5	3	–	–	150	150
6	32025123	Responsive Environments	1	2	3	2	–	100	–	100
7	32025124	Electives 3	2	2	4	3	–	100	–	100
			10	**24**	**34**	**22**	**100**	**300**	**500**	**900**
ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects									**Total Marks = 900**	

Semester 6										
S. No.	**Course Code**	**Course name**	**L**	**St**	**CH**	**Cr**	**Th**	**SS**	**SV**	**Total Marks**
1	32025125	Design Project 4 (P)	2	–	2	2	100	–	–	100
2	32025126	Design Project 4	–	10	10	5	–	–	250	250
3	32025127	Material & Construction Techniques 4	2	6	8	5	–	–	100	100
4	32025128	Estimation & Costing (P)	2	–	2	2	100	–	–	100
5	32025129	Estimation & Costing	–	2	2	1	–	50	–	50
6	32025130	Research Methods	1	2	3	2	–	100	–	100
7	32025131	Professional Practice	1	2	3	2	–	100	–	100
8	32025132	Electives 4 *(Design)*	2	2	4	3	–	100	–	100
			10	**24**	**34**	**22**	**200**	**350**	**350**	**900**
ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects									**Total Marks = 900**	

Bachelor of Design

Credit Structure
Third Year- Product Design

Semester 5										
S. No.	**Course Code**	**Course name**	**L**	**St**	**CH**	**Cr**	**Th**	**SS**	**SV**	**Total Marks**
1	32025220	Design Project 3	2	10	12	7	–	–	250	250
2	32025221	Elements of Form 3	1	4	5	3	–	–	200	200
3	32025222	Material & Processes 3	2	4	6	4	–	100	–	100
4	32025223	Craft Documentation	1	4	5	3	–	–	150	150
5	32025224	Responsive Environments	1	2	3	2	–	100	–	100
6	32025225	Electives 3	2	2	4	3	–	100	–	100
			9	**26**	**35**	**22**	–	**300**	**600**	**900**
ILH = 5 Independent learning Hours should be allotted according to the academic requirement of respective subjects.									**Total Marks = 900**	

Semester 6										
S. No.	**Course Code**	**Course name**	**L**	**St**	**CH**	**Cr**	**Th**	**SS**	**SV**	**Total Marks**
1	32025226	Design Project 4 (P)	2	–	2	2	100	–	–	100
2	32025227	Design Project 4	–	10	10	5	–	–	250	250
3	32025228	Product Costing & Estimation (P)	2	–	2	2	100	–	–	100
4	32025229	Product Costing & Estimation	–	2	2	1	–	50		50
5	32025230	Research Methods	1	2	3	2	–	100	–	100
6	32025231	Professional Practice	1	2	3	2	–	100	–	100
7	32025232	Electives 4 *(Design)*	2	4	6	4	–	100	–	100
8	32025233	Electives 5	2	4	6	4	–	100	–	100
			10	**24**	**34**	**22**	200	450	250	900
ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects.									**Total Marks = 900**	

Bachelor of Design

Credit Structure
Third Year- Set Design

Semester 5

S. No.	Course Code	Course name	L	St	CH	Cr	Th	SS	SV	Total Marks
1	32025318	Design Project 3	2	8	10	6	–	–	250	250
2	32025319	Elements of Form 3	1	4	5	3	–	–	150	150
3	32025320	Elements of Medium 2	1	2	3	2	–	–	150	150
4	32025321	Light & Camera	2	2	4	3	–	100	–	100
5	32025322	Craft & Cultural Documentation	1	4	5	3	–	–	150	150
6	32025323	Responsive Environments	1	2	3	2	–	100	–	100
7	32025324	Electives 3	2	2	4	3	–	100	–	100
			10	**24**	**34**	**22**	**–**	**300**	**700**	**1000**

ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects

Total Marks = 1000

Semester 6

S. No.	Course Code	Course name	L	St	CH	Cr	Th	SS	SV	Total Marks
1	32025325	Design Project 4 (P)	2	–	2	2	100	–	–	100
2	32025326	Design Project 4	–	10	10	5	–	–	250	250
3	32025327	Elements of Form 4	1	4	5	3	–	–	150	150
4	32025328	Elements of Medium 3	1	2	3	2	–	–	150	150
5	32025329	Estimation & Costing (P)	2	–	2	2	100	–	–	100
6	32025330	Estimation & Costing	–	2	2	1	–	50	–	50
7	32025331	Research Methods	1	2	3	2	–	100	–	100
8	32025332	Professional Practice	1	2	3	2	–	100	–	100
9	32025333	Electives 4	2	2	4	3	–	100	–	100
			10	**24**	**34**	**22**	**200**	**350**	**550**	**1100**

ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects.

Total Marks = 1100

Bachelor of Design

Third Year- Furniture Design

Credit Structure

Semester 5										
S. No.	**Course Code**	**Course name**	**L**	**St**	**CH**	**Cr**	**Th**	**SS**	**SV**	**Total Marks**
1	32025420	Design Project 3	2	10	12	7	–	–	250	250
2	32025421	Elements of Form 3	1	4	5	3	–	–	200	200
3	32025422	Material & Processes 3	2	4	6	4	–	100	–	100
4	32025423	Craft Documentation	1	4	5	3	–	–	150	150
5	32025424	Responsive Environments	1	2	3	2	–	100	–	100
6	32025425	Electives 3	2	2	4	3	–	100	–	100
			9	**26**	**35**	**22**	**–**	**300**	**600**	**900**
ILH = 5 Independent learning Hours should be allotted according to the academic requirement of respective subjects.									**Total Marks = 900**	

Semester 6										
S. No.	**Course Code**	**Course name**	**L**	**St**	**CH**	**Cr**	**Th**	**SS**	**SV**	**Total Marks**
1	32025426	Design Project 4 (P)	2	–	2	2	100	–	–	100
2	32025427	Design Project 4	–	10	10	5	–	–	250	250
3	32025428	Furniture Costing & Estimation (P)	2	–	2	2	100	–	–	100
4	32025429	Furniture Costing & Estimation	–	2	2	1	–	50		50
5	32025430	Research Methods	1	2	3	2	–	100	–	100
6	32025431	Professional Practice	1	2	3	2	–	100	–	100
7	32025432	Electives 4	2	4	6	4	–	100	–	100
8	32025433	Electives 5	2	4	6	4	–	100	–	100
			10	**24**	**34**	**22**	**200**	**450**	**250**	**900**
ILH = 6 Independent learning Hours should be allotted according to the academic requirement of respective subjects.									**Total Marks = 900**	

ANNEXURE- A

List of Electives

S.	Art & Design	S.	Technology /Management	S.	Social/Humanities/History
1	Interior Styling	1	Exhibition design	1	History of Furniture
2	Interior landscape	2	Introduction to Bamboo construction & Techniques	2	Graphic narratives
3	Soft furnishings	3	Advanced Bamboo construction & Techniques	3	Culture & Design
4	Theatre design	4	Digital animation	4	Environmental Psychology
5	Introduction to Universal Design	5	Visual Communication-Infographics	5	Gender and Design
6	Automative styling	6	Visual Communication- Illustration	6	Anthropology
7	Fashion Image & Identity	7	Introduction to programming	7	Vernacular Design
8	Graphic Design	8	Internet of Everyhting	8	Sociology & Design
9	Basic Photography	9	Green building & rating systems	9	Basics of Archeology
10	Design Journalism	10	Appropriate design material &Technology	10	Basics of Ecology
11	Music & Space	11	Tensile structures	11	Climate change
12	Healthcare design	12	Facility management	12	Emergence of Global culture
13	Hospitality design	13	Geographic Information Systems (GIS)	13	Addressing for Senior Citizen Population
14	UI/UX design	14	Parametric design	14	Design as a tool for Social change
15	Ephemeral design	15	Building Onformation Modelling	15	Film appreciation
16	Architecture Photography	16	Creative coding	16	Script writing
17	Costume design	17	Smart/Intelligent Technology systems	17	Ethnography
18	Visual Merchandising	18	Creative Surface Techniques		
19	Visual Arts	19	Fibre Reinforced Plastics		
20	Basic typography	20	Advanced construction in Fabrication		
21	Art appreciation	21	Documentary Film making		
22	Liberal Arts	22	Short Film Making		
23	Representation Techniques	23	Basics of Photoediting		
		24	Light design for theatre		
		25	Computer Aided Drawing (Basic)		
		26	Computer Aided Design (Advanced)		
		27	Toy & Game Design		
		28	Introduction to Artificial Intelligence		
		29	Interaction Design		
		30	Auditorium Interiors		
		31	Design for differently abled		
		32	Mobility & Vehicle Design		
		33	Identity Design		
		34	Packaging Design		

Note:

* The students can opt for Electives from the categories defined above. (Annexure - A).
* It should be noted that the student has to choose different Electives in each Semester, as per '*RULE NO.13: OTHER RULES,* given in **Programme Structure & Rules**'.
* Specific topics of Electives as mentioned in each discipline for different semesters should be conducted in coordination.
* It is suggested to conduct any one Elective as per the choice of the Institute in **Interdisciplinary,** manner in collaboration with other Institutes.

Audit Courses

S.N	SEMESTER 1	S.N	SEMESTER 2
1	Crafts	1	Workshop & Model Making
2	Creative Writing	2	Foreign Language
3	Performing Arts	3	Cyber Security
4	Yoga	4	Sign language
5	Calligraphy		
6	English for Communication		

Note:

* The topic of "Workshop & Model Making" is suggested to be offered by the Institutions in Semester 2.

* The details of this topic can be worked out according to the specific disciplines of the Institute .

SAVITRIBAI PHULE PUNE UNIVERSITY

REVISED SYLLABUS FOR

BACHELOR OF DESIGN

(To be implemented w.e.f. A.Y. 2024-25)

PROGRAMME DETAIL

SECOND YEAR

BOARD OF STUDIES IN DESIGN

FACULTY OF SCIENCE AND TECHNOLOGY

B. DES.

REVISED SYLLABUS (2024 - 25)

SECOND YEAR - INTERIOR DESIGN

SEMESTER 3

DESIGN PROJECT 1		
COURSE CODE	**22024101**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 8 Studio TOTAL = 10 hrs./week	**Sessional (SV)**	**200**
	Sessional CIA SV	100 100
	Paper: Nil	
TOTAL MARKS	200	
TOTAL CREDITS	6	

COURSE OBJECTIVE:

1. To understand space in terms of volume and planes and produce design solutions based on context, requirements, anthropometry, functionality and aesthetics.
2. To introduce students towards design of Residential spaces.

Design parameters in terms of typology: Flat/Bungalow/Row House/ Bachelor's Apt. / Studio Apt. etc.
Typology scale: Approx. 1200 to 1500 Sq. ft.

COURSE CONTENT:

1. Study of Anthropometry – human dimensions, its proportions and relevance in design.
2. Detailed study of residential spaces: such as, living, dining, bedrooms, kitchen, toilet etc. on Furniture layout, circulation, clearances, functionality, aesthetics etc. through Case studies & analysis.
3. Design development: Site Analysis, Design brief, zoning and circulation diagrams, mood board, conceptual sketches etc.
4. Study Models: Understanding space in terms of volume and planes through study models.
5. Design solution through detailed drawings.

SUBMISSION REQUIREMENT

1. Study of human anthropometry in terms of residential spaces. **(Data Collection)**
2. Analytical study of typical interior layouts with respect to activities, functions and requirements etc. **(Case Studies)**

(25%)

3. Site Analysis: Documenting Site and its context (through Drawings and photo Documentation)
4. Design concepts, Formulation of Design Brief and Design development
5. **Drawings** – Plans, Sections, Details, Views, Study Models, Colour & Material Pallet etc.

(60%)

6. Presentation drawings of design project. **(15%)**

NOTE: Quick study models expected out of materials such as Paper/ File Boards/Foam Boards/ Pop etc.

METHOD OF INSTRUCTION

Minor Projects can be taken for Topic 1 and 2, with focus on 'Analysis' of Anthropometry, Functionality etc.
Supervised Case Study visits and Site visits to be done for 3 and 4.
Designed Interior spaces to be taken for Case Studies in addition to Live Case Studies.
2 to 3 Case Studies can be done online/ Book as well.
Guest Lectures/ interaction related to topic shall be organized.

Online Lectures for some topics from NPTEL, Coursera can be organized.

COURSE OUTCOME:

The students will be able to analyse and understand human factors that need to be considered in Interior design.
They will be able to explore spatial volumes through drawings and models.

Recommended Readings:

- Basic design and Anthropometry by Shirish Vasant Bapat.
- The measure of men and women – human factors in design by Allvin R. Tilley and henry Dreyfuss and associates.
- Visual Dictionary of Architecture by D. K. Ching.
- Interior design by Ahmed Kasu.
- Interior design by D K Ching.
- Time savers standards of interior design
- Neuferts standards.
- Interior World volumes by Archiworld
- Storytelling In Daily Life: Performing Narrative, Kristin M. Langellier and Eric E. Peterson; Temple University Press, 2004
- Apartment Interiors By Charles Broto
- Residencial Interior Design by Maureen Mitton, Courtney Nystuen
- The Modern Home by Yateen Pandya
- The Digital Photography Book, Scott Kelby, Peachpit Press, 2006

ELEMENTS OF SPACE DESIGN 1		
COURSE CODE	**22024102**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 4 Studio TOTAL = 6 hrs./week	**Sessional (SV)**	**150**
	Sessional CIA SV	75 75
	Paper (P): Nil	
TOTAL MARKS	150	
TOTAL CREDITS	4	

COURSE OBJECTIVE:

The subject aims at developing observational and creative skills that would enhance the visual perception of students and evolve aesthetic sensitivity.

COURSE CONTENT:

UNIT 1: Space defining elements: Floor, Walls, Roof, Columns, Openings, and Stairs. Their attributes, impacts and influences on space generation.

UNIT 2: Spatial relationship: Transforming space with volumetric divisions, levels, space within space, adjacent spaces, surface transitions, relationship of space with Human scale, relationship between object and environment, impact sof light in spaces.

UNIT 3: Form generation in interior spaces through geometry, form transition etc./ Relationship between Form and Space in Interiors.

UNIT 4: Abstraction: Understanding the concepts of abstraction through 2D and 3D compositions.

UNIT 5: Visual perception: Understanding cognitive theories and Gestalt Laws of Psychology --- Laws of similarity, proximity etc. and application of Laws in compositions.

UNIT 6: Art forms: Sculpture, Paintings, Furniture, Décor elements etc. that contribute towards space experience.

