FACULTY OF ARCHITECTURE AND PLANNING
DR APJ ABDUL KALAM TECHNICAL UNIVERSITY, UTTAR PRADESH LUCKNOW

Syllabus of
M.Arch. in Interior Design

(Effective from session 2021-22)

FACULTY OF ARCHITECTURE AND PLANNING
Dr APJ Abdul Kalam Technical University, Uttar Pradesh, Lucknow

1	**Title of the Course:**	**M.Arch.** in **Interior Design (MID)**
2	Eligibility for Admission:	1. B.Arch. degree 2. Admissions on the basis of Written Test followed by an Interview.
3	Ordinances / Regulations:	Same as M.Arch.
4	No. of Years / Semesters:	2 years / 4 semesters
5	Level:	Graduate
6	Pattern:	Semester
7	Status:	Approved from BOS held on 15/09/2021
8	To be implemented from:	From Academic Year 2021-22

Syllabus drafted by:

1. Dr. Ritu Gulati (Course Co-ordinator)
2. Ar. Alok Omar (Course Co-coordinator)

Syllabus approved by Board of Studies (BOS), Architecture and Planning, AKTU, Lucknow in online meeting held on 15/09/2021 at 11.30 AM and suggested corrections were incorporated. Following members are in BOS with Special invitee for syllabus of M.Arch. in Interior Design

1. Prof. Virendra Pathak, Dean, UPID, AKTU, Lucknow
2. Dr. Sanjeev Singh, Professor, SPA, Bhopal
3. Prof. Rakesh Sapra, Director, Sunderdeep College of Architecture, Ghaziabad
4. Prof. Vivek Saberwal, Director, Apeejay School of Architecture & Planning, Greater Noida
5. Prof. Anil Dewan, H.O.D., Architecture, SPA, New Delhi
6. Prof. Anurag Bansal, Professor, G.L.Bajaj Group of Institutions, Mathura
7. Prof. Mukul Singh, Professor, Anand College of Architecture, Agra
8. Prof. Jagbir Singh, Director, Amity School of Architecture & Planning, Lucknow
9. Prof. Subodh Shanker, Ex Dean, Architecture, Integral University, Lucknow
10. Dr. Vandana Sehgal, Principal & Dean, FOAP, AKTU, Lucknow
11. Prof. Rajiv Kacker, H.O.D., FOAP, AKTU, Lucknow
12. Dr. Ritu Gulati, Associate Professor, FOAP, AKTU, Lucknow (special invitee)

Date: 09/10/2021

Signature:
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Principal & Dean,
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Faculty of Architecture and Planning, AKTU, Lucknow
M.Arch. in Interior Design

Preamble

The Masters of Architecture course in Interior Design establishes cohesive relationship amongst architecture, interiors & technology, enabling design graduates & practicing architects to respond effectively to the increasing challenges faced by the Interior design industry. This program offers an opportunity to expand students' knowledge base for developing solutions for the Interior designs of various typologies of built environment, grounded in rigorous scientific research and analysis with a multidisciplinary approach to understanding issues related to various interior design trends and traditional wisdom of the Interior design. This course also delves into design theories, advance materials, techniques and processes which are essential subjects of Interior design.

Aim

The FoAP, AKTU aims to play a key role in preparing future Interior designers to meet the industry challenges by offering this specialized course. The aim is to develop in depth knowledge and understanding related to theories of interior design, craft & documentation, research techniques, furniture design, various building systems & services, materials estimation & specifications, working drawings, fabrication & manufacturing processes along with professional practice & management. The course offers a contextualized and deep understanding of varied interior design solutions ranging from small to large scale projects.

The study moves from the small-scale interior designs and graphical representation to interior designs of commercial spaces and visual merchandising followed by interior design of large campuses. Furthermore, dissertation research that can be culminated into a thesis project.

The course also offers knowledge about various aspects of interior design i.e., landscape in interiors, interiors photography, culture & society, art in interior design, graphic design, parametric design, psychology of spaces, sustainable interiors, IOT & smart design, marketing management & entrepreneurship development.

Throughout the course, students are encouraged to challenge existing orthodoxies and to explore potential, cultural and technical responses to a changing world whilst respecting the limits posed by our context. Teaching methodology includes live site visits, special lectures from experts, special training programs, interactions with the client's promoters, contractors, approving authorities and project managers to get feedback on drawings, details, specifications, selection of materials, techniques of constructions.

Admission Requirements

Bachelor's degree in Architecture from a recognized university with minimum 50% marks with or without GATE score.

Course Outcome

The programme is designed for architects and designers interested in developing expertise in an area of rapidly increasing importance of various aspects of interior designing (such as theories of interior design advance materials & techniques, fabrication & manufacturing processes), where skill shortages are being reported and increasing specialist knowledge is required. Thus, this programme is developed to meet the industry's specific demands.

This programme gives students the opportunity to:

- Practice Independently as specialized Interior designer.
- Develop design skills in the area of Interior Design solutions for Buildings.
- Facilitate intellectual, creative and professional development.
- Develop the judgment in response to complex and unpredictable research and professional issues within the area.
- Can take a senior/management position in academic research and professional practice.

The course is thus designed to fill up these gaps by imparting the knowledge in the field of Interior Design to those interested to make their rewarding career in this field

Career Opportunities

Due to the increased focus on this specialized field, the career outlook in Interior Design is very bright and promising. The students specializing in this field have a substantial career in the private and government sector. The professional expertise in a similar field graduating from this course would fill the gap. Candidates would have opportunity to get placement in:

- Design Industry sector (such as product design, furniture design),
- Interior Design Consultancy firms
- Multi-star Hotels (Consultant for Interior design)
- Real Estate sector (Consultant for Interior design)
- Research & Development Laboratory

The passed-out candidates/students can have opportunity to serve as:

- Interior Design Consultants
- Project Officers/Managers
- Freelancers In the Field of Interior Design
- Many more alike as stated above.