SUBMISSION REQUIREMENT

Multiple explorations, 2D and 3D corresponding to Units in the form of sketches & models.

METHOD OF INSTRUCTION

Hands on explorations, out of materials such as Paper/ File Boards/Foam Boards/ Pop etc. shall be incorporated.

Computer aided mediums may be used for specific exercises.

COURSE OUTCOME

The course will develop understanding towards creative thinking. It will sensitize them towards visual perception, appreciation and articulation of space and its elements.

Recommended Readings:

- Elements of Space making by Yatin Pandya, Vastu shilp foundation.
- Form, Space and Order by Francis D. K. Ching.
- Elements of Style by Calloway Stephan
- Rethinking design & interiors: Human beings in built environment.
- Thematic spaces in Indian Architecture by Kulbhushan Jain
- A concise history of Architectural styles by Emily Cole
- Principles Of Gestalt Psychology by Kurt Koffka
- Kepes, Gyorgy; Language of Vision, Dover Publications, 1995
- Geometry of Design: Studies in Proportion and Composition, Elam, Kimberly; Princeton Architectural Press, 2001
- The Poetics of Space, Publisher: Bachelard, Gaston; Jolas, Maria (Translator); Beacon Press; Reprint edition, 1994
- Elements of Design, Hannah, Gail Greet; Princeton Architectural Press, 2002
- Elements of Design and the Structure of Visual Relationships, H. G. Greet and R. R. Kostellow, Architectural Press, NY, 2002
- Elements of Design, Gail Greet Hannah, Princeton Architectural Press, 2002
- Design Basics, Lauer, David; Wadsworth Publishing, 1999
- Geometry of Design: Studies in Proportion and Composition, Elam,
- Kimberly; Princeton Architectural Press, 2001The complete guide to illustration & design, Dalley Terence ed.; Phaidon, Oxford, 1980

INTERIOR DRAWINGS & GRAPHICS 1		
COURSE CODE	**22024103**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 4 Studio TOTAL = 5 hrs./week	**Sessional (SS)**	**100**
	Sessional CIA SS	50 50
	Paper (P): Nil	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To understand different methods and techniques of making Interior Design / drawings.

COURSE CONTENT:

1. To introduce the students to the units and modes of measurements, scales and use of appropriate scales for various drawings.
2. To introduce students to the use of orthographic projections as a tool for drawing architectural plans, sections, elevations showing the interior layouts in detail.
3. Use of lettering, texting and dimensioning as an effective way of communicating the drawings.
4. Drawing Isometric and Axonometric views in interior spaces.
5. Understanding the graphical representation of materials on the drawings through various symbols, rendering techniques.
6. Sketching and rendering techniques essential for communicating the landscape, furniture and interior space elements.
7. Learning the techniques of making a presentation drawing with renderings in different mediums like water colours, pencil colors, graphite pencils, and charcoal.

Note : 70% weightage to be given to Assignments related to Technical Drawings. 30% weightage to be given to Illustration techniques. The drawings shall be manually done.

SUBMISSION REQUIREMENT

1. Assignment on use of Scales, by increasing and reducing scales to draft drawings and details on appropriate scale.
2. Exercise on Standard lettering and dimensioning styles for execution drawings.
3. Assignment on Measurement drawings- Measurement of any given space with all its structural elements and drafting it on Scale.
4. Introducing technical drawings of Interior spaces, drawing Plans and Sections and execution drawing layouts.
5. Exercise on drafting any one room from their Design, using all the above techniques learnt.

6. Making 3D Isometric and Axonometric views with furniture of the given space.
7. Rendering of Plan, Sections, Elevations and Views with various mediums like water colours, pencil colours and inking of drawings.

COURSE OUTCOME

This course will equip students with the skills of drafting, understanding graphic language and communicating through drawings in a legible and effective manner.

Recommended Readings:

- Interior Design Visual Presentation Guide to Graphics, models & presentation methods, Wiley publications
- Hand drafting for Interior Design by Diana Bennett, Wirtz Kingsley
- Drawing for Interior Design by Drew Plunkett - Laurence King publishing
- Rendering with pen and ink by Robert W Gill
- The architectural drawing course by Thames and Hudrey.
- Geometrical drawings for arts students by I.H.Morris and William Jesse.
- Presenting architectural designs by Koos Eissen.
- The complete guide to illustration & design, Dalley Terence ed.; Phaidon, Oxford, 1980

MATERIAL & CONSTRUCTION TECHNIQUES 1		
COURSE CODE	**22024104**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 4 Studio TOTAL = 6 hrs./week	**Sessional (SV)**	**100**
	Sessional CIA SV	50 50
	Paper (P): Nil	
TOTAL MARKS	100	
TOTAL CREDITS	4	

COURSE OBJECTIVE:

To understand structural systems of buildings, materials used, and construction techniques.

COURSE CONTENT:

UNIT 1: Structural system

Introduction to the structural systems in a building -- load bearing and reinforced cement concrete.

Building terminologies and structural elements: Introduction to the structure of a building like foundations, slabs, beams, columns, walls, partitions, lintels, arches, doors and its types, windows and its types, ceilings, roof, timber roofs, chajjas, terraces, box windows, staircases, headroom, parapet walls, railings, service ducts etc.

UNIT 2: **Bricks**

To acquaint students with the traditionally used material, its availability, properties, manufacturing process, acquainting them to the tools and machines required for its construction of brick walls.

Brick variants like sun dried and adobe.

Masonry in Bricks of different thickness, Types of bonds in Brick construction, surface finishes.

Concrete blocks-wall construction.

UNIT 3: **Stone**

Properties, types, procurement, tools and machines required for its handling dressing and construction.

Types of Stone masonry, pointing, construction details.

UNIT 4: Wood

Wood, sourcing of wood, its structure and properties (physical and biological), types, seasoning, market forms, its machining, like cutting, plaining, gauging, preservation.

Making of processed woods like ply wood, block boards, Particleboard, Block board, MDF, and allied products of wood.

Doors and its types -- Ledged, braced and battened doors, Paneled doors, Glazed doors, French doors, sliding doors, Folding doors, etc. and their construction details.
Windows and its types -- Ledged, braced and battened windows, Paneled windows, Glazed windows, Bay windows, Sliding windows, etc. and their construction details.

Carpentry with all types of joints -- lengthening, widening joints, angle joints etc

UNIT 5: Cement: Properties, manufacturing, uses
Concrete: Properties, manufacturing, uses
Light weight construction materials like Aerocon blocks, fly ash etc.

UNIT 6: Flooring: Different types of in situ flooring like, Mosaic, IPC, etc. Different types of flooring: Ceramic, Stone slabs, PVC, Wooden flooring etc.

SUBMISSION REQUIREMENT

Journal

Journal writing with sketches of details, from Unit 2 to 6.

Sheet work :

Unit 1 : Sheet work explaining building parts in Section.
Unit 2 : Brick masonry in different thickness and types of bonds, details.
Unit 3: Stone walls of different thickness and construction details.
Unit 4: Detailed drawings of minimum 5 types of doors and 3 types of windows, with all drawing details.

METHOD OF INSTRUCTION

Regular Site visits, with focus on construction methods and material application shall be organized.
Vendor interactions to give exposure to Brands, materials and development in technologies shall be arranged.
Market surveys shall be encouraged.

Online Lectures for some topics from NPTEL, Coursera can be organized.

COURSE OUTCOME:

This course helps the students to understand materials, their properties and processes and the construction techniques required to execute the designs with specific materials.

Recommended Readings:

- Materials for Interior environments by Corky Binggeli
- Wood: Materials for inspirational design by Chris Lefteri.
- Interior Design Materials & Specification by Godsey Lisa
- Materials: Innovation & Design, Dimitris Kottas, Diana Bennett.
- Materials: Manual & new possibilities by Edward Broto

- Engineering materials by K.P.Roy and Chaudhari.
- Building construction by W.B.Mckay- Vol 1 to 4.
- Building construction by Chudley.
- Building materials by Sushil kumar.
- Woodworkers guide to furniture design.

HISTORY OF INTERIOR DESIGN 1		
COURSE CODE	**22024105 (P)**	**22024106**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 2 Studio TOTAL = 4 hrs./week	**Sessional**	--
	Sessional CIA SS	-- --
	Paper (P): 100	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To explore the evolution and salient characteristics of spatial forms, design expressions and their influence on the interior spaces in the Indian subcontinent.
Understanding the timelines, social, cultural, political and regional influences, design development under various dynasties and time periods.

COURSE CONTENT:

UNIT 1: Overview of evolution of civilization, Pre historic period settlements of ancient Greek, Roman, Egyptian, Indus valley civilization and settlements. Relationship between Art & Design from the earlier periods.

UNIT 2 : Vedic civilization, Study of Buddhist and Hindu period, development of habitable spaces, Religious spaces, Harmony between architecture and interior in religious spaces – architecture, spatial components and their treatments.

UNIT 3: Mughal architecture in India, influence of their lifestyle on the architectural styles and eventually the interiors, Furniture, art forms, artefacts, motifs, patterns etc.

UNIT 4: Colonial and Indo-saracenic style, quality of space, Ornamentation and decoration.

UNIT 5: Study and evolution of habitable spaces in connection with regional and geographical contexts, lifestyle, culture, indigenous art forms, materials and techniques, responses and expressions. Elements of style, materials and concepts of interiors in vernacular & secular architecture across India; Pols of Gujrat, Bhungas of Rajasthan, Wadas of Maharashtra, etc.

UNIT 6: Chinese and Japanese Interiors, art forms and motifs.

SUBMISSION REQUIREMENT

Journal writing on all the Units with sketches pertaining to topics taken.
Sheet work for Unit 5.

COURSE OUTCOME

The students will understand the evolution of architecture & interior spaces during different historic time lines.

They will be able to critically assess design responses, integrating cultural and regional contexts.

Recommended Readings:

- History of world architecture, Llyod S & Muller H.W.,Publications ; Faber & Faber Ltd.
- Indian architecture Buddhist and Indo period by Percy Brown.
- Indian Architecture (Islamic Period) by Percy Brown.
- Masterpieces of Traditional Indian Architecture, Satish Grover
- The Arts of Kutch, Christopher W. London
- A concise history of Architectural Styles, Emily Cole
- History of Modern Design, David Raizman; Prentice Hall, 2004
- http://designhistorytimeline.com/
- Journal of Design History, Oxford Journals
- Beginnings of Interior Environments by Lynn M. Jones, Heidi Plumb

ELECTIVES 1 - COMPUTER AIDED DRAWING		
COURSE CODE	**22024107**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 2 Studio TOTAL = 3 hrs/week	**Sessional (SS)**	50
	Sessional CIA SS	25 25
	Paper (P): Nil	
TOTAL MARKS	50	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

1**.** To introduce the students to the use of computer aided design tools for drafting and presentations.
2. To use computer as a tool in visual perception of Interior spaces.

COURSE CONTENT

1. Demonstrations of the tools in the CAD software and their applications to produce 2D drawings.
2. Equipping students to produce detailed CAD drawings.
3. Equipping students with Printing techniques in the software.
4. Learning allied drawing software's like Sketch Up to generate quick interior modelling spaces.

SUBMISSION REQUIREMENT:

1. Assignment on each CAD tool to be covered during class.
2. Drafting plans, sections, elevations in model space with all necessary tools, for effective drawing communication like, layers, line thicknesses, text, dimension styles, hatching etc.
3. Exercise on Sketch up- interior view, applying materials, shadows etc.
4. Printing the drawing to Scale.

COURSE OUTCOME:

This course will introduce students to computer aided skills, required as an essential skill set for Designers.

Recommended readings: -

User manual of related software.

B. DES.

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SECOND YEAR - INTERIOR DESIGN

SEMESTER 4

DESIGN PROJECT 2		
COURSE CODE	**22024108 (P)**	**22024109(SV)**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 8 Studio TOTAL = 10 hrs./week	**Sessional (SV)**	**200**
	Sessional CIA SV	100 100
	Paper: 100	
TOTAL MARKS	300	
TOTAL CREDITS	6	

COURSE OBJECTIVE:

This subject aims at introducing students to the larger scale projects.
The course will encourage students, to handle multiple users and public at large.
It will give them the exposure of handling services and functionality simultaneously.

Design parameters in terms of typology: Offices, Consultancies, Banks, Financial services, Studios, Polyclinics, etc.
Area minimum: 2000 Sq. ft. to 3000 Sq ft.

COURSE CONTENT:

1. Detailed study of selected Typology and its requirements. Study and analysis of related data. Study of Anthropometry. Case study and analysis of designed spaces
2. Design development: Site Analysis: Documenting space (Drawings and photo documentation)

Design brief, zoning and circulation diagrams, mood board, conceptual sketches, spatial explorations etc.

3. Detailed drawings for Design solutions.
4. Views, colour and material pallet.
5. Conceptual integration of Interior Services learnt –Plumbing, Electrification, and Firefighting, in the design solutions.

SUBMISSION REQUIREMENT

1. Study of anthropometry, required for Office spaces related to selected typology. **(Data Collection)**
2. Analytical study of typical interior layouts with respect to activities, Functions, requirements, service integration, aesthetics and etc. **(Case Studies)**

(20%)

3. Site Analysis: Documenting Site and its context (through Drawings and photo Documentation)
4. Design concepts, Formulation of Design Brief and Design develop
5. **Drawings** – Layout Plans, Sections, Service drawings, Colour & Material Pallet, Details, Views etc.

(60%)

6. Presentation and working drawings of design project. **(20%)**

METHOD OF INSTRUCTION

2 to 3 Case Studies can be done online/ Book as well, in addition to Live Case Studies. Online Lectures for some topics from NPTEL, Coursera can be organized.

COURSE OUTCOME:

The students will develop understanding of workspaces.

Evaluate the parameters of interiors in specific settings and iterate customized solutions.

Recommended Readings:

- Interior design by D.K. Ching
- Time savers standards of interior design
- Neuferts standards.
- The Office Interior Design Guide: An Introduction for Facility and Design Professionals by Julie K. Rayfield (Author)
- Atlas of Office Interiors by Alex Sanchez Vidiella
- Detail in Contemporary Office Design by By Drew Plunkett (Author), Olga Reid (Author)
- The Office Interior Design Guide: An Introduction for Facility and Design Professionals, Julie K. Rayfield, Wiley, 1994

ELEMENTS OF SPACE DESIGN 2		
COURSE CODE	**22024110**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 4 Studio TOTAL = 5 hrs./week	**Sessional (SV)**	**150**
	Sessional CIA SV	75 75
	Paper (P): Nil	
TOTAL MARKS	150	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

The subject aims at developing observational and creative skills that would enhance the visual perception of students and evolve aesthetic sensitivity.