FACULTY OF ARCHITECTURE & PLANNING
Dr APJ Abdul Kalam Technical University, Uttar Pradesh, Lucknow
M.ARCH. IN INTERIOR DESIGN
SCHEME OF TEACHING & EXAMINATION
(Effective from Session 2021-22)

SEMESTER I

S.No	SUBJECT CODE	NAME OF SUBJECT	PERIODS		EVALUATION SCHEME						TOTAL	CREDITS	DURATION IN HOURS
			L	P/T	SESSIONAL ASSESSMENT			ESE					
					CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	MID-101	Interior Design Studio-I (Graphical rep. & small scale design)	2	8	30	70	100	0	50	50	150	5	_
2	MID-102	Theories of Interior Design (Evolution, Elements & Principles)	2	1	15	35	50	50	0	50	100	3	3
3	MID-103	Furniture Design & Processes -I	2	1	15	35	50	50	0	50	100	3	3
4	MID-104	Research Techniques & Methods	2	1	15	35	50	50	0	50	100	3	3
5	MID-105	Building Systems & Services-I	1	1	15	35	50	50	0	50	100	2	3
6	MID-106	Elective-I	1	1	15	35	50	0	0	0	50	2	_
		Total	10	13							600	18	

SEMESTER II

S.No	SUBJECT CODE	NAME OF SUBJECT	PERIODS		EVALUATION SCHEME						TOTAL	CREDITS	DURATION IN HOURS
			L	P/T	SESSIONAL ASSESSMENT			ESE					
					CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	MID-201	Interior Design Studio-II (Commercial spaces-Visual Merchandising)	2	8	30	70	100	0	50	50	150	5	_
2	MID-202	Material Estimation & Specifications	2	1	15	35	50	50	0	50	100	3	3
4	MID-203	Furniture Design & Processes - II	2	1	15	35	50	50	0	50	100	3	3
4	MID-204	Building Systems & Services -II	2	1	15	35	50	50	0	50	100	3	3
5	MID-205	Crafts & Documentation	1	1	15	35	50	50	0	50	100	2	3
6	MID-206	Elective II	1	1	15	35	50	0	0	0	50	2	_
		Total	10	13							600	18	

SEMESTER III

S.No	SUBJECT CODE	NAME OF SUBJECT	PERIODS		EVALUATION SCHEME						TOTAL	CREDITS	DURATION IN HOURS
			L	P/T	SESSIONAL ASSESSMENT			ESE					
					CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	MID-301	Interior Design Studio-III (Large campuses-Interior design)	2	8	30	70	100	0	50	50	150	5	_
2	MID-302	Dissertation	1	2	0	50	50	0	50	50	100	3	_
3	MID-303	Design Thory: Experiential Design & Critical Writing	2	1	15	35	50	50	0	50	100	3	3
4	MID-304	Working & Shop Drawings	1	2	15	35	50	50	0	50	100	3	3
5	MID-305	Fabcrication and Manufacturing Processes	1	1	15	35	50	50	0	50	100	2	3
6	MID-306	Elective III	1	1	15	35	50	0	0	0	50	2	_
7	MID-307	Professional Training	0	0	0	0	0	0	yes	0	0	0	_
		Total	8	15							600	18	

SEMESTER IV

S.No	SUBJECT CODE	NAME OF SUBJECT	PERIODS		EVALUATION SCHEME						TOTAL	CREDITS	DURATION IN HOURS
			L	P/T	SESSIONAL ASSESSMENT			ESE					
					CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	MID-401	Thesis	2	18	0	250	250	0	250	250	500	15	_
2	MID-402	Professional Practice & Management	2	1	15	35	50	50	0	50	100	3	3
		Total	4	19							600	18	

Pool of Electives for PG Courses at FOAP, AKTU, Lucknow		
Semester I	**Semester II**	**Semester III**
List of Electives (M.Arch. in Interior Design)-Departmental		
Elective I	**Elective II**	**Elective III**
A. Landscape in Interiors	A. Graphic Design in Interiors	A. Sustainable Interiors & Alternate Materials
B. Interiors Photography	B. Parametricism in Interiors	B. IOT and Smart Design
C. Culture & Society	C. Psychology of Spaces	C. Craft and Future
D. Art In Interior Design	D. Graphic Representation: AR & VR	D. Marketing Management & Entrepreneurship Development
List of Electives (M.Arch. in Enviornmental Design)-Inter Departmental		
Elective I	**Elective II**	**Elective III**
Façade Design For Environment Responsiveness	Restoration Of Ecologically Disturbed Cities	Artificial Intelligence For Low Carbon Design
Biommicry & Miomimetics	Environmental Economics	Environment Planning Policies, Law & Legislation
Landscape Design For Suitable Environment	Smart Cities	Sustainable Landscape Design
Pollution Monitoring And Control	Life Cycle Thinking For Buildings	Integrated Environmental Management
Building Performance Analysis	Healthy Buildings	Post Occupancy Evaluation Of Green Buildings
	Environmental Compliance & Report Making	Intelligent Building

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – I

MID – 101 INTERIOR DESIGN STUDIO-I

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
		SESSIONAL ASSESMENT			ESE					
LECTURE	PRACTICAL/ TUTORIAL	CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	8	30	70	100	-	50	50	150	5	-

OBJECTIVES:

- The aim is to introduce the students to Interior Design and their Elements and Principles
- To understand in depth, the factors influencing interior Design, space usage and spatial quality of smaller scale designs.
- Apply varied presentation skills for formulating Interior Design Proposals.