The course focuses towards developing colour sensibility which is an integral element of Interior Design.

COURSE CONTENT:

UNIT 1: Colour Theory, Colour Psycology, Colour and cultural connotations.

UNIT 2: Colour schemes

UNIT 3: Colour interaction: Experimentations with colour, texture and space.

Colour in Interiors : Exploring spatial expression of color in spaces, to understand the visual impact of colour with material, texture and finishes..

UNIT 4: Colour Abstraction , colour percentage

UNIT 5: Colour in historic Interiors, examples from Design movements, like Graphic Arts, Pop arts etc. 20th century Art movements and its emphasis on Colours.

SUBMISSION REQUIREMENT

Multiple explorations, 2D and 3D corresponding to Units in the form of Sheets, sketches & models.

METHOD OF INSTRUCTION

Hands on explorations, computer aided mediums, visual presentations etc. shall be incorporated.

Market survey / vendor interaction suggested for colour understanding.

Online Lectures for some topics from NPTEL, Coursera can be organized.

COURSE OUTCOME

The course will develop understanding towards creative thinking. It will sensitize them towards perception, appreciation and articulation of space and its elements.

Recommended Readings:

- Elements of Design, Hannah, Gail Greet; Princeton Architectural Press, 2002
- Elements of Design and the Structure of Visual Relationships, H. G. Greet and R. R. Kostellow, Architectural Press, NY, 2002
- Principles of color design : designing with electronic color by Wucius Wong.
- Color by Paul Zelanski and Mary Pat Fisher.
- Color in graphics by Labudovic, Ana
- Advances in color harmony and contrast for the home decorator by Michael Wilcox.
- The Art of Color: The Subjective Experience and Objective Rationale of Color, Itten, Johannes; Wiley Publications, 1997

INTERIOR DRAWINGS & GRAPHICS 2		
COURSE CODE	**22024111**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 2 Studio TOTAL = 3 hrs./week	**Sessional (SS)**	**100**
	Sessional CIA SS	50 50
	Paper (P): Nil	
TOTAL MARKS	100	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

To acquaint students with the technique of making perspective drawings, and advanced rendering techniques.

COURSE CONTENT:

1. Computer Aided drawings on Interiors.
2. Computer Aided drawings on Furniture details.
3. Perspective & Sciography : To introduce students to Interior perspective drawings – one point perspective, two point perspective etc. Sciography of simple 3-D objects.
4. Introduction to advance rendering mediums and techniques used for making presentable sketches and perspective views.
5. Digital rendering mediums for 2D and 3D drawings.

SUBMISSION REQUIREMENT

1. Exercise on CAD drafting : Furniture Layout Plans, Sectional Elevations and details with material specification & finishes.
2. Exercise on CAD drafting: Minimum 2 types of Furniture details like Partition, Wardrobe, Multifunctional units etc. with material specification & finishes.
3. Drafting of one point, two point perspectives of interior spaces with furniture.
4. Exercise on exploring different rendering tools, like dry pastels, soft pastels, Alcohol markers, rendering with inks etc. Application of these mediums in perspective drawings.
5. Exercise on digital presentation of drawings in appropriate software.

COURSE OUTCOME

This course will equip students with the skills of drafting, and communicating through drawings in a legible and effective manner using manual and digital mediums.

Recommended Readings:

- Interior Design Visual Presentation Guide to Graphics, models & presentation methods, Wiley publications
- Hand drafting for Interior Design by Diana Bennett, Wirtz Kingsley
- Drawing for Interior Design by Drew Plunkett - Laurence King publishing
- Rendering with pen and ink by Robert W Gill
- The architectural drawing course by Thames and Hudrey.
- Geometrical drawings for arts students by I.H.Morris and William Jesse.
- Presenting architectural designs by Koos Eissen.
- The complete guide to illustration & design, Dalley Terence ed.; Phaidon, Oxford, 1980

MATERIAL & CONSTRUCTION TECHNIQUES 2		
COURSE CODE	**22024112**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 4 Studio TOTAL = 5 hrs./week	**Sessional (SV)**	**100**
	Sessional CIA SV	50 50
	Paper (P): Nil	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

This course will help students understand structural systems of buildings, materials used, and construction techniques required.

COURSE CONTENT:

UNIT 1: Metals : Ferrous &non Ferrous construction materials, Cast Fe, Wrought Fe, Steel, MS, Aluminum, Brass, Cu, Bronze, etc. ,their properties and uses, metal alloys.

UNIT 2 : Types of Glasses, properties, manufacturing processes, its structural and decorative forms.

UNIT 3: Finishing materials like Laminates, veneers, wallpapers etc Plasters : Stucco, Lime, Textured etc.

UNIT 4 : Hardware : Types, uses material and finishes

UNIT 5 : Staircases and railings : Different types of staircases, construction details in RCC, Wood, MS and their combinations.

UNIT 6: Furniture systems with materials learnt: min 3 types of furniture like Bed, Sofa etc. with different material combinations and description of upholstery materials.

SUBMISSION REQUIREMENT

Unit 1, 2 3 and 4: Journal writing, Market survey

Unit 5, and 6: Sheet work with details.

METHOD OF INSTRUCTION

Regular Site visits, with focus on construction methods and material application shall be organized.

Vendor interactions to give exposure to Brands, materials and development in technologies shall be arranged.

Online Lectures for some topics from NPTEL, Coursera can be organized.

COURSE OUTCOME

This course helps the students to understand materials, their properties, processes and the construction techniques required to execute the designs with specific materials.

Recommended Readings:

- Wood: Materials for inspirational design by Chris Lefteri.
- Interior Design Materials & Specification by Godsey Lisa
- Materials: Innovation & Design, Dimitris Kottas, Diana Bennett.
- Materials: Manual & new possibilities by Edward Broto
- Engineering materials by K.P.Roy and Chaudhari.
- Materials of construction by D.N.Ghose.
- Architectural metals by l.William Zabner.
- Building construction by W.B.Mckay- Vol 1 to 4.
- Building construction by Chudley.
- Building materials by Sushil kumar.
- Woodworkers guide to furniture design.

INTERIOR SERVICES 1		
COURSE CODE	**22024113 (P)**	**22024114(SS)**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 2 Studio TOTAL = 4 hrs./week	**Sessional (SS)**	**100**
	Sessional CIA SS	50 50
	Paper (P): 100	
TOTAL MARKS	200	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

This course aims towards acquainting the students with necessary building services required for Interior projects.

COURSE CONTENT :

a) Plumbing systems which involve water supply, sanitation and drainage systems in buildings.
b) Electrification and Lighting
c) Fire hazards and Fire safety equipments.

UNIT 1 : Plumbing systems

1. Introduction to Water Supply, Sanitation and drainage systems from source to terminal point in brief.
2. Basic components of system like Pipes, Traps, Sanitary fittings etc. Basic structural requirement for system installation.
3. Design principles and anthropometry for planning of services in residential areas like Toilets, Kitchen and Utility areas.
4. Design principles and anthropometry for planning of services in non-residential areas like Public Toilets etc.
5. Details of specialized systems like bathtubs, Jacuzzi, Washing Machines, Dishwashers, Water dispensers, High pressure shower systems, steam rom etc.
6. Waterproofing, laying of pipes, choosing correct sanitary fittings as per site conditions.

UNIT 2 : Electrification & Lighting

1. Introduction to sources of Natural light within spaces, and methods through which natural light can be brought inside spaces.
2. Role of Artificial lighting in interior design. Techniques of illumination through artificial lighting.
3. Understanding terminologies like Lux, Lumen, Foot-candles , illumination and illumination requirement for various spaces.
4. Principles for planning lighting layout for interiors. Various symbols and methods used to communicate lighting layout in the form of drawings.
5. Materials used for conduits, switches wires etc.

UNIT 3 : Fire services

1. Introduction to types of fire and Fire hazards
2. Active and passive ways of fighting fire more in relevance of interiors and interior spaces.

Fire extinguishers, water sprinklers' used in ceilings, fire alarms etc.

3. Fire resistant materials and its application in interiors.

SUBMISSION REQUIREMENT

UNIT 1 : Journal writing with sketches on all the topics covered
Sheet work on Plumbing layout.
Market survey report on Sanitary fittings and components.
UNIT 2 : Journal writing with sketches on all the topics covered.
Sheet work on Electrification layout.
Note: Residential design of Semester 3 can be taken for Electrical and Plumbing Layout.
UNIT3: Journal writing with sketches on all the topics covered.

METHOD OF INSTRUCTION

Site visits, Vendor interactions to give exposure to Brands, materials and development in technologies shall be arranged.
Online Lectures for some topics from NPTEL, Coursera can be organized.

COURSE OUTCOME :

They will understand basic concepts and principles of building services.
They will be able to read and create drawings for proper execution of Services on site.

Recommended Readings:

- Sanitary Engg. Vol I & II by R.S. Deshpande
- Water Supply and Sanitary Engg, by S. Birdi, Dhanpat Rai & Sons
- Interior design, by Mohammed kasu.
- The lighting of buildings ,by:R.G.Hapkinsen.
- Lighting in Architecture design , by:Derek Philips.
- B.B.C. – 83 PART VIII. Section I . lighting and ventilation.

HISTORY OF INTERIOR DESIGN 2		
COURSE CODE	**22024115 (P)**	**22024116**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 2 Studio TOTAL = 4 hrs./week	**Sessional**	--
	Sessional CIA SS	-- --
	Paper (P): 100	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To introduce the concept of modernism and its impact on the realm of design.

COURSE CONTENT:

UNIT 1: Evolution of Spatial design features in the West from early medieval till Victorian period: Romanesque, Gothic, Renaissance, Baroque, Roccoco, Neo Classical, and Victorian style. Their characteristic features, major examples, interior and furniture design elements, materials and motifs.

UNIT 2: Industrialization: social and political Changes, events leading to industrial revolution, its impact on society and lifestyles, innovations and new products.

UNIT 3: Early design movements as a response to Industrialisation: Art &Craft, Art Nouveau, Art Deco: Style expression, Designers, major examples, materials and motifs.

UNIT 4: Modern architecture and art : expressionism , futurism, constructivism, cubism, Bauhas, works of Gropius , Meyer and Mies van der Rohe, Frank Lyod Wright, Loius Kahn, etc., growth of international style.

Post-modernist and Contemporary design: characteristics, materials, contributors and major examples.

UNIT 5: Other influential design movements, like Organic design, Minimalism, Pop art, etc.

SUBMISSION REQUIREMENT

Journal writing on all the Units with sketches pertaining to topics taken.

COURSE OUTCOME:

The course will encourage the understanding of development of Design across the globe.

Recommended Readings:

- History of world architecture, Llyod S & Muller H.W.,Publications ; Faber & Faber Ltd.
- A concise history of Architectural Styles, Emily Cole
- History of Interior Design by John Pile (Author), Judith Gura (Author)

- A chronology of Western Architecture by Doreen Yarwood, Dover publications.
- History of Modern Design, David Raizman; Prentice Hall, 2004
- http://designhistorytimeline.com/
- Journal of Design History, Oxford Journals
- Beginnings of Interior Environments by Lynn M. Jones, Heidi Plumb

ELECTIVES 2		
COURSE CODE	**22024117**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 2 Studio TOTAL = 3 hrs/week	**Sessional (SS)**	50
	Sessional CIA SS	25 25
	Paper (P): Nil	
TOTAL MARKS	50	
TOTAL CREDITS	2	

Course Objective:
To allow the students to study a subject of their interest and develop theoretical as well as practical understanding of the same.

Course Outline:

- Colleges have to develop course outline for the elective they wish to offer such that theoretical as well practical aspects are covered linking them to the Design field.
- Apart from lectures delivered by the subject resource persons, self-study in form of hands on workshop / field work/ review of literature / seminar or any suitable format of learning may be adopted.
- A list of Electives is suggested in **Annexure A- in *Programme Structure & Rules***. The Institutes can refer it or offer any other subject in Elective.

As mentioned in the *RULE NO.13: OTHER RULES,* ***Programme Structure & Rules***, a student may adhere to a particular stream of elective of his/her choice and nurture his/her area of interest and develop his/her expertise.
However the student should not repeat a particular Elective.

B. DES.

REVISED SYLLABUS (2024 - 25)

SECOND YEAR - PRODUCT DESIGN

SEMESTER 3

DESIGN PROJECT 1		
COURSE CODE	**22024201**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lecture + 8 studio TOTAL = 10 hrs/week	Sessional (SV)	200
	Sessional CIA SV	100 100
	Paper: Nil	
TOTAL MARKS	200	
TOTAL CREDITS	6	

COURSE OBJECTIVE:

1. To understand the process of simple function product design and to find solutions to simple day to day human needs.
2. To develop the skill of observation.
3. To develop the skill of critical thinking and analysis.
4. To develop the skill of critical creative thinking through the response to solution finding.

COURSE CONTENT:

1. Introduction of the design intervention in the human realm which adds value and quality to the life.
2. Identifying simple design opportunity in everyday life.
3. Introduction to methods of undertaking research with techniques like Brain storming, mind mapping, radial thinking, etc.
4. Analyzing and concluding the potential of the opportunity to be deliverable as product design.
5. Introducing the tools of creative thinking like brain storming, inspiration board, parallel product research, reverse thinking, etc.
6. Ideation -- concept generation and explorations with quick explanatory models.
7. Finalization of the concept with design development and detailing.
8. Hand Renderings and final finished model of the final design solution.

SUBMISSION REQUIREMENT:

1. Research documentation & presentation with observation, analysis & conclusion – formulating design brief **(25%)**

2. Ideation & exploration -- sketches & study models, design solutions, product detailing etc. **(55%)**

3. Final design solution -- Rendering & finished models/prototype **(20%)**

COURSE OUTCOME :

It will encourage students towards finding solutions to simple day to day human needs.

To identify and analyze the problem, articulate it and generate innovative solutions.

Recommended readings:-

- A Forty; Objects of Desire, MIT Press, 1998Thems & Hudson 1995
- Design- Reflections of a century, J. de Noblet ed., Industrial Thames & Hudson, 1993
- 20th Century Design, Julier, G.; Thames & Hudson, 1993
- What is a Designer: Things, Places, Messages, Potter, Norman; Princeton Architectural Press, 2002
- The design process. Karl Aspelund.
- Design as art. Bruno Muna
- Model Making: A Basic Guide, Sutherland, Martha, WW Norton and Company, New York USA 1999
- Creating Breakthrough Products: Innovation from Product Planning to Program Approval, Cagan, Jonathan; Vogel, Craig M.;Publisher: Financial Times Prentice Hall; 2002.
- The Design Process, Karl Aspelund; Fairchild Pubns, 2011

ELEMENTS OF FORM 1		
COURSE CODE	**22024202**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 4 Studio TOTAL = 5 hrs./week	**Sessional (SV)**	**150**
	Sessional CIA SV	75 75
	Paper: Nil	
TOTAL MARKS	150	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To sensitize towards perception, appreciation and articulation of the language of form. To provide with some fundamental tools to creatively influence a given form or shape to a desirable objective.