Module I	**Ergonomics & Anthropometry in Interior Spaces**	Studies and Introduction to human Dimensions and functions, Space Activity relationships
Module II	**Understanding Application of Elements & Principles of Interiors Design**	Discussion and Critique of Assigned Projects shall enable students to develop an understanding of 2D-3D design elements and principles that unify them in clear visual and conceptual organization.
Module III	**Graphic Representation**	Introduction to drawing for Interior Design, projections, perspectives, sketching Interior Environments, digital modelling and digital rendering, quick illustrations, manual sketching and digital Artwork. Presenting materials and Finishes, creating design templates, digital mood boards, digital design library, Digital Illustrations and rendering using Softwares.
Module IV	**Design Exercise - I**	Design of multi-functional small space like studio apartment, loft apartments through the application of afore-mentioned principles. Students are expected to follow the design process, programming, space planning, selection of finishes, furniture textures and preparation of professional presentations.
Module V	**Design Exercise - II**	Design of uni-functional large spaces like Exhibitions, Chapels, Meditation Centres through the application of afore-mentioned principles. Students are expected to follow the design process, programming, space planning, selection of finishes, furniture textures and preparation of professional presentations.

References:

1. Human Dimension & Interior Space -A Source Book of Design Reference Standards, By Julius Panero, Martin Zelnik
2. The Interior Design Handbook, By Frida Ramstedt
3. Interior Design Illustrated, By Francis D. K. Ching, Corky Binggeli
4. Selected Anatomy for Interior Designers, By Julius Panero
5. The Interior Design Reference & Specification Book: Everything Interior Designers Need to Know Every Day, By Linda O'Shea, Chris Grimley, Mimi Love
6. Time-Saver Standards for Interior Design and Space Planning, Second Edition, By Joseph DeChiara, Julius Panero, Martin Zelnik

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M.ARCH. IN INTERIOR DESIGN SEMESTER – I

MID – 102 THEORIES OF INTERIOR DESIGN

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESSMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	1	15	35	50	50	-	50	100	3	3hrs

OBJECTIVES:

- The aim is to introduce the students to basic theories and philosophies pertaining to interior design, and their historical evolution.
- To allow students to develop an understanding of how to read design movements and related socio-cultural situations.
- To enable students to develop a sound understanding of how socio-cultural and technological changes affect design, especially interior design by tracing these changes in the post classical era.
- To familiarize the students with design movements and principles followed across the world through history.

Module I	**Introduction to the importance of studying history and theory. Evolution of society, culture, and form – Roman era to Baroque era (0 CE – 1700 CE)**	Understanding the relationship between art, architecture, design and culture. Understanding the evolution of form influenced by changes in socio-cultural aspirations, and materials, with a special focus on interior design and furniture design. Understanding the evolution of form with changes in technology.
Module II	**Post Industrial Revolution. (1760 CE – 1820 CE)** **Post Second Industrial Revolution. (1820 CE – 1920 CE)**	Understanding evolution in manufacturing technology and its socio-cultural impact, and how that was reflected in art, and architecture, with a special focus on interior design. Influences of art and architecture styles of the post-industrial era on interior design. Understanding evolution in manufacturing technology and its socio-cultural impact, and how that was reflected in art, and architecture, with a special focus on interior design. Understanding overlapping art movements and their contemporary interior design strategies. Neo-classical to Art Deco. Arts & Crafts, Art Nouveau.
Module III	**Modern movement and theories (1918 CE – 1980 CE)**	Understanding the key principles of the modern movement. Understanding the socio-cultural aspirations of the post WWI and WWII, technological advancements following the wars, and their impact on art, architecture, and design, especially interior design. Understanding the Asian design movements, especially Japan.
Module IV	**Elements of Interior Design**	Design Vocabulary of Interior Space: Spatial Form, linear elements, Point, Line, Plane. Volume, texture, Light, colour- their impact on space-making. Specific Interior building Elements including floors, roofs & ceiling, walls, fenestration, fenestration, stairs, lifts & escalators, Furniture, Plants & Accessories.

Module V	**Principles of Interior Design**	Priciples guiding the arrangement of elements in interior spaces: Proportion: Golden section, Fibonacci series; Scale: Visual, Human, contrast; Balance: Visual, symmetrical, Asymmetrical, Radial; Harmony; variety & Unity, Rhythm; Emphasis;

References:

1. Francis Ching, Interior Design
2. John Pile, History of Interior Design
3. Michelle Galindo, Japanese Interior Design
4. Basil Ionides, Colors and Interiors
5. C. Edwards, Interior Design: A Critical Introduction
6. Spiro Kostof - A History of Architecture - Setting and Rituals, Oxford University Press, London, 1985.
7. Pier Luigi Nervi, General Editor - History of World Architecture - Series, Harry N. Abrams, Inc. Pub., New York, 1972.
8. S. Lloyd and H. W. Muller, History of World Architecture - Series, Faber and Faber Ltd., London, 1986
9. Christian Norberg-Schulz, Meaning in Western Architecture, Praegur, 1975
10. Kenneth Frampton, Modern Architecture: A Critical History, Thames and Hudson, Ltd. 2007.

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – I

MID – 103 FURNITURE DESIGN AND PROCESSES-I

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	1	15	35	50	50	-	50	100	3	3hrs

OBJECTIVES:

- Introduction to Furniture design as an integral element in the design of an interior space.
- Exploration of form to develop imagination and insight into furniture design.
- Study of various materials used for interior design and furniture.
- Develop strong material, technical, aesthetic and empirical skills.