COURSE CONTENT:

UNIT 1: An introduction to the elements of form in 2D and 3D.

UNIT 2: Visualization and processes of form generation from 2D to 3D --- transformation in 1 axis, 2 axis & multiple axis.

UNIT 3: Form transformation --- radii manipulation --- geometric to organic.

UNIT 4: Emotions through form exploration: To enable student understand & articulate the attributes emotions through forms.

UNIT 5: Abstract forms: Explorations orientated towards achieving desired abstract forms with compositional value.

UNIT 6 : Basic color terminology & color psychology – introductory level.

SUBMISSION REQUIREMENT

Multiple explorations on each topic corresponding to Units in the form of sketches & models, hands on explorations, computer aided mediums etc.

TEACHING METHODOLOGY

Primary importance on hands on learning to be encouraged using materials like wood, paper, paper mache, clay, fabric, fiber boards, foam boards, acrylic, etc. to explore forms.

COURSE OUTCOME:

The students will be able to understand the basics of “Form Manipulation”, as one of the essential design skills.

Recommended reading:

- Elements of Design and the Structure of Visual Relationships, H. G. Greet and R. R. Kostellow, Architectural Press, NY, 2002
- Basic design and anthropometry by Shirish Vasant Bapat.
- Interior design by Ahmed Kasu.
- Principles of color design : designing with electronic color by Wucius Wong.
- Color by Paul Zelanski and Mary Pat Fisher.
- Color in graphics by Labudovic, Ana
- Advances in color harmony and contrast for the home decorator by Michael Wilcox.
- S.K. Hajra Choudhary and A.K. Hajra Choudhary, Elements of Workshop Technology Vol 1, MPP, 2000
- C. Baillie and L. Vanasupa. Navigating the Materials World, Academic Press, San Diego, CA 2003
- Elements of Design – Hannah, Gail Greet
- Elements of Design, Gail Greet Hannah, Princeton Architectural Press, 2002
- Design Basics, Lauer, David; Wadsworth Publishing, 1999
- Geometry of Design: Studies in Proportion and Composition, Elam,
- Kimberly; Princeton Architectural Press, 2001The complete guide to illustration & design, Dalley Terence ed.; Phaidon, Oxford, 1980

ERGONOMICS 1		
COURSE CODE	**22024203 (P)**	**22024204 (SS)**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 2 Studio TOTAL = 4 hrs./week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: 100	
TOTAL MARKS	200	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To introduce the students to the principles of ergonomics.

To equip the students with the methods of analyzing products from the view point of Ergonomics.

COURSE CONTENT:

1. An introduction to ergonomics: history, definition, aims and application.
2. Anthropometry: static and dynamic, percentile value and its application.
3. Different types of Ergonomics.
4. Ergonomic Principles and Criteria's.
5. Physiology and work Physiology.
6. Posture.
7. Occupational health and safety.
8. Application in design process.

SUBMISSION REQUIREMENT

Journal writing for topics 1to 7

Exercise related to Design Project.

COURSE OUTCOME: This course will help students to identify essential human factors that are fundamental to the design of user friendly products and systems.

Recommended readings: -

- Indian Anthropometric Data for Designer's Use by Debkumar Chakraborty NID Publication
- The Ergonomics of Workspace and Machines: A Design Manual by Clark T.S., Corlett E. N. Taylor and Francis, London
- Handbook of Human Factors by Salvendy G. John Willy and Sons.
- Introduction to Ergonomics, 2nd Edition, Bridger, RS: Taylor &Francis, 2003.
- Ergonomics for beginners, a quick reference guide, J. Dul, and B. Weerdmeester, Taylor & Francis, 1993.
- An Introduction to Human Factors Engineering, Longman, Bridger, RS: New York, 1997
- Fitting the task to the man, E.Grandjean : Taylor & Francis Ltd.1980.
- Human Factors in Product Design- current practice and future trends, P. W. Jordan and W. S. Green (edit): Taylor Francis, London, 1999.
- Visual ergonomics in the workplace, J. Ansel, Taylor & Francis, London, 1999

- Introduction to Ergonomics, Bridger, 2nd Edition, Taylor &Francis, 2003.
- Human Factors in Product Design--- current practice and future trends,
- P. W. Jordan and W. S. Green (edit):Taylor Francis, London, 1999.

TECHNICAL DRAWING 1		
COURSE CODE	**22024205**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 4 studio TOTAL = 5 hrs/week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

The course aims to equip students with the essential technical drawing skills required in furniture design. Students will learn to create accurate and detailed drawings, including orthographic projections, isometric views, and assembly drawings, enabling effective communication with manufacturers and clients.

COURSE CONTENT:

Understanding and learning:

Unit 1: An Introduction to Technical drawing in the field of Industrial design.
Unit 2: Introduction to Measuring tools used for precision in drawings.
Unit 3: Understanding the scale of the drawing and layout of the drawing.
Unit 4: Understanding dimensioning units, styles and tolerance.
Unit 5: Detail drafting of Orthographic, isometric, section/ intersection.
Unit 6: Technical drawing of assembly drawing through extruded view.
Unit 7: Application in Design Project

SUBMISSION REQUIREMENT

Unit 1 to 7: Hand drafted sheets to be done as assignment on all the topics.
Minimum 2-3 sheets shall be done for Individual piece of Product.

COURSE OUTCOME:

The students will be able to draft the detail drawings of a product/parts of product required for manufacturing.
They will be able to apply all learned technical drawing skills in a comprehensive product design project.

Recommended Readings: -

- Engineering Drawing by N.D. Bhatt
- Geometrical drawings for arts students by I.H.Morris and William Jesse.

MATERIAL & PROCESSES 1		
COURSE CODE	**22024206**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 2 studio TOTAL = 3 hrs/week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

The course aims to guide students to select specific materials as well as manufacturing processes used for design and development of specific products required to achieve desired product function.

COURSE CONTENT:

1. An introduction to materials and processes commonly used in Industrial Design.
   - Metal – ferrous and non-ferrous.
   - Wood – natural and derivatives.
   - Plastic – introduction and classification.
   - Ceramic, glass and stone.
2. Learning properties of materials
   a. Physical Properties b. Engineering Properties c. Chemical Properties
3. Learning manufacturing processes.
4. To Conduct industry / workshop visits to observe and understand processes such as forging, shearing, blanking, drilling, milling, punching, cutting, bending, grinding, buffing, knurling, welding, brazing, turning, casting etc.
5. Analysis of five simple products to understanding materials & processes.
6. To understand the economics related to the, material selection process.

SUBMISSION REQUIREMENT

Documentation of manufacturing process of materials mentioned above & journal writing.

TEACHING METHODOLOGY

Minimum 2 industrial visits for material understanding.
Online Lectures for some topics from NPTEL, Coursera can be organized.

COURSE OUTCOME: It will introduce the students to the major processes and materials commonly used in Product Design.

Recommended reading:

- Design and Technology, Garratt J Cambridge University Press, UK, 20004
- Manufacturing processes for design professionals, Thompson R.: Thames & Hudson, London 2007
- Materials and Design: The Art and Science of Material Selection in Product Design, Ashby, Michael; Johnson, Kara; Publisher: Butterworth-Heinemann; 2002
- Basic product design II – Material thoughts by David Bramst
- Materials and Design: The Art and Science of Material Selection in Product Design, Ashby, Michael; Johnson, Kara; Publisher: Butterworth---Heinemann; 2002

HISTORY OF PRODUCT DESIGN 1		
COURSE CODE	**22024207 (P)**	**22024208**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 2 Studio TOTAL = 4 hrs/week	Sessional (SS)	--
	Sessional CIA External	-- --
	Paper: 100	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE: To introduce the notion of Design as it evolved through the ages, from pre-historic times to a discipline in its own right.

COURSE CONTENT:

1. The evolution of Design as a discipline and its relationship to the environment.
2. The discoveries and inventions that have changed the world. Overview of history of art in (pre industrial era) and its relation to design with respect to technique, craft and technology.
3. An introduction to history of design. Design as an activity and as a profession
4. Theories of design.
5. Design development from Industrial revolution in Europe, and other parts of the world.
6. Art movements from Baroque to Modernism, post-modernism and beyond and its influence on design.

COURSE OUTCOME:

The students will develop an understanding of Design, its origins and its evolutions as an organized modern profession.

SUBMISSION REQUIREMENT

Assignments in the form of Journal writing with sketches, Reports, Presentations etc. on all the above topics.

Recommended reading:

- Design as Future making by Yelavich Susan.
- The Industrialization of Design by Gantz Carroll.
- World History of Design Vol I by Margolin Victor.
- World History of Design Vol II by Margolin Victor.
- Star product designers by Alegre Irene.
- Sustainable by design by Walker,Stuart. History of Modern Design, David Raizman; Prentice Hall, 2004

- Journal of Design History, Oxford Journals
- Industrial Design--- Reflections of a century, J. de Noblet ed., Thames & Hudson
- Product Design and Development, Ulrich, Karl T., Eppinger, SteveD
- http://designhistorytimeline.com/

ELECTIVES 1 - COMPUTER AIDED DRAWING		
COURSE CODE	**22024209**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 2 Studio TOTAL = 3 hrs/week	**Sessional**	50
	Sessional CIA SS	25 25
	Paper (P): Nil	
TOTAL MARKS	50	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

This course equips the students with the computer aided design skills essential for understanding, visualizing and presenting design ideas.

COURSE CONTENT:

1. Demonstrations of the tools in the CAD software and their applications to produce 2D drawings.
2. Equipping students to produce detailed CAD drawings.
3. Principles of parametric solid modeling.
4. Data transfer and creating 2D technical drawing from 3D models.
5. Export of files for photo realistic rendering.

SUBMISSION REQUIREMENT:

1. Assignment on each CAD tool to be covered during class
2. Drafting in model space with all necessary tools, for effective drawing communication like, layers, line thicknesses, text, dimension styles, hatching etc.
3. Minimum 5 products to be modelled.
4. Export of files for photo realistic rendering.

Recommended readings:

- User manual of related softwares

B. DES.

REVISED SYLLABUS (2024 - 25)

SECOND YEAR - PRODUCT DESIGN

SEMESTER 4

DESIGN PROJECT 2		
COURSE CODE	**22024210 (P)**	**22024211(SV)**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lecture + 8 studio TOTAL = 10 hrs/week	**Sessional (SV)**	**200**
	Sessional CIA SV	100 100
	Paper: 100	
TOTAL MARKS	300	
TOTAL CREDITS	6	

COURSE OBJECTIVE:

To introduce the students to the user-centered design concerns, considerations and deliverables.

COURSE CONTENT:

1. Identifying user centered design opportunity in accessible environments.
2. Analyzing and concluding the potential of the opportunity with the scope to intervene with product design.
3. Introducing students to the need and methods / techniques of user research.
4. Introducing students to critical thinking of data relevance, analysis and conclusions. Observations, documentation, analysis and conclusions with specifics to formulate the design brief.
5. Formulating the design brief.
6. Introducing students to critical creative thinking tools like – Synaptic, Lateral thinking, etc
7. Ideation -- concept generation and explorations with quick explanatory models.
8. Finalization of the concept with design development and detailing.
9. Hand and computer Renderings and finished model of the final design solution.

SUBMISSION REQUIREMENT:

1. Research documentation & presentation with observation, analysis & conclusion – formulating design brief. **(25%)**

2. Ideation & exploration -- sketches & study models, design solutions, product detailing etc. **(55%)**

3. Final design solution -- Rendering & finished models/prototype **(20%)**

COURSE OUTCOME:

Students will be able to map the user requirements.

They will learn the methods and techniques to identify problems or needs for specific groups of users, develop ideas and possible solutions.

Recommended reading:

- Product Design: Fundamentals and Methods, Roozenburg and Eekels, Publisher: John Wiley & Sons Inc; New Ed edition, 1995
- Steven D.; Product Design and Development, Ulrich, Karl T., Eppinger, McGraw-Hill 1995, 2000, 2004
- Industrial Design- Reflections of a century, J. de Noblet ed., Thames & Hudson, 1993
- The fundamentals of product design by Morris Richards
- Model Making: A Basic Guide, Sutherland, Martha, WW Norton and Company, New York USA 1999
- Creating Breakthrough Products: Innovation from Product Planning to Program Approval, Cagan, Jonathan; Vogel, Craig M.;Publisher: Financial Times Prentice Hall; 2002.
- The Design Process, Karl Aspelund; Fairchild Pubns, 2011

ELEMENTS OF FORM 2		
COURSE CODE	**22024212**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 4 Studio TOTAL = 5 hrs./week	**Sessional (SV)**	**150**
	Sessional CIA SV	75 75
	Paper: Nil	
TOTAL MARKS	150	
TOTAL CREDITS	3	

COURSE OBJECTIVE: To sensitize towards perception, appreciation and articulation of the visual.

To provide fundamental tools for creatively influencing a given form or shape using color, light and material/texture.

COURSE CONTENT:

UNIT 1: Colors, textures & finishes of forms in nature.

UNIT 2: Brand / product identity with respect to colors, textures & finishes.

UNIT 3: Material, color& finishes and their contribution towards form communication & surface transitions on the product.

UNIT 4: To understand the role of light in surface transitions with color and finishes and the resultant of the articulation with finishes.

UNIT 5: Analysis of natural form in order to understand the inter-relationship between form, movement (time and space) and structure in response to the process of evolution in natural environment.

SUBMISSION REQUIREMENT

- Multiple explorations on each topic corresponding to Units in the form of sketches & models, hands on explorations, computer aided mediums etc.
- Study of the natural form through drawings, sketches and physical models to understand form and structure.
- Analysis of the natural form with models at each stage of the process, in Unit 4.

TEACHING METHODOLOGY

Primary importance on hands on learning to be encouraged using materials like wood, paper, paper mache, clay, fabric, fiber boards, foam boards, acrylic, etc. to explore forms.

COURSE OUTCOME: It will help students to understand the articulation of the form with the elements - color& finishes. It will also equip the students to understand relationship between movement and form.