Module I	**INTRODUCTION**	Introduction to Furniture design as an integral element in the design of an interior space. Study of Evolution of furniture due to technological and material development. Environment conditions influencing furniture design. Ergonomics & anthropometry study.
Module II	**FORM EXPLORATIONS**	Introduction to 2-dimensional and 3-dimensional forms. Form exploration in context of interior products. Expressions in Form (soft, hard, warm, cold, precise, precise, gross, feminine, masculine, playful, serious). Form, material and process relationship for furniture design.
Module III	**MATERIALS - CHARACTERISTICS AND APPLICATIONS**	Wood, applications of hardwood and softwood, boards and engineered woods (block board, laminboard, plywood, mdf, particle boards, veneers, etc) Wooden construction and assembly methods. Connections in Wood Furniture (wooden joinery) Surface finishes for wood. Metals-Ferrous metals (mild steel, stainless steel, wrought iron). Non-ferrous metals, aluminium, brass, copper. Textiles- Textiles usage for interiors (upholstery, curtains, carpeting, acoustic panels etc). Considerations for fabric selection. Installation Methods for fabrics in interiors. Plastics- usage of thermosetting and thermo plastics for interiors. ABS, ACRYLICS (plexiglass, Corian, hi-macs), NYLON, POLYSTYRENE, POLYVINYL CHLORIDE, VINYLS, MELAMINES, PHENOLICS, POLYCARBONATES, POLYESTERS, URETHANE, FRP, WPC. Fabrication, Assembly and decorative techniques for plastic. Plastics in paints and finishes. Glass- Architectural (annealed, laminated, tempered and wired, blocks) Decorative glass (Engraved, Etched, Bevelled, Leaded, and Stained Glass). Ceramics-usage of ceramic tiles and fixtures. Property and usage of other miscellaneous materials like terracotta, stone, gypsum, bamboo, cane, rubber, leather, jute, Paper
Module IV	**DESIGN OF SIMPLE FORM BASED INTERIOR ACCESSORIES/ FURNITURE**	Simple form-based design, accessories, fixtures, small furniture (e.g. - Door handle, water taps, sinks, lighting fixtures, chairs, tables etc) Final output- Working/mock up models, design drawings.

References:

1. Mel Byers, The Design Encyclopaedia, Publisher: John Wiley & Sons Publications, (8 August 1994)
2. Morris Asimow, Introduction to Design, Prentice Hall, Englewood Cliffs, N.J., 1962.
3. Kimberly Elam, Geometry of Design: Studies in Proportion and Composition, Princeton Architectural Press, 2001
4. Chris Lefteri, Materials for Design

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M.ARCH. IN INTERIOR DESIGN SEMESTER – I

MID – 104 RESEARCH TECHNIQUES AND METHODS

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
		SESSIONAL ASSESMENT			ESE					
LECTURE	PRACTICAL/ TUTORIAL	CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	1	15	35	50	50	-	50	100	3	3hrs

OBJECTIVES:

- To understand the importance of research in Interior Design.
- To formulate a research plan through application of research techniques, data collection, analysis and interpretation.
- To understand the methods of writing and presenting a research report.

Module I	**Introduction**	Significance of research in Environmental Design. Basic research issues and concepts - Orientation to research process - Types of Research: Historical, Qualitative, Co-Relational, Experimental, Simulation and Modelling, Logical Argumentation, Case Study And Mixed Methods- Illustration Using Research Samples
Module II	**Research Problem**	Elements of Research Process: finding a topic - Writing an introduction - Stating a purpose of study identifying key research questions and hypotheses - Reviewing literature using theory, defining, delimiting and stating the significance of the study, advanced methods and procedures for data collection and analysis - illustration using research samples.
Module III	**Research Design**	Components of research design. Concepts of dependent and independent variables, unit of analysis. Defining the scope and limitations of a research plan, significance of the research outcome. Preparing time schedule & budget for a research plan.
Module IV	**Sampling Design**	Steps in Sampling, Characteristics of a good Sample design, Types of Sample design. Quantitative and Qualitative
Module V	**Data Collection**	Library and archives - Internet: new information and the role of internet, finding and evaluating sources of misuse - Test for reliability ethics - Methods of data collection - From primary sources: observation and recording, interviews structured and unstructured, questionnaire, open ended and close ended questions and the advantages, sampling - Problems encountered in collecting data from secondary sources. Methods of qualitative data collection in Architecture: Interview
Module VI	**Referencing**	Types of referencing styles. Writing the bibliography using M.S Word and Mendeley. Plagiarism checks and process.
Module VII	**Introduction to Statistics**	Converting data into numerical form for data analysis. Introduction to the simple statistical methods of analyzing numerical data – frequencies / percentages, mean / median / mode, correlation, chi square test – inferring from the data and interpreting the meaning of those inferences. Use of MS Excel/SPSS for statistical data analysis.
Module VIII	**Report Writing**	Presentation & Reporting: Presentation of the Data: Techniques of

	presenting the numerical data – graphical (pie charts, bar charts, line graphs etc.), tabulations, verbal qualitative data, architectural drawings / maps. Different sections of a research report, technical writing and language (tense, voice, etc.), formatting of a report.

References:

1. Research Methodology; C.R.Kothari; New Age International (P) Ltd.
2. Research Methodology; D. K. Bhattachary; Excel Books
3. Research Methodology; Goodday& Hack
4. The Practice of Social Research, by Babbie, E. 3rd Ed.,1983 Belmont :Wadsworth Publishing Co..
5. Research Design: Qualitaitve, quantitative and mixed methods approaches
6. By Creswell, J. W., 2nd Ed, 2003.Thousand Oaks : Sage
7. Research Design: Qualitative & Quantitative Approaches, 1994 Thousand Oaks : Sage
8. Surveys in Social Research, Jaipur, By De Vaus, D. A, 2003, Rawat Publications
9. Qualitative Data Analysis : A User Friendly Guide for Social Scientists, By Dey, I, 1993, London:Routledge
10. Architectural Research Methods, By Groat, L & Wang, D., 2002, NY : John Wiley and Sons Inc.
11. Research Methodology : Methods and Techniques By Kothari, C.R., 2005 New Delhi : WishwaPrakashan
12. Research Methods in the Social Sciences, By Nachmias, C. F. and Nachmias, D., 5th Ed 1996 Great Britain: St. MEDtin's Press Inc
13. Handbook of Qualitative Research By Norman K Denzin and Yvonna S Lincoln (Eds.)
14. pp.377-392., 1994, Thousand Oaks : Sage Publications
15. Qualitative Evaluation Methods, By Patton, M. Q.,1980, Sage Publications
16. Methods of Architectural Programming, By Sanoff, H, 1977 Dowden Hutchinson and Ross, Inc. Vol. 29,Community Development Series
17. Visual research methods in design, By Sanoff, H, 1991 USA : Van Nostrand Reinhold
18. Interpreting Qualitative Data : Methods for Analysing Talk, Text and Interaction By Silverman, D.,1993 , London: Sage Publication
19. Behavioral Methods in Environmental Design, By William Michelson (ed.),1982Stroudsberg, Pennylvania: Dowden Hutchinson and Ross. Inc.
20. Selected Research Papers and Studies

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – I

MID – 105 Building Systems & Services-I (Electrical, Lighting, Acoustics, Plumbing & HVAC)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	50	-	50	100	2	3hrs

OBJECTIVES:

- The aim is to introduce the students to essential building services with respect to interior design of spaces.
- Making the students incorporate and resolve MEP considerations and issues w.r.t to site works and execution of interior works.

Module I	**Lighting**	Terminologies and units, Importance (Natural and artificial lighting), Types of Lighting and illumination schemes (Ambient, accent, task, Focal, decorative etc), Architectural lighting terminologies, Design and standards. Space transformations (Installations and Product lighting designs). Making Lighting drawings
Module II	**Electrical**	Terminology and architectural symbols as per (NBC/NEC) for electrical Installations in buildings. Introduction to electrical panel (LT & HT) Distribution boards, bus –bars, earthing etc. Systems of wiring Basic consideration, Types of Internal wiring eg. Cleat, casing, capping, batten and conduits. (Exposed and concealed) Design of Circuits - Box systems and looping-in systems. Electrification and safety – excess current, short circuits, earth faults, shocks. Switches, fuses and circuit breakers. Modern appliances and Installations.
Module III	**Acoustics**	Terminologies and units, common acoustical defects and recommended remedies, Noise and its control measures in interiors. Acoustical insulations, Public address systems and their installations .Sound systems and their installations.
Module IV	**Plumbing**	Water Supply – Requirements of water supply (Building type- NBC) Sources of water supply, quality of water (BOD, TDS). Understanding water distribution, types and terminologies. OHT & UGT and basic terminologies associated with supply pipes, bends and fittings. Sanitation – Collection and conveyance of waste matter. Quantity and quality of refuse sanitary appliances, traps and types, pipes and joints.
Module V	**HVAC**	Fundamentals of Air conditioning systems and design. Refrigeration and heating (thermostat radiators) Air distribution systems-fans, filters, fan, coil units, ductworks, outlets, ODU's etc.
Module VI	**Layout and Specifications**	Drawing and layout of various services involved in Interior design, Create specifications to procure estimates from the vendors and Bill of Quantities (BOQ) of the system to aid in procurement

References:

1. National Building code 2016
2. National Electrical code
3. K.A Sirasker , Acoustics in Building design , Orient Longman ltd 1972
4. Mitchell's Building Construction: Environmnet & Services , Peter Burberry , 8th Edition, 1997 Longman
5. Raina K.B & Bhattacharya , S.K , Electrical design estimating and costing , New age international (P) Limited, New Delhi , 2004

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – I

MID –106 ELECTIVE-I (A. LANDSCAPE IN INTERIORS)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- To introduce the students to concepts of interior scapes, indoor plantation design and its maintenance.
- Preparing schemes and layouts to incorporate landscape interiors to overall interior design scheme.

Module I	**Introduction**	Plant scaping; use of tropical, subtropical herbaceous, woody plants and bonsai art in interior scaping, concept, purpose and applications Indoor requirements for healthy plant growth, identification of problems and diseases in indoor plants.
Module II	**Accessories in Landscaping**	Indoor décor ideas complementing landscape interiors such as murals, artworks, stones, metal arts, pots, frames, statues and modern art installations.
Module III	**Case studies and live examples**	Historical evidences of interior scaping in Greek, Chinese and other ancient civilizations. Identifying various case studies of interior landscaping in different building types with their themes (Hotels, schools, hospitals, malls, airports etc)
Module IV	**Layout and presentation**	Preparing layouts for interior landscape, with details and annotations. Adding necessary architectural and interior details for execution works. Site selection to completion – steps and processes involved. Understanding indoor scaping and landscaping of terrace gardens and roof tops.

References:

1. Interior landscapes – Horticulture and design published by Norton Architecture.
2. Living decors: Plants, potting and DIY ideas. By Maria Collett.