Recommended reading:

- Elements of Design and the Structure of Visual Relationships, H. G. Greet and R. R. Kostellow, Architectural Press, NY, 2002
- Principles of color design : designing with electronic color by Wucius Wong.
- Color by Paul Zelanski and Mary Pat Fisher.
- Color in graphics by Labudovic, Ana
- Biomimicry: Nature as Designer byMr. Benjamin R.Krueger.
- Nature Form & Spirit: The Life and Legacy of George Nakashima by MiraNakashima
- Art Forms in Nature (Dover Pictorial Archive) by ErnstHaeckel
- The Art of Color: The Subjective Experience and Objective Rationale of Color, Itten, Johannes; Wiley Publications, 1997

ERGONOMICS 2		
COURSE CODE	**22024213 (P)**	**22024214(SS)**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 2 Studio TOTAL = 4 hrs./week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: 100	
TOTAL MARKS	200	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To introduce the students to the topic of cognitive ergonomics and to apply the basic Principles to the areas of Product Design.

COURSE CONTENT:

1. Cognitive ergonomics.
2. Physiological and functional aspects of human brain.
3. Human information processing – working and long term memory.
4. Human cognitive process- Perception, decision making, attention.
5. Human error and behavior.
6. Introduction to stereotypes, mental models, methods of mapping mental models.
7. Introduction to semantics and its implication in the process of design.
8. Introduction to signifier and signified.

SUBMISSION REQUIREMENT

Journal writing and exercises related to all the above topics.

COURSE OUTCOME: This course will equip the students with the knowledge that helps them understand interactions among humans and other elements of a product or a system.

Recommended readings:

- Perception; The basic process in cognitive development, Ronald H. Forgus; USA, McGraw-Hill 1996
- Indian Anthropometric Dimensions by DebkumarChakraborty NID Publication.
- Indian Anthropometric Data for Designer's Use by DebkumarChakraborty NID Publication
- Handbook of Human Factors by Salvendy G. John Willy and Sons.
- Human Factors in Product Design- current practice and future trends, P. W. Jordan and W. S. Green (edit): Taylor Francis, London, 1999.
- Visual ergonomics in the workplace, J. Ansel, Taylor & Francis, London, 1998
- Visual Intelligence: Perception, Image, and Manipulation in Visual Communication, Ann Marie Barry; State University of New York Press, 1999
- The Ergonomics of Workspace and Machines: A Design Manual by Clark T.S., Corlett E. N. Taylor and Francis, London

- Handbook of Human Factors by Salvendy G. John Willy and Sons.
- An Introduction to Human Factors Engineering, Longman, Bridger, RS: New York, 1997
- Fitting the task to the man, E.Grandjean : Taylor & Francis Ltd.1980.
- Introduction to Ergonomics, Bridger, 2nd Edition, Taylor &Francis, 2003.

TECHNICAL DRAWING 2		
COURSE CODE	**22024215**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 2 studio TOTAL = 3 hrs/week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

The course aims to equip students with the advanced technical drawing skills required in manufacturing of mass scale Products.

Students will learn to create detailed drawings, enabling effective output from computer numeric control machines.

COURSE CONTENT:

Unit 1: An Introduction to Technical drawing in computer-aided design (CAD) software for complex Products.

Unit 2: Introduction to component drawings and specification writing.

Unit 3: Introduction and drafting of component drawing with details and joineries for assembly of Product which specifies material and processes.

Unit 4: Technical drawing the concept of exploded views for depicting assemblies.

Unit 5: Application in Design Project

SUBMISSION REQUIREMENT

- Unit 1 to 5: Exercise to be done on sheets on all the topics.
- Actual Products can be taken for assignment.
- Minimum 2-3 sheets shall be done for Individual piece of Product.

COURSE OUTCOME:

The students will be able to draft the detail drawings required for manufacturing the Product with the help of CAD software.

Recommended Readings:

- Engineering Drawing by N.D. Bhatt
- Geometrical drawings for arts students by I.H.Morris and William Jesse

MATERIAL & PROCESSES 2		
COURSE CODE	**22024216**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 4 studio TOTAL = 5 hrs/week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To provide an in-depth understanding of materials (advanced polymers) and their properties in the context of Product Design.

To enhance the understanding of the materials and processes, their limitations, properties and their applications in general.

COURSE CONTENT:

1. Introduction to advanced polymers.
2. Introduction to advanced nonferrous material – mazak.
3. Learning properties of materials

a. Physical Properties b. Engineering Properties c. Chemical Properties

4. Learning manufacturing processes.
5. To conduct industry / workshop visits to observe and understand processes injection molding, blow molding, extrusion molding, vacuum forming, and rotational molding.
6. Analysis of five complex products to understanding materials & processes.
7. To understand and select the appropriate material to obtain desired texture and finishes like mirror finish, glossy and matt finish.

COURSE OUTCOME: It will introduce the students to the major processes and materials commonly used in Product Design.

SUBMISSION REQUIREMENT

Documentation of manufacturing process of materials mentioned above & journal writing.

TEACHING METHODOLOGY

- Minimum 2 industrial visits for material understanding.
- Online Lectures for some topics from NPTEL, Coursera can be organized.

Recommended reading:

- Design and Technology, Garratt J Cambridge University Press, UK, 20004
- Manufacturing processes for design professionals, Thompson R.: Thames & Hudson, London 2007
- Materials and Design: The Art and Science of Material Selection in Product Design, Ashby, Michael; Johnson, Kara; Publisher: Butterworth-Heinemann; 2002
- Basic product design II – Material thoughts by David Bramst
- Materials and Design: The Art and Science of Material Selection in Product Design, Ashby, Michael; Johnson, Kara; Publisher: Butterworth---Heinemann; 2002

HISTORY OF PRODUCT DESIGN 2		
COURSE CODE	**22024217 (P)**	**22024218**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 2 Studio TOTAL = 4 hrs/week	Sessional (SS)	--
	Sessional CIA External	-- --
	Paper: 100	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE: To acquaint students with a broad framework of design history, this recognizes design as material embodiment of social, cultural and economic values.

COURSE CONTENT:

1. An introduction to the history of design from 1945 to contemporary times.
2. Design development in Europe, America, Russia and rest of the world.
3. Indian design, a search and dialogue.
4. Influences on Indian design and Indian design history:
    - Company school.
    - Bengal School and Bombay School.
    - Swadeshi Movement.
    - Progressive art movement
5. Charles Eames report and formation of National School of Design, Ahmedabad.

SUBMISSION REQUIREMENT FOR SESSIONAL WORK

Assignments in the form of Journal writing with sketches, Reports, Presentations etc. on all the above topics.

COURSE OUTCOME:

The students will learn about design developments in India and the rest of the world.

Recommended reading:

- Design source book – PennySparke.
- Thinking DesignByS.Balaram.
- Art History of IndiaByParulDhar.
- Design Since 1945 … World of artseries.
- Design Directory -- World Of artSeries.
- Design as Future making by YelavichSusan.
- The Industrialization of Design by GantzCarroll.
- World History of Design Vol I by MargolinVictor.
- World History of Design Vol II by MargolinVictor.
- Star product designers by AlegreIren

ELECTIVES 2		
COURSE CODE	**22024219**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 2 Studio TOTAL = 3 hrs/week	Sessional (SS)	50
	Sessional CIA External	25 25
	Paper: Nil	
TOTAL MARKS	50	
TOTAL CREDITS	2	

Course Objectives:
To allow the students to study a subject of their interest and develop theoretical as well as practical understanding of the same.

Course Outline:

- Colleges have to develop course outline for the elective they wish to offer such that theoretical as well practical aspects are covered linking them to the Design field.
- Apart from lectures delivered by the subject resource persons, self study in form of hands on workshop / field work/ review of literature / seminar or any suitable format of learning may be adopted.
- A list of Electives is suggested in **Annexure A- in *Programme Structure & Rules.*** The Institutes can refer it or offer any other subject in Elective.

As mentioned in the *RULE NO.13: OTHER RULES,* ***Programme Structure & Rules****,* a student may adhere to a particular stream of elective of his/her choice and nurture his/her area of interest and develop his/her expertise.
However the student should not repeat a particular elective.

B. DES.

REVISED SYLLABUS (2024 - 25)

SECOND YEAR - SET DESIGN

SEMESTER 3

DESIGN PROJECT 1		
COURSE CODE	**22024301**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 8 Studio TOTAL = 10 hrs/week	**Sessional (SV)**	**200**
	Sessional CIA SV	100 100
	Paper: Nil	
TOTAL MARKS	200	
TOTAL CREDITS	6	

COURSE OBJECTIVE:

1. Initiate the process of visual thinking.
2. Converting the given empty space with thematic development.
3. Develop the skill of Article thinking and analysis with set Design Point of view.

COURSE CONTENT:

A. Window Display

1. Introduction of Window Display and Role of Set Designer in Window Display
2. Selection of Brand, Case Study, Concept Generation and explorations.
3. Finalize the Concept and with explanatory models.

B. Event

1. Introduction to set design in Event, importance of effective Set Design in Event.
2. Case Study Practical Applications, analyze successful events, hands on projects and site visit
3. Research of the event with respect to purpose, Place, People, Zoning, Services, Materials, etc.
4. Creative Concept and theme development. Incorporating design elements and principles into layout
5. Material Selection – Choosing appropriate (considering Sustainability also) Materials for décor and installations
6. Technology integration – Enhancing Visual impact through technological advancements. (Like automation, LED Screen automatic Lights, Sensors, etc.)
7. Finalization of the concept with design development and detailing.
8. Hand Renderings and final finished model of the final design solution.

SUBMISSION REQUIREMENT

The assessment of Design Project to be done for above assignment stages with due weightage to each stage.

1. Research and Documentation of Case Studies with observations, analysis and Conclusion
2. Documentation and presentation of an event with design opportunity **(20%)**
3. Site Analysis and Design Brief

4. Design development-Ideation with exploration and study model
5. Final Design Solutions with Technical drawings **(50%)**
(Plan, Elevation, Section) materials, views and construction details

6. Presentation drawings with Finished model. **(30%)**

COURSE OUTCOME

Students will be able to understand the process of Set Design for Window display and Event with creative ideas and articulate solutions.

RECOMMENDED READINGS:

- Event management: A professional and development approach by Greg Damster, Dimitri Tassiopolulos .
- Successful event management: A practical handbook by Anon Shone, Bryn Parry.
- Exhibition design by David Dernie.
- Furniture Exhibition by LiXiao Bell.
- New exhibition design, by Uwe J. Reinhardt and Philipp Teufel.
- Event Design Handbook by Roel Frissen and Ruud Janssen.

ELMENTS OF FORM 1		
COURSE CODE	**22024302**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 4 Studio TOTAL = 5 hrs/week	**Sessional (SV)**	**150**
	Sessional CIA SV	75 75
	Paper: Nil	
TOTAL MARKS	150	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

1. To explore, understand the basics of principle and elements of design to make 2D & 3D objects used in Set Design.
2. To give students hands on experience of making props of small to medium range.

COURSE CONTENT:

1. Analyse the Further advance example of principle and elements of design in Set Design in relation to topics covered in First Year.
2. The concept of “Make Believe”
3. Importance of props in visual design of Set
4. Types of props
5. Property handling in industry
6. Basics of Typography and Calligraphy
7. Basics of contour lines and contours

SUBMISSION REQUIREMENT

Exercise based on principle and elements of design in 2D and 3D objects used in Set Design

1. Making of small and medium size props based on period and history
2. Making of text part used in sets eg. Sign boards, Name plates, etc
3. To make a contour model of appropriate area to given Scale.

Exercises based on all above topics with special thrust on hands on explorations and models.

COURSE OUTCOME:

Students will get hands on experience of making make believe props by applying principles of design & exploring elements of design.

RECOMMENDED READINGS:

- Form, Space and Order by Francis D. K. Ching.
- Create Your Own Stage Props by Jacquie Govier
- The Prop Buiding Guidebook for Theatre, Film & TV by Eric Hart
- The Prop Maker's Workshop Manual by David H Ridgen
- Form, Space and Order – Francis D. K. Ching
- Language of Vision – Kepes Gyorgy
- Geometry of Design: Studies in Proportion and Composition – Elam Kimberly
- Poetics of Space – Bachelard, Gaston; Jolas, Maria (translator)
- Elements of Design – Hannah, Gail Greet
- Elements of Design, Gail Greet Hannah, Princeton Architectural Press, 2002
- Design Basics, Lauer, David; Wadsworth Publishing, 1999
- Geometry of Design: Studies in Proportion and Composition, Elam,
- Kimberly; Princeton Architectural Press, 2001The complete guide to illustration & design, Dalley Terence ed.; Phaidon, Oxford, 1980
- Typographic Design: Form and Communication, Carter Ron, Day Ben Meg Phillip, John Wiley & Sons, 1999
- Typography, Weingart Wolfgang, Lars Muller Publishers, 2000.
- Signs and Symbols: Their Design and Meaning, Frutiger, Adrian; Watson---Guptill Publications, 1998

TECHNICAL DRAWING & GRAPHICS 1		
COURSE CODE	**22024303**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 4 Studio TOTAL = 5 hrs/week	**Sessional (SS)**	**100**
	Sessional CIA SS	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

1. To equip students with the skill of making drawings, understanding graphic language and communicating through drawings in effective manner.
2. To understand different methods and techniques of making drawings.
3. Techniques of representing various building elements.
4. To understand the different methods and techniques of making rendered drawings.

COURSE CONTENT:

1. Introduction to technical drawing & Graphics: overview of the rule of technical drawing & graphics in art direction.
2. Basic principle of technical drawing & graphics: introduction to element tools & software
3. To introduce students to the use of orthographic projections as a too; for drawing architectural plans, sections, elevations showing the interior layout in details.
4. Drawing Isometric & Axonometric views in interior spaces.
5. Use of lettering, treating& dimensioning as an effective very of communicating the drawings & illustration techniques.
6. Understanding the graphical representation of materials on the drawings through various symbols techniques.
7. Sketching & undaring techniques essential for Communicating the landscape. Furniture & Set s[ace element.
8. Incorporating technical drawings into narrative story telling.
9. Learning the techniques of making a presentation drawing with renderings in different mediums like water colours, pencil colours, graphite pencils & charcoal

SUBMISSION REQUIREMENT

1. Assignment on use of Scales, by increasing and reducing scales to draft drawings and details on appropriate scale.
2. Exercise on Standard lettering and dimensioning styles for execution drawings.
3. Assignment on Measurement drawings- Measurement and drawing of studio and drafting it on Scale.