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – I

MID – 106 ELECTIVE-I (B. INTERIOR PHOTOGRAPHY)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- The aim is to understand the relation between light and photography of interior spaces.
- Understanding the various terms, tools and settings used in photography.

Module I	**Light and Camera**	Understanding light Understanding camera and auxiliary equipment Understanding the terminology and settings
Module II	**Application**	Photography under various lighting conditions Photographing interior spaces and elements Individual Assignments (Field work and Picture Portfolio)

References:

1. Handmade in India by M.P. Ranjan and Aditi Ranjan
2. India's Craft Tradition by Kamaladevi Chattopadhyay
3. Crafts Atlas of India by Jaya Jaitley
4. The craft traditions of India by Jaya Jaitley
5. Naqsh - the Art of Wood Carving of Traditional Houses of Gujarat: Focus on Ornamentation by Jay Thakkar

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – I

MID – 106 ELECTIVE-I (C. CULTURE & SOCIETY)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- The aim is to introduce the students to parametric design as an important aspect of interior design
- To understand in depth, the various factors influencing generative design and creation of forms along with the associated building materials.

Module I	**Role and Relationship of Culture & Society in Interior Design**	Importance of culture in interior design. cultural representation in the interior design
Module II	**Evidence of cultural influence on Interior Design**	Historical context of culture in interior design and the development of interior design styles throughout the various era. Application of various traditional/ region wise cultures such American, French, Indian Japanese, Mediterranean, Scandinavian, Tuscan etc in interior design.
Module III	**Application of cultural influence on Interior Design**	Manifestation of cultural influence on Interior Design as seen in surface narratives, form narratives, material narratives.

References;

1. Interior Design and Identity, Susie McKellar, Penny Sparke, Manchester University Press.
2. A Cultural History of Furniture, Volumes 1-6, Christina M. Anderson (Anthology Editor), Bloomsbury Publishing.
3. Culture, Architecture, And Design, Amos Rapoport
4. Visual Culture in the Built Environment: A Global Perspective, Susan Winchip

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – I

MID – 106 ELECTIVE-I (D. ART IN INTERIOR DESIGN)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
		SESSIONAL ASSESMENT			ESE					
LECTURE	PRACTICAL/ TUTORIAL	CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- Understand the role of art in interior spaces.
- Understand the evolution of art in interior spaces through history.
- Understand the use of colors, motifs, and objects of art in interior design.
- Understand different modes of art and their use within interior spaces
- Develop the ability to critically choose art to enhance interior spaces

Module I	**History of art in interior spaces in pre-industrial era**	Study works in pre-historic era to understand how art was used to tell a story, across geographies. Study works of Classical art in interior spaces of the buildings of the time, across geographies. Study works of Byzantine to Gothic art in interior spaces of buildings of the time, across geographies. Study works of Renaissance art in interior spaces of the buildings of the time, across geographies. Study works of Baroque and Rococo styles in the interior spaces of buildings of the time, across geographies.
Module II	**Art in interior spaces in the post-industrial era Architectural elements become art**	Study evolution of art in the post-industrial era due to mechanization of production. Evolution of architectural elements becoming pieces of art. Eg. Art Nouveou elements, Gaudi, stained glass, etc..
Module III	**Contemporary interior spaces with a focus on art**	Study contemporary interior spaces through examples and case studies. Understanding modern modes, methods, and materials used in contemporary interior spaces.

References:

1. Inside Outside (Multiple volumes)
2. Elle Décor (Multiple volumes)
3. Better Interiors (Multiple volumes)
4. Good Homes (Multiple volumes)
5. Francis Ching, Interior Design
6. John Pile, History of Interior Design
7. Michelle Galindo, Japanese Interior Design
8. Basil Ionides, Colors and Interiors
9. C. Edwards, Interior Design: A Critical Introduction
10. Spiro Kostof - A History of Architecture - Setting and Rituals, Oxford University Press, London, 1985.
11. Pier Luigi Nervi, General Editor - History of World Architecture - Series, Harry N. Abrams, Inc. Pub., New York, 1972.
12. S. Lloyd and H. W. Muller, History of World Architecture - Series, Faber and Faber Ltd., London, 1986
13. Christian Norberg-Schulz, Meaning in Western Architecture, Praegur, 1975
14. Kenneth Frampton, Modern Architecture: A Critical History, Thames and Hudson, Ltd. 2007

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – II

MID – 201 INTERIOR DESIGN STUDIO-II

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	8	30	70	100	-	50	50	150	5	-

OBJECTIVES:

- The aim is to introduce the students to Interior Design and their Elements and Principles
- To understand in depth, the factors influencing interior Design, space usage and spatial quality of smaller scale designs.
- Apply varied presentation skills fr formulating Interior Design Proposals.

Module I	**Psychology of Space: Impact of Interior on Behaviour**	Introduction to behavioral changes through Interior Design, space psychology, and generative design.
Module II	**Understanding Retail and Commercial Interior Design**	Understanding the usage pattern of multiple user groups in single space. Understanding the principles of retail, commercial design and planning of public spaces.
Module III	**Advanced Graphic Representation**	Advanced Graphic Representation via Portfolio and Brand Identity Building for Clients
Module IV	**Design Exercise**	Design of commercial multi-functional large spaces like Showrooms, Restaurants, Corporate Offices through the application of afore-mentioned principles. Students are expected to follow the design process, programming, space planning, selection of finishes, furniture textures and preparation of professional presentations.