4. Introducing technical drawings of Interior spaces, drawing Plans and Sections and execution drawing layouts.
5. Exercise on drafting any one room from their Design, using all the above techniques learnt.
6. Making 3D Isometric and Axonometric views with furniture of the above room.

Note : 80% weightage to be given to Assignments related to Technical Drawings. 20% weightage to be given to Illustration techniques.

COURSE OUTCOME:

This course will equip students with the skills of drafting, understanding graphic language and communicating through drawings in a legible and effective manner.

RECOMMENDED READINGS:

- Rendering with pen and ink by Robert W Gill
- The architectural course by Thames and Hudrey.
- Geometrical drawings for arts students by I.H.Morris and William Jesse.
- Presenting architectural designs by Koos Eissen.

WORKSHOP AND MINIATURE MAKING		
COURSE CODE	**22024304**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 4 Studio TOTAL = 5 hrs/week	**Sessional (SS)**	**100**
	Sessional CIA SS	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

1. Skill development in cutting, shaping assembling miniature components
2. Introduce students to the finishing methods, and Fine detailing techniques.
3. Introduce the students into the safe operation of hand tools and power tools for the fabrication and other materials.

COURSE CONTENT:

1. Introduction to Miniature Models: Understanding the significance and application of miniature models.
2. Basic Materials and Tools: Overview of Materials Like clay. Wood FRP, foam sheet and Dental Plaster Corrugated and miniature tools for cutting, shaping and detailing
3. Scale and Proportions: Learning how to maintain accurate scale and proportion in miniature projects. Techniques for sculpting carving and moulding miniature components.
4. Painting and Finishing : Exploring Painting Techniques for realistic detailing and finishing touches.
5. Final Project Showcase and feedback Session

SUBMISSION REQUIREMENT FOR SESSIONAL WORK

Hands on exercises related to above topics.

COURSE OUTCOME:

- Students work with different type of materials, machines and precision tools for making models and mock ups essential for set Design.
- Students should be able to focus on the hands on working with materials.
- Students should understand different techniques for miniature making.

Recommended Readings:

- Elements of workshop technology: Volume – I by S.K.Hajra Choudhary, A.K. Hajra Choudhary, Nirjhar Roy.
- Elements of workshop technology: Volume – II by S.K.Hajra Choudhary, A.K. Hajra Choudhary, Nirjhar Roy.
- Model Making by David Near. (Covers a wide range of MM Technique & Materials)
- Sculpting and painting miniatures by chris clayton
- The Art of Miniature Modelling by Claire Waite Brown.

MATERIAL AND CONSTRUCTION TECHNIQUES 1		
COURSE CODE	**22024305**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 2 Studio TOTAL = 3 hrs/week	**Sessional (SV)**	**100**
	Sessional CIA SV	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

1. To understand of materials wood and its allied products and metal (MS, aluminium etc.) and their properties in the context of set design.
2. To understand the construction techniques and details of wood and metal
3. To acquaint students with the processes and treatments of the materials.

COURSE CONTENT:

1. Properties of the materials --- physical, chemical and mechanical properties.
2. Market study – the different forms, types and variants in the market.
3. Processes, Method of working with the materials like drilling, cutting, bending, welding, grinding etc.
4. Construction details --- wooden joinery, metal fabrication.
5. The finishes and their processes like painting, polishing, aging etc.
6. Application of paints and polishes on various surfaces wood, ms , aluminium etc.
7. Mandatory set visit w. r. t. material construction

SUBMISSION REQUIREMENT FOR SESSIONAL WORK

1. Journal writing with sketches on topics and PPT presentation.
2. Market survey and report for topic with sample of materials.
3. Hands on experience With respect to practical exposure on materials is mandatory.

COURSE OUTCOME:

- Student understand material, their properties and processes which are used in the construction of the set.
- Understanding of materials and how they interact with light colour and texture to create desired visual effects.
- Students understand proficiency in selecting appropriate materials for different design concepts and style, considering budget, durability and sustainability.

Recommended Readings:

- Architectural metals: A Guide to Selection, Specification, and Performance by L. William Zahner
- Woodwork's guide to furniture design.
- Engineering materials by K.P. Roy Chowdhari
- Engineering materials by Rangwala
- Building construction by W.B.Mackay
- Building construction by Chudley.
- Building materials by Sushil Kumar
- Guide to Wood Technology by R. Brace Hadley
- "Wood: Identification and Use "by Terry Porter
- "The Complete Manual of Woodworking "by olbert Jackson and David Day
- "Wood Handbook: Wood as an Engineering Material" by Forest Products Laboratory
- "Woodworking Basics: Mastering the Essentials of Craftsmanship" by Peter Korn
- "Metals in Construction" by F.W. Taylor
- "Materials and Techniques of Construction" by Ezio Goddi
- "Welding and Metal Fabrication Book" by Larri Jeffus.
- "Steel Design" by William T. Segui

HISTORY 1		
COURSE CODE	**22024306(P)**	**22024307**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 2 Studio TOTAL = 4 hrs/week	**Sessional (SS)**	**--**
	Sessional CIA SV	-- --
	Paper: 100	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To equip students with an understanding of art movements.

COURSE CONTENT:

1. World art movements: cave paintings, renaissance, realism, expressionism, impressionism, surrealism, Modern art.

SUBMISSION REQUIREMENT FOR SESSIONAL WORK

1. Journal writing on all topics.
2. Sketching and report preparing all topics.

COURSE OUTCOME:

The course will enable students to understand evolution of visual arts in context with India & world with the reference of types, isms & styles.

RECOMMENDED READINGS:

- India art and culture 1300- 1900 by Stuart Cary Welch.
- The illustrated history of Art by Sir Lawrence Gowing.
- History of Art by H. W. Janson.
- A world history of art by Hugh Honour and John Fleming.

ELECTIVES 1 (COMPUTER AIDED DRAWING)		
COURSE CODE	**22024308**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 2 Studio TOTAL = 3 hrs/week	**Sessional (SS)**	**50**
	Sessional CIA SS	25 25
	Paper: Nil	
TOTAL MARKS	50	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

1**.** To introduce the students to the use of computer aided design tools for drafting and presentations.
2. To use computer as a tool in visual perception of Interior spaces.

COURSE CONTENT

1. Demonstrations of the tools in the CAD software and their applications to produce 2D drawings.
2. Equipping students to produce detailed CAD drawings.
3. Equipping students with Printing techniques in the software.
   Learning allied drawing software's like Sketch Up to generate quick interior modelling spaces

SUBMISSION REQUIREMENT:

1. Assignment on each CAD tool to be covered during class.
2. Drafting plans, sections, elevations in model space with all necessary tools, for effective drawing communication like, layers, line thicknesses, text, dimension styles, hatching etc.
3. Exercise on Sketch up- interior view, applying materials, shadows etc.
4. Printing the drawing to Scale.

COURSE OUTCOME:

This course will introduce students to computer aided skills, required as an essential skill set for Designers.

Recommended readings:

User manual of related software.

B. DES.

REVISED SYLLABUS (2024 - 25)

SECOND YEAR - SET DESIGN

SEMESTER 4

DESIGN PROJECT 2		
COURSE CODE	**22024309 (P)**	**22024310(SV)**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 8 Studio TOTAL = 10 hrs/week	**Sessional (SV)**	**200**
	Sessional CIA SV	100 100
	Paper: 100	
TOTAL MARKS	300	
TOTAL CREDITS	6	

COURSE OBJECTIVE:

1. Exposure to moving images and environment orientation for movie camera
2. Exposure to creating immersive environment facilitating smooth production and contributing to audience engagement through executable and functional design ideas.
3. Develop the skill of critical thinking and analysis of television programmes.
4. Develop the skill of creative visual thinking for movie images.

COURSE CONTENT:

1. Introduction to Design process of Television Programme
2. To understand anthropometry and its relevance in design.
3. To understand the content of programme, channel identity, target audience, light and camera angles and materials etc through the case study
4. Identification of the area of intervention as set designer for their design project of a scale of approximately 40x50 ft. Example News room, art and craft show cookery show, talk show, podcasts, tech shows etc..
5. Ideation, Concept generation, and exploration creative concept and theme development. incorporating design elements and principles.
6. Material Selection choosing appropriate materials for set design of television serial / programme.
7. Finalization of the concept with design development and detailing
8. Hand Renderings and Final Finished model of the final design solution

SUBMISSION REQUIREMENT :

The assessment of Design Project to be done at the following assignment stages with due weightage to each stage

1. Documentation and analysis of human anthropometry and ergonomics of space. Research and presentation of TV program with design opportunity
2. Research and Documentation of Case Studies with observations, analysis and Conclusion
3. Research of application area and Design Brief.

(20%)

4. Design development- Ideation with exploration and study model.
5. Technical drawing with materials and construction details **(50%)**

6. Final Design Solutions with views and Finished model **(30%)**

COURSE OUTCOME:

- Students understand the process of set design for television medium and articulate the solution with their creative ideas.
- Students should focus on storytelling with respect to set design and support the script of overall theme of television serial and talk show.

Recommended Readings:

- Television Production Handbook by Herbert Zettl
- TV Scenic Design by Gerald Millerson
- Television Production By Jim Owens

ELEMENTS OF FORM 2		
COURSE CODE	**22024311**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 4 Studio TOTAL = 5 hrs/week	**Sessional (SV)**	**150**
	Sessional CIA SV	75 75
	Paper: Nil	
TOTAL MARKS	150	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

1. Aim of the course is to understand, explore the basics of visual perception and design semiotics to make 2D and 3D objects used in Set Design.
2. To give understanding of articulation of form with the help of colour, texture, light and finishes.
3. To sensitize students towards visual perception and colours used in Set Design
4. To give students hands on experience of making 2D and 3D props of small to medium size with manipulation in scale.

COURSE CONTENT:

1. Understanding visual perception
2. Analysis of design semiotics in set design
3. Basics of logo, emblem, signs design
4. Colour theory and colour psychology in Set Design
5. Colour as a vehicle in story telling
6. Content for prop making

SUBMISSION REQUIREMENT FOR SESSIONAL WORK

1. Making of logos, emblems, etc
2. Making of small and medium size props based on colour and texture explorations with manipulation in scale.
3. Exercise on colour as a vehicle in storytelling
4. Exercise on semantics

Exercises based on all above topics with special thrust on hands on explorations and models.

COURSE OUTCOME:

Students will appreciate & explore colour in different medium TV, Cinema, Television Commercial, Web Series etc.

Recommended Readings:

- Color by Paul Zelanski and Mary Pat Fisher.
- Color in graphics by Labudovic, Ana
- Elements of Design and the Structure of Visual Relationships, H. G. Greet and R. R.Kostellow, Architectural Press, NY, 2002
- Basics of Semiotics by John Deely
- Film Language: A Semiotics of the Cinema by Christian Metz
- Principles of color design : designing with electronic color by Wucius Wong.
- Color in graphics by Labudovic, Ana

ELEMENTS OF MEDIUM 1		
COURSE CODE	**22024312**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 2 Studio TOTAL = 3 hrs/week	**Sessional (SV)**	**100**
	Sessional CIA SV	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

1. To understand the different elements contributing towards the medium of Television.
2. To understand the different genres of the television programs.

COURSE CONTENT:

1. Brief history of Television: World & India.
2. To study the television program and short films.
3. Exploring the concept of time and space in television medium
4. Appreciation of old classics and contemporary expressions.
5. Understanding the relationship between the channel and production house as major stakeholders of the television industry with its relevance to art direction.
6. Understanding the different elements of television medium such as story and screenplay, direction, production, costume design, editing, visual effects etc.

SUBMISSION REQUIREMENT:

1. Making timelines of evolution of TV in world and Indian contexts.
2. Model making of TV set as an evolution (decade wise).
3. Journal writing on analysis of old classics, contemporary TV shows & series.

COURSE OUTCOME:

- Students will understand the elements of TV production from makers point of view.
- Students will understand evolution of TV as a medium in the past & its future

Recommended Readings:

- Television Production Handbook by Herbert Zettl
- TV Scenic Design by Gerald Millerson
- Television Production By Jim Owens

TECHNICAL DRAWING & GRAPHICS 2		
COURSE CODE	**22024313**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 2 Studio TOTAL = 3 hrs/week	**Sessional (SS)**	**100**
	Sessional CIA SS	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

To acquaint students with the technique of making perspective drawings and advanced rendering techniques

COURSE CONTENT:

1. Introduction to detail film 1 to set drawings with furniture details showing material & finish specifications
2. To introduce students to the theory of perspective drawings 1 point perspective & 2 point perspective
3. To introduce principles of sociography, Sociography of simple 3D objects.
4. To introduce the application of the sociography in interior drawings
5. Advance Sketching & rendering techniques essential for communicating the landscape, furniture & Set space elements.
6. Incorporating Detailed technical drawings into narrative story felling.
7. Advance techniques of making a presentation drawing with renderings in different mediums like water colours, pencil colours, graphite pencils & charcoal.

SUBMISSION REQUIREMENT

1. Exercise on detail furniture layout of interior space with showing plans, section, elevation and details with material specification, finishes and levels.
2. Drafting of one point and two point perspectives with furniture of interior spaces.
3. Sciography of basic forms and their combinations.
4. Exercise on exploring different rendering tools, like dry pastels, soft pastels, Alcohol markers, rendering with inks etc.
5. Application of above mediums in perspective drawings.
6. Application of sciography in plan, sections, elevations, furniture's and interior views.

Note : 80% weightage to be given to Assignments related to Technical Drawings.
20% weightage to be given to Illustration techniques.

COURSE OUTCOME:

This course will equip students with the skills of drafting, understanding graphic language and communicating through drawings in a legible and effective manner.

RECOMMENDED READINGS:

- Rendering with pen and ink by Robert W Gill
- The architectural drawing course by Thames and Hudrey.
- Presenting architectural designs by Koos Eissen.

MATERIAL AND CONSTRUCTION TECHNIQUES 2		
COURSE CODE	**22024314**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 4 Studio TOTAL = 6 hrs/week	**Sessional (SV)**	**100**
	Sessional CIA SV	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	4	

COURSE OBJECTIVE:

1. To provide an understanding of materials (Cement sheet, FRP, high dense thermocol, glass, acrylic, textiles, Styrofoam) and their properties in the context of set design.
2. To provide an understanding of the construction techniques using above mentioned materials and details.
3. To acquaint students with the tools and machine required for its handling and processing.