References:

1. Retail Store Planning And Design Manual – M. J. Lopez
2. Retail Design by Otto Riewoldt
3. Building Type Basics for Retail and Mixed-Use Facilities - By The Jerde Partnership, Stephen A. Kliment, Vilma Barr, Jerde Partnership International, Jerde Partnership
4. Graphic Perception Of Space - by Frank Mulvey
5. Selected Research Papers and Studies

Faculty of Architecture and Planning, AKTU, Lucknow
M.ARCH. IN INTERIOR DESIGN SEMESTER – II

MID – 202 MATERIAL ESTIMATION & SPECIFICATIONS

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
		SESSIONAL ASSESMENT			ESE					
LECTURE	PRACTICAL/ TUTORIAL	CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	1	15	35	50	50	-	50	10	3	3hrs

OBJECTIVES:

- To initiate the students into theory and practice of estimation and quantity surveying.
- To develop the understanding of specification writing.

Module I	**ESTIMATION**	Introduction, Importance & scope. Terminology & Definitions – Detail of measurements, Bill of quantities, Analysis of rates, Inventory & Estimate. Types of Estimates- Preliminary, Plinth area, Approximate quantity, Detailed / Item rate method estimates. Methods of Estimation- Inventory based, Detail of measurement based
Module II	**SPECIFICATIONS (Materials)**	Introduction, importance and scope. Types of specifications, Correct form and sequence of clauses for writing specifications. Study and uses of standard specifications viz; drafted by C.P.W.D. Writing detailed specifications for various interior building materials eg. Floor Finishes, Wall Finishes, Ceiling Finishes, Paints, Upholstery, Curtains, Blinds, Timber, Timber by products, Plastics, Metals & Glass etc.
Module III	**SPECIFICATIONS (Item of works)**	Writing detailed specifications for various items of work eg. Flooring (Tile, Stone, Wood, Carpet, PVC etc.), Wall Paneling (Wooden & Acoustical etc.), Painting & Polishing (Wall, ceiling, Wood & Metal work), False Ceiling (Gypsum board & tiles, Wooden, Metal & Acoustical etc.) Wood works (Doors, Windows, Fixed & Loose furniture) & Partitions (Wooden, Glass & Metal stud partitions etc.)
Module IV	**RATE ANALYSIS**	Principles of analysis of rates, Market / DSR rates of labour and materials. Exercises in rate analysis of various items of work mentioned in Module 3.
Module V	**ESTIMATION EXERCISES**	Exercises in estimation using different methods, for small or medium interior projects.
Module VI	**ACCOUNTING PROCEDURES**	Introduction to Measurement book, muster roll, stores, stock, and issue of material from stock, indent form, imprest account, cash book, and mode of payment.

References:

1. Dutta, B. N. (2003) *Estimating and Costing,* UBS Publishers
2. Birdie, G. S. *Estimating and Costing*
3. Chakraborthi, M. *Estimation, Costing and Specifications*, Laxmi Publications
4. Kohli, D.D and Kohli, R.C. (2004) A Text Book of Estimating and Costing, S.Chand & Company Ltd.

5. Buchan, R., Grant, F. and Fleming, E. (2006) *Estimating for Builders and Quantity Surveyors*, 2nd edition, Butterworth-Heinemann
6. Sher, W. (1997) *Computer-aided Estimating: A Guide to Good Practice*, Addison Wesley Longman
7. Standard Schedule of Rates for Delhi, CPWD & UPPWD.
8. Standard Specifications, CPWD & UPPWD
9. S. 1200 Parts I to XXV Method of Measurement of Building and Civil Engineering Works, Bureau of Indian Standards
10. National Building Code of India (Latest Edition), Bureau of Indian Standards.

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – II

MID – 203 FURNITURE DESIGN AND PROCESSES-II

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	1	15	35	50	50	-	50	100	3	3hrs

OBJECTIVES:

- To advance their innovative and aesthetic responsiveness for making articulate and suitable products pertaining to interiors.
- Students possessing understanding of both traditional and new process, will be able to create dynamic designs for a variety of contemporary spaces.
- Focus will be on the exploration of structure, material, connection and production methodology.

Module I	**MODULAR DESIGN FOR INTERIORS**	Understanding modularity and modular systems – 3D lattice and structures Design of Modular abstract design. Final output-Working/mock up models, Drawings
Module II	**FURNITURE DESIGN-I DESIGN IDEATION**	Designing furniture for usages such as for seating, working, sleeping and storage etc. Determining size and scale based on Ergonomics, anthropometrics and spatial relationships between people and furniture Spatial composition of furniture and interior space. Generating ideas for design.
Module III	**FURNITURE DESIGN-II CONCEPT DEVELOPMENT-VISUAL LANGUAGE**	Finalizing concept for the furniture design, selecting visual language Construction/assembly method for making of the final design (materials, processes and connecting methods.) Influence of choosing materials and finishes on the overall aesthetics and structure of the designed product. Final output- Working/mock up models, Design drawing.
Module IV	**SUSTAINABLE DESIGN METHODOLOGIES**	Embodied energy, renewable resources, recyclability, recycled materials, Transportation reduction (local materials), longevity and durability.

References:

1. Stuart Lawson, Furniture Design: An Introduction to Development, Materials.
2. Mike Baxter, Product Design-Practical methods for the systematic development of new products.
3. Chris Lefteri, Making It- Manufacturing Techniques for Product Design
4. Jordan Patrick W., Designing pleasurable products: an introduction to the new human factors

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – II

MID –204 BUILDING SYSTEMS AND SERVICES -II

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	1	15	35	50	50	-	50	100	3	3hrs

OBJECTIVES:

- To explore advanced services and systems in interiors.
- To study the materials and methods of advance management systems.