COURSE CONTENT:

1. Properties of the materials --- physical, chemical and mechanical properties.
2. Market study – the different forms, types and variants of the materials in the market.
3. Making students aware regarding the processes on the materials like cutting, drilling, etching, forming etc.
4. The construction details for the above specified materials.
5. The finishes and their processes like polishing, painting, lamination etc.
6. Use of molding of materials e.g rubber, fibre, clay, papermache etc.
8. Molding and casting techniques, e.g surface moldings for vertical textures etc.
9. Mandatory Set Visit with respect to Material and Construction exposure.

SUBMISSION REQUIREMENT :

1. Journal writings for all above topics.
2. Practical sessions for topics 3 to 7.

COURSE OUTCOME

- Students understand materials, their properties and process which are used in the construction of the set.
- Understanding of materials and how they interact with light, colour and texture to create desired visual effects.
- Students understand proficiency in selecting appropriate materials for different design concepts and style, considering budget, durability and sustainability.

RECOMMENDED READINGS:

- Engineering materials by Rangwala
- Elements of workshop technology : Volume – I by S.K.Hajra Choudhary, A.K. Hajra Choudhary, Nirjhar Roy.
- Elements of workshop technology : Volume – II by S.K.Hajra Choudhary, A.K. Hajra Choudhary, Nirjhar Roy.
- "Fiber Reinforced Cement Composites" by oltoine G. Naaman
- "Cement – Based Composites : Materials, Mechanical Properties and performance" by Christian Schittich.
- "Glass Construction : Design Detail and Material Selection' by Christoph Timm.
- "Textiles For Residential and Commercial Interiors" by olmy willbanks, Nancy oxford and Dana Miller.
- "Textiles in Architecture" by Jenny E. Sabin
- Fabric architecture : Creative Resources for Shade, Signage, and Shelter" Rachael and Ben Barney

HISTORY 2		
COURSE CODE	**22024315 (P)**	**22024316**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lectures + 2 Studio TOTAL = 4 hrs/week	**Sessional (SV)**	**--**
	Sessional CIA SV	-- --
	Paper: 100	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

1. To explore the evolution and salient characteristics of architectural forms, design expressions in the Indian subcontinent. Understanding the various timelines, social, cultural, political and regional influences, design development under various rulers and timelines.
2. Study and evolution of habitable spaces in connection with regional and geographical contexts, lifestyle, culture, indigenous materials and techniques,
3. To enable students to link the development in various periods and timelines, with respect to social, political and regional backdrops.

COURSE CONTENT:

a) World Architecture Styles –

1. Classical Greek & Roman
2. Gothic, Renaissance, Baroque, Victorian
3. Islamic (world)
4. Modern

b) Indian Architecture Styles

5. Vedic period.
6. Buddhist
7. Introduction to temple architecture of India-Dravidian, Nagara and Vesara styles,Characteristic features, influences, expressions.
8. Hindu period - Pallavas, Cholas, Guptas, Hoysalas, etc
9. Mughal architecture in India
10. Development of forts and prayer places.
11. Colonial Architecture in India
12. Indo Saracenic

SUBMISSION REQUIREMENT :

Journal writing with sketches on each topic.

COURSE OUTCOME:

The course will enable students to understand evolution of architecture in context with India & world with reference of typology, isms & styles.

Recommended Readings:

- Sir Banister Fletcher's History of Architecture
- Indian architecture Buddhist and Indo period by Percy Brown.
- Indian Architecture (Islamic Period) by Percy Brown.
- The History of Indian Architecture by Ar. A K Shrivastava
- History of Modern Design, David Raizman; Prentice Hall, 2004
- http://designhistorytimeline.com/
- Journal of Design History, Oxford Journals

ELECTIVES 2 - (VISUAL ARTS)		
COURSE CODE	**22024317**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lectures + 2 Studio TOTAL = 3 hrs/week	**Sessional (SS)**	**50**
	Sessional CIA SS	25 25
	Paper: Nil	
TOTAL MARKS	50	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

1. To understand the history of the visual arts contextually in India.
2. To equip students with an understanding of styles of Visual arts in India.

COURSE CONTENT:

Indian Visual Arts: cave paintings, miniature paintings, tribal art, folk art, Mughal art, contemporary art which communicates the styles in India with respect to time, place, expression & elements like patterns, motifs, colors, textures etc.

SUBMISSION REQUIREMENT :

Sketching and report preparing on all topics.

COURSE OUTCOME:

The course will enable students to understand evolution of visual arts in context with India & world with the reference of types, isms & styles.

RECOMMENDED READINGS:

- India art and culture 1300- 1900 by Stuart Cary Welch.
- The illustrated history of Art by Sir Lawrence Gowing.
- History of Art by H. W. Janson.
- A world history of art by Hugh Honour and John Fleming.

B. DES.

REVISED SYLLABUS (2024 - 25)

SECOND YEAR - FURNITURE DESIGN

SEMESTER 3

DESIGN PROJECT 1		
COURSE CODE	**22024401**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lecture + 8 studio TOTAL = 10 hrs/week	**Sessional (SV)**	**200**
	Sessional CIA External	100 100
	Paper: Nil	
TOTAL MARKS	200	
TOTAL CREDITS	6	

COURSE OBJECTIVE:

To understand the elements of space through designing of simple furniture.

COURSE CONTENT:

Understanding and learning:

UNIT 1: Introduction to elements of space and the role furniture plays within a certain space. Identifying design opportunity in such a space.

UNIT 2: Introduction to research and synthesis of information by using established methods to identify potential of the opportunity and formulation of design brief as per Design Process.

UNIT 3: Ideation, concept generation and explorations.

UNIT 4: Design development and detailing.

UNIT 5: Communication and presentation of drawings.

SUBMISSION REQUIREMENT:

The format of the submission shall be devised as suitable for the exercises designed by the institute.

1. Formulation of brief or design problem and identifying context
2. Spatial understanding and its application in design

(30%)

3. Concept explorations, Response to brief, Design development and detailing, Material application **(50%)**

4. Presentation and communication of the same **(20%)**

COURSE OUTCOME:

- Students will be introduced the nuances of furniture design process.
- They will develop the skills of observation, critical thinking, analysis and synthesis and responding with solutions.
- They will corelate the relationship of furniture with the spatial context they occupy is the focus.

RECOMMENDED READINGS :-

1. Emotional Design: Why we hate (or love) everyday things – Don Norman
2. Furniture Design – Jim Postell
3. Furniture Design - Jerzy Smardzewski
4. Atlas of Furniture Design – Vitra Design Museum
5. The Anarchist's Design Book – Christopher Schwarz
6. Simple Furniture Making – Sidney Vant

ELEMENTS OF FORM 1		
COURSE CODE	**22024402**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 4 studio TOTAL = 5 hrs/week	**Sessional (SV)**	**150**
	Sessional CIA SV	75 75
	Paper: Nil	
TOTAL MARKS	150	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To understand form manipulation and its relationship with furniture design.

COURSE CONTENT:

1. Form generation through axis manipulation. Transformation in 1 axis, 2 axes and multiple axes.
2. Exploration and articulation of 3D form as a medium of expression through specific attributes and emotions.
3. Understanding the complexities and finer nuances of the concept of abstraction.
4. Articulation of form using abstraction.

SUBMISSION REQUIREMENT

Multiple explorations for each topic shall be practiced by students. This may happen through sketching, hands on explorations, computer aided programs, audio visual mediums, etc. as per the requirement of exercise.

COURSE OUTCOME:

- The students will be able to grasp the manipulation of forms to generate desirable outcomes, by appreciating the process of articulation.
- They will understand the language of form through perception, analysis, appreciation and articulation.
- They will understand the concept of abstraction and understanding its bearing on furniture design.

Recommended Readings :-

- Form, Space and Order – Francis D. K. Ching
- Language of Vision – Kepes Gyorgy
- Geometry of Design: Studies in Proportion and Composition – Elam Kimberly
- Poetics of Space – Bachelard, Gaston; Jolas, Maria (translator)
- Elements of Design – Hannah, Gail Greet
- Elements of Design, Gail Greet Hannah, Princeton Architectural Press, 2002
- Design Basics, Lauer, David; Wadsworth Publishing, 1999

- Geometry of Design: Studies in Proportion and Composition, Elam,
- Kimberly; Princeton Architectural Press, 2001The complete guide to illustration & design, Dalley Terence ed.; Phaidon, Oxford, 1980

ERGONOMICS 1		
COURSE CODE	**22024403 (P)**	**22024404(SS)**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lecture +2 studio TOTAL = 4 hrs/week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: 100	
TOTAL MARKS	200	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

The course aims to equip students with a deep understanding of physical ergonomics principles and their application in designing functional and user-friendly furniture.

COURSE CONTENT:

Unit 1: An Introduction to Ergonomics: History, Definition, Aims and Application in Design field.
Unit 2: Different types of Ergonomics
Unit 3: Introduction to Anthropometry: Static and Dynamic, Percentile value and its application.
Unit 4: Ergonomics Principles and Criteria's.
Unit 5: Physiology and work physiology
Unit 6: Grips and Posture
Unit 7: Occupational health and safety
Unit 8: Application in Design Project

SUBMISSION REQUIREMENT

Unit 1 to 7: Journal Writing with sketches
Unit 8: Exercise related to design project

COURSE OUTCOME:

- The students will be able to define ergonomics and its significance in furniture design.
- The students will understand the relationship between ergonomics and user experience by identifying key factors which influence furniture design

RECOMMENDED READINGS: -

- Indian Anthropometric Data for Designer's Use by Debkumar Chakraborty NID Publication
- The Ergonomics of Workspace and Machines: A Design Manual by Clark T.S., Corlett E. N.Taylor and Francis, London
- Handbook of Human Factors by Salvendy G. John Willy and Sons.
- Introduction to Ergonomics, 2nd Edition, Bridger, RS: Taylor &Francis, 2003.
- Ergonomics for beginners, a quick reference guide, J. Dul, and B. Weerdmeester, Taylor &Francis, 1993.

- An Introduction to Human Factors Engineering, Longman, Bridger, RS: New York, 1997
- Fitting the task to the man, E.Grandjean : Taylor & Francis Ltd.1980.
- Human Factors in Product Design- current practice and future trends, P. W. Jordan and W. S.
- Green (edit): Taylor Francis, London, 1999.
- Introduction to Ergonomics, Bridger, 2nd Edition, Taylor &Francis, 2003.
- Human Factors in Product Design--- current practice and future trends, P. W. Jordan and W. S. Green (edit):Taylor Francis, London, 1999.
- Handbook of Human Factors and ergonomics,G. Salvendy, (edit), John Wiley & Sons, Inc., 1997

TECHNICAL DRAWING 1		
COURSE CODE	**22024405**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 4 studio TOTAL = 5 hrs/week	Sessional (SS)	100
	Sessional CIA External	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

The course aims to equip students with the essential technical drawing skills required in furniture design. Students will learn to create accurate and detailed drawings, including orthographic projections, isometric views, and assembly drawings, enabling effective communication with manufacturers and clients.

COURSE CONTENT:

Unit 1: An Introduction to Technical drawing in the field of Industrial design.
Unit 2: Introduction to Measuring tools used for precision in drawings.
Unit 3: Understanding the scale of the drawing and layout of the drawing.
Unit 4: Understanding dimensioning units, styles and tolerance.
Unit 5: Detail drafting of Orthographic, isometric, section/ intersection.
Unit 6: Technical drawing of assembly drawing through extruded view.
Unit 7: Application in Design Project

SUBMISSION REQUIREMENT

Unit 1 to 7: Hand drafted sheets to be done as assignment on all the topics.
Minimum 2-3 sheets shall be done for Individual piece of Furniture.

COURSE OUTCOME:

- The students will be able to draft the detail drawings required for manufacturing the furniture.
- The students will be able to apply all learned technical drawing skills in a comprehensive furniture design project

RECOMMENDED READINGS: -

- Engineering Drawing by N.D. Bhatt
- Geometrical drawings for arts students by I.H.Morris and William Jesse.

MATERIALS AND PROCESSES 1		
COURSE CODE	**22024406**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 2 studio TOTAL = 3 hrs / week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

To study and understand simple production processes and corresponding materials in furniture making.

COURSE CONTENT:

Unit 1: Understanding the physical, engineering and chemical properties of key materials such as wood and metal.

Unit 2: Introduction to glass, stone and ceramic. Understanding processes used for these materials for shaping, cutting, joining, etc.

Unit 3: Introduction to engineered materials such as types of laminates, veneers, MDF, plywood, chip board, etc. Understanding their manufacturing processes and various properties.

SUBMISSION REQUIREMENT:

To ensure a thorough understanding of materials and processes, studio-based hands-on work is encouraged.

Documentation of manufacturing process of materials mentioned above & Journal writing.

TEACHING METHODOLOGY

Minimum 2 industrial visits for material understanding.

Online Lectures for some topics from NPTEL, Coursera can be organized.

COURSE OUTCOME:

- The students will understand and analyse the processes and materials based on their properties, limitations and applications.
- The students will be equipped with a knowledge-based ability to select and or design relevant materials and their processes for producing various designs.

Recommended Readings :-

1. Product and Furniture Design – Rob Thompson, Young Yun Kim
2. Furniture Design and Construction for the Interior Designer – Christopher Natale
3. Tage Frid teaches Woodworking – Tage Frid
4. Design your own furniture – Jim Stack
5. Woodworkers guide to Furniture design – Garth Graves
6. Bent Ply - Dung Ngo (ed.), Eric Pfeiffer
7. Plydesign – Philip Schmidt
8. Instant Furniture – Peter S. Stamberg
9. Build your own Furniture – Peter S. Stamberg

HISTORY 1		
COURSE CODE	**22024407 (P)**	**22024408**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lecture + 2 studio TOTAL = 4 hrs / week	**Sessional (SS)**	**--**
	Sessional CIA External	-- --
	Paper: 100	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

Understanding the evolution of furniture and its design through Indian History.

COURSE CONTENT:

Understanding and learning influences on Indian Design History and evolution of Indian Furniture till contemporary times.

Unit 1: An introduction to history of design. Overview of history of art, and its relationship with design with respect to materials, technique, craft and technology.

Unit 2: Study of furniture in Indian history, Vijaynagara, Mughal empire, Indo Islamic, Indo Portuguese, Indo Dutch and colonial furniture, Indian Furniture style.

Unit 3: Indian Design and Art history such as Company School, Bengal School and Bombay School, Swadeshi Movement, Progressive Art Movement, India Design report.

SUBMISSION REQUIREMENT

Assignments in the form of Journal writing with sketches, Reports, Presentations etc. on all the above topics.

METHOD OF INSTRUCTION

The assignments shall be designed to convey the students' understanding of the history and evolution of furniture design. This may be done through sketches, audio visual media, performances, research work, reports, designs or any other suitable medium.

COURSE OUTCOME:

- The students will be able to perceive furniture as a form of material embodiment of the social, cultural and economic context in the history of India.
- The students will observe the furniture around them and relate it to the process of evolution.
- They will develop an understanding of the evolution of furniture throughout history and how it could be related to the contemporary work in the field.

RECOMMENDED READINGS:-

- Illustrated History of Furniture: From the Earliest to the Present Time – Fredrick Litchfield
- Design source book – Penny Sparkle
- Thinking Design – S. Balaram
- Art History of India – Parul Dhar
- Dtesign The Indian context – H. Kumar Vyas
- World of art series, Design since 1945 – Peter Dormer
- Design as future making – Yelavich Susan
- World History of Design Vol I and II – Margolin Victor
- Journal of Design History, Oxford Journals
- History of Modern Design, David Raizman; Prentice Hall, 2004
- http://designhistorytimeline.com/
- Journal of Design History, Oxford Journals

ELECTIVES 1 (COMPUTER AIDED DRAWING)		
COURSE CODE	**22024409**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 2 studio TOTAL = 3 hrs / week	**Sessional (SS)**	**50**
	Sessional CIA External	25 25
	Paper: Nil	
TOTAL MARKS	50	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

This course equips the students with the computer aided design skills essential for understanding, visualizing and presenting design ideas.

COURSE CONTENT:

1. Demonstrations of the tools in the CAD software and their applications to produce 2D drawings.
2. Equipping students to produce detailed CAD drawings.
3. Principles of parametric solid modeling.
4. Data transfer and creating 2D technical drawing from 3D models.
5. Export of files for photo realistic rendering.

SUBMISSION REQUIREMENT:

1. Assignment on each CAD tool to be covered during class
2. Drafting in model space with all necessary tools, for effective drawing communication like, layers, line thicknesses, text, dimension styles, hatching etc.
3. Minimum 5 products to be modelled.
4. Export of files for photo realistic rendering.

Recommended readings:

- User manual of related software

B. DES.

REVISED SYLLABUS (2024 - 25)

SECOND YEAR - FURNITURE DESIGN

SEMESTER 4

DESIGN PROJECT 2		
COURSE CODE	**22024410 (P)**	**22024411(SV)**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lecture + 8 studio TOTAL = 10 hrs/week	**Sessional (SV)**	**200**
	Sessional CIA External	100 100
	Paper: 100	
TOTAL MARKS	300	
TOTAL CREDITS	6	

COURSE OBJECTIVE:

1. The course aims to prepare furniture design students for the challenges of creating commercial segment furniture.
2. To introduce students to user-centered, design concerns, considerations and deliverables.
3. Students wil develop skills in market research, concept development, prototyping, and presentation, ensuring their designs meet both functional and commercial requirements.

COURSE CONTENT:

UNIT 1: Introduction to Commercial Furniture Design its scale and volume.
UNIT 2: Introduction to functional space planning for commercial furniture.
UNIT 3: Analyze case studies of successful commercial furniture designs
UNIT 4: Analyze user behaviour and preferences in commercial spaces
UNIT 5: Analysing and concluding the potential of the opportunity with the scope to intervene with furniture design.
UNIT 6: Introducing students to critical thinking of data relevance, analysis and conclusions. Observations, documentation, analysis and conclusions with specifics / findings to formulate the design brief.
UNIT 7: Ideation phase concept generation and explorations with quick explanatory models, hand rendering of the concepts.
UNIT 8: Finalization of the concept with design development and detailing. Finished model of final design solution.

SUBMISSION REQUIREMENT

Spatial understanding and proportions **(25%)**

1. Concept development and ideation sketches, Material and manufacturing considerations, Prototyping and testing documentation, validating concept. **(50%)**
2. Final project presentation and critique **(25%)**

COURSE OUTCOME:

- The students will be able to define the space where in the solution is proposed.
- The students will be able to understand fundamental Principles of commercial furniture design.
- The students will be able to articulate the concept with functionality, aesthetics and comprehensive understanding of materials suitable for commercial furniture.

Recommended Readings: -

- Form, Space & Order by DK Ching
- Neufert – Architect's Data
- Product Design: Fundamentals and Methods, Roozenburg and Eekels, Publisher: John Wiley & Sons Inc; New Ed edition, 1995
- Steven D.; Product Design and Development, Ulrich, Karl T., Eppinger, McGraw-Hill 1995, 2000,2004
- Industrial Design- Reflections of a century, J. de Noblet ed., Thames & Hudson, 1993
- The fundamentals of product design by Morris Richards

ELEMENTS OF FORM 2		
COURSE CODE	**22024412**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 4 studio TOTAL = 5 hrs/week	**Sessional (SV)**	**150**
	Sessional CIA External	75 75
	Paper: Nil	
TOTAL MARKS	150	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To understand form manipulation and its relationship with furniture design.

COURSE CONTENT:

Unit 1: Understanding how materials and finishes contribute towards form communication and surface transitions.

Unit 2: Colour psychology and understanding of colours, textures and finishes and role of light.

Unit 3: Studying brand and brand identity as a defining factor in the study and design of form.

Unit 4: Understanding the concept and process of stylization through form, colour and finishes.

SUBMISSION REQUIREMENT

Multiple explorations for each Unit shall be practiced by students. This can be done through sketching, hands on explorations, computer aided programs, audio visual mediums, etc. as per the requirement of exercise.

COURSE OUTCOME:

- The students will be able to advance from form manipulation to handle the elements related to finishing.
- They will gain the ability to understand and synthesise the meaning of attributes of brands and different styles and incorporating them in form explorations.

Recommended Readings :

- Form, Space and Order – Francis D. K. Ching
- Language of Vision – Kepes Gyorgy
- Geometry of Design: Studies in Proportion and Composition – Elam Kimberly
- Emotional Design: Why we hate (or love) everyday things – Don Norman
- Poetics of Space – Bachelard, Gaston; Jolas, Maria (translator)
- Elements of Design – Hannah, Gail Greet
- The Politics of Furniture – Edited by Cammie McAtee, Fredie Floré

- The Art of Color: The Subjective Experience and Objective Rationale of Color, Itten, Johannes; Wiley Publications, 1997
- Principles of color design : designing with electronic color by Wucius Wong.
- Color by Paul Zelanski and Mary Pat Fisher.
- Color in graphics by Labudovic, Ana
- Advances in color harmony and contrast for the home decorator by Michael Wilcox.

ERGONOMICS 2		
COURSE CODE	**22024413 (P)**	**22024414(SS)**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lecture +2 studio TOTAL = 4 hrs/week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: 100	
TOTAL MARKS	200	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

The course aims to equip students with a deep understanding of cognitive and advance cognitive ergonomics principles and their application in designing furniture that enhances cognitive performance, well-being, and user experience.

Students will develop the skills to create furniture that supports cognitive processes, considering factors such as attention, memory, and decision-making, semantics.

COURSE CONTENT:

Unit 1: An Introduction to Cognitive Ergonomic
Unit 2: Physiological and functional aspects of human brain.
Unit 3: Human information processing – working and long term memory.
Unit 4: Human Cognitive process - Perception, decision making, attention.
Unit 5: Human Error and behaviour
Unit 6: Introduction to stereotypes, mental models and methods of mapping mental models.
Unit 7: Introduction to semantics and its implication in the process of design.
Unit 8: Introduction to signifier and signified.

SUBMISSION REQUIREMENT

Unit 1 to 7: Journal Writing with sketches
Unit 8: Exercise related to design project

COURSE OUTCOME:

- The students will be able to define ergonomics and its significance in furniture design.
- The students will understand the relationship between ergonomics and user experience by identifying key factors which influence furniture design.

Recommended Readings :-

- Perception; The basic process in cognitive development, Ronald H. Forgus; USA,
- McGraw- Hill 1996
- Visual Intelligence: Perception, Image, and Manipulation in Visual Communication,
- Ann Marie Barry; State University of New York Press, 1999
- Thinking Design by S. Balaram.
- Semantic Turn by Kripendroff.
- Introduction to Ergonomics, Bridger, 2nd Edition, Taylor &Francis, 2003.
- Human Factors in Product Design--- current practice and future trends, P. W. Jordan and W. S. Green (edit):Taylor Francis, London, 1999.
- Handbook of Human Factors and ergonomics,G. Salvendy, (edit), John Wiley & Sons, Inc., 1997

TECHNICAL DRAWING -2		
COURSE CODE	**22024415**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 2 studio TOTAL = 3 hrs/week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	2	

COURSE OBJECTIVE:

The course aims to equip students with the advanced technical drawing skills required in manufacturing mass furniture. Students will learn to create detailed drawings, enabling effective output from computer numeric control machines.

COURSE CONTENT:

Understanding and learning:

Unit 1: An Introduction to Technical drawing in computer-aided design (CAD) software for complex furniture.
Unit 2: Introduction to component drawings and specification writing.
Unit 3: Introduction and drafting of component drawing with details and joineries for assembly of furniture which specifies material and processes.
Unit 4: Technical drawing the concept of exploded views for depicting assemblies.
Unit 5: Application in Design Project

SUBMISSION REQUIREMENT

- Unit 1 to 5: Exercise to be done on sheets on all the topics.
- Real Furniture objects can be taken for assignment.
- Minimum 2-3 sheets shall be done for Individual piece of Furniture.

COURSE OUTCOME:

- The students will be able to draft the detail drawings with the help of CAD software required for manufacturing the furniture.
- The students will be able to apply all learned technical drawing skills in a comprehensive furniture design project

Recommended Readings: -

- Engineering Drawing by N.D. Bhatt
- Geometrical drawings for arts students by I.H.Morris and William Jesse

MATERIALS AND PROCESSES 2		
COURSE CODE	**22024416**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 4 studio TOTAL = 5 hrs / week	**Sessional (SS)**	**100**
	Sessional CIA External	50 50
	Paper: Nil	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

To study and understand assembly of furniture. Introduction to synthetic materials and their manufacturing processes in furniture making.

COURSE CONTENT:

Unit 1: Understanding assembly of furniture using materials such as engineered boards, metal, wood, etc.

Unit 2: Understanding the physical, engineering and chemical properties of key materials such as plastics, polymers, rubbers, FRP. Introduction to their manufacturing processes and machinery used for forming, cutting, shaping, joining, etc.

Unit 3: Introduction to mass manufacturing and relationship of processes with costs, production safety, human factor, etc.

SUBMISSION REQUIREMENT:

Documentation of manufacturing process of materials mentioned above & Journal writing.

TEACHING METHODOLOGY

To ensure a thorough understanding of materials and processes, studio-based hands-on work shall be encouraged.

Minimum 2 industrial visits for material understanding.

Online Lectures for some topics from NPTEL, Coursera can be organized.

COURSE OUTCOME:

1. The students will understand and analyse the processes and materials based on their properties, limitations and applications.
2. The students will be equipped with a knowledge-based ability to select and or design relevant materials and their processes for producing various designs.

Recommended Readings :-

- Manufacturing Processes for Design Professionals – Rob Thompson
- Product and Furniture Design – Rob Thompson, Young Yun Kim
- Furniture Design and Construction for the Interior Designer – Christopher Natale
- Materials and Design: The Art and Science of Material Selection in Product Design – Ashby Michael, Johnson Kara
- Bent Ply - Dung Ngo (ed.), Eric Pfeiffer
- Plydesign – Philip Schmidt
- Instant Furniture – Peter S. Stamberg
- Build your own Furniture – Peter S. Stamberg

HISTORY 2		
COURSE CODE	**22024417 (P)**	**22024418**
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 2 Lecture + 2 studio TOTAL = 4 hrs / week	**Sessional (SS)**	**--**
	Sessional CIA External	-- --
	Paper: 100	
TOTAL MARKS	100	
TOTAL CREDITS	3	

COURSE OBJECTIVE:

Understanding the broad framework of design history and its relation with Furniture Design.

COURSE CONTENT:

Understanding and learning

Unit 1: Origins of furniture design, furniture from Neolithic age, Egyptian and Greek furniture.

Unit 2: Medieval and Renaissance furniture.

Unit 3: Jacobian, Rococo and Revival furniture.

Unit 4: Art schools and movements. Art Nouveau, Bauhaus, Art Deco, Modern, postmodern.

SUBMISSION REQUIREMENT

Assignments in the form of Journal writing with sketches, Reports, Presentations etc. on all the above topics

METHOD OF INSTRUCTION

The assignments shall be designed to convey the students' understanding of the history and evolution of furniture design. This may be done through sketches, audio visual media, performances, research work, reports, designs or any other suitable medium / models.

COURSE OUTCOME:

- The students will identify design as a result of evolution through the ages, from pre historic times, to a discipline.
- They will understand various art and design languages through times and their bearing on contemporary furniture design.
- The students will perceive furniture design through its origins and evolutions as an organized modern profession.

Recommended Readings :-

- Illustrated History of Furniture: From the Earliest to the Present Time – Fredrick Litchfield
- Design source book – Penny Sparkle
- Thinking Design – S. Balaram
- Furniture Design – Stuart Lawson
- Furniture Design – Jerzy Smardzewski
- Art History of India – Parul Dhar
- Design The Indian context – H. Kumar Vyas
- World of art series, Design since 1945 – Peter Dormer
- Design as future making – Yelavich Susan
- World History of Design Vol I and II – Margolin Victor
- The Story of Western Furniture – Phyllis Bennett Oates

ELECTIVES 2		
COURSE CODE	**22024419**	
TEACHING SCHEME	**EXAMINATION SCHEME**	
TOTAL CONTACT HOURS PER WEEK 1 Lecture + 2 studio TOTAL = 3 hrs / week	**Sessional (SS)**	**50**
	Sessional CIA External	25 25
	Paper: Nil	
TOTAL MARKS	50	
TOTAL CREDITS	2	

Course Objectives:
To allow the students to study a subject of their interest and develop theoretical as well as practical understanding of the same.

Course Outline:

- Colleges have to develop course outline for the elective they wish to offer such that theoretical as well practical aspects are covered linking them to the Design field.
- Apart from lectures delivered by the subject resource persons, self study in form of hands on workshop / field work/ review of literature / seminar or any suitable format of learning may be adopted.
- A list of Electives is suggested in **Annexure A- in *Programme Structure & Rules.*** The Institutes can refer it or offer any other subject in Elective.

As mentioned in the *RULE NO.13: OTHER RULES,* ***Programme Structure & Rules***, a student may adhere to a particular stream of elective of his/her choice and nurture his/her area of interest and develop his/her expertise.
However the student should not repeat a particular elective.