Module I	**Introduction to BMS**	Concept and Application of BMS and Automation and its application in Interior design. Familiarize with the components and technologies involved in a typical Building Automation System. Building Types and Key Requirements. Different types of sensors and meters and their mounting types. Temperature sensors, pressure sensors, Light sensors and Air flow sensors.
Module II	**Fire Alarm system (FAS)**	FAS Components as part of Interiors: Different fire sensors, smoke detectors and their types, Fire control panels, design considerations for the FA system. Field Components, Panel Components, Applications. FAS Architectures: Types of Architectures, Examples. FAS loops: Classification of loops, Examples. Fire Standards: FAS Design procedure in brief, NFPA 72A, BS 5839, IS Concept of IP enabled fire & alarm system, design aspects and components of PA system
Module III	**Security and Surveillance systems**	Components of Access Control Systems, Access control system Design and topology, RFID & card based systems, Biometric systems, Exit Switch & Status Detectors. Types of CCTV systems, Types of CCTV cameras, DVRS & their selection criteria for interiors.
Module IV	**Communication Systems**	Design consideration of EPBX system and its components, integration of all the above systems to design BMS as applicable in Interior Design.
Module V	**Precision systems**	Precision systems like Water leak detection systems (WLDS), Precision Air Conditioning systems (PAC), Indoor air quality (IAQ), Sensor based Energy Conservation Control Systems as part of specialized interior design projects.
Module VI	**Layout and Specifications**	Drawing and layout of various systems involved in Interior design, Create specifications to procure estimates from the vendors and Bill of Quantities (BOQ) of the system to aid in procurement

References:

1. Understanding Building Automation Systems (Direct Digital Control, Energy Management, Life safety, Security, Access Control, Lightning, Building Management Programs) (Hardcover), Reinhold A. Carlson and Robert A. Di Giandomenico.
2. CCTV (Newnes), Vlado Damjanovski (1999).
3. Building Control Systems, Application Guide (CIBSE Guide), CIBSE, 2000.
4. Smart Buildings by Jim Sinopoli, Butterworth-Heinemann imprint of Elsevier,2nd ed., 2010.
5. Intelligent Building Systems by Albert Ting-Pat So, WaiLok Chan, Kluwer Academic publisher,3rd ed., 2012.
6. Intelligent Buildings and Building Automation by Shengwei Wang, published November 4, 2009 by Routledge.

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – II

MID – 205 CRAFTS AND DOCUMENTATION

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
		SESSIONAL ASSESMENT			ESE					
LECTURE	PRACTICAL/ TUTORIAL	CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	50	-	50	100	2	3hrs

OBJECTIVES:

- The aim is to introduce the students to various craft practices and their incorporation in space design.
- To develop a sensitivity towards traditional craft practices in order to establish a synergy between the diminishing craft practices and contemporary design.
- Sensitization towards craft clusters and contemporary craft based design practices.

Module I	**Crafts**	Concept of crafts and building crafts Craft and Vernacularism Various organizations related to craft sector Scenario of the craft sector Potentials of the sector Individual Assignments (report / presentation plates)
Module II	**Craftsmen and Craft Clusters**	Understanding and documenting craft clusters Group Assignments (Field work and presentation plates)
Module III	**Craft based design practices**	Positioning crafts in contemporary practices Designer intervention in crafts sector Case studies of craft based practices Individual/group assignments (report/presentation plates)
Module IV	**Application: Crafted Prototype**	Crafting a prototype of a space element inspired by a traditional craft form Individual/group assignments (Scale Prototype and presentation plates)

References:

1. Handmade in India by M.P. Ranjan and Aditi Ranjan
2. India's Craft Tradition by Kamaladevi Chattopadhyay
3. Crafts Atlas of India by Jaya Jaitley
4. The craft traditions of India by Jaya Jaitley
5. Naqsh - the Art of Wood Carving of Traditional Houses of Gujarat: Focus on Ornamentation by Jay Thakkar

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – II

MID – 206 ELECTIVE-II (A. GRAPHIC DESIGN IN INTERIORS)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- Students learn graphic design applications in interiors which have an expressionistic composition.
- To connect through exercises how graphics help in the gaining of functional and visual comfort and change perception of the of ordinary spaces.
- Through selected lectures, student presentations and guest speakers, students will better understand how to utilize the graphics design and related processes to enhance their own designs.
- Students explore printing as creative medium to produce graphics for interiors.

Module I	**HISTORY OF GRAPHICS IN INTERIORS**	Diachronic and synchronic development of graphics in interior space Pre-Historic Era- ancients cave-painting, Petroglyphs, rock-carving, Geoglyphs. Advent of language and writing and printing- advent of Greek and Roman alphabets, Egyptian hieroglyphs, temple arts, Chinese screens. 14th -18th Century-Renaissance, Islamic architecture, Fresco paintings The Industrial Revolution & Art Movements- Art Nouveau, Constructivism, bahuas, art deco and de-stilj, Futurism, modernism and post- modernism Digital Era- influence of advent of computers and design software, Environmental Graphics, supergraphics. Indian Tribal and Folk-Art Forms.
Module II	**ENVIRONMENTAL GRAPHICS- PURPOSES AND PROCESSES**	Study of visual language and its structure along its application in the interior space. (Murals, reliefs, motif, patterns) Purposes of interior design graphics- Adding Context and Character to the Space, Communicate a Message or a story (social or cultural), Depicting Moods & Emotions. Camouflages a Space, Express identity, Inspire and Influence, Inform and educate (infographics, pictograms and signages). Create interest and entertain.
Module III	**PATTERN MAKING FOR INTERIORS DESIGN AND PRODUCTION -PRINTINGMAKING**	Design of patterns by repetition of a graphic motif on various materials (wallcoverings, tiles, upholstery, carpeting, glass, wood and on other graphic elements like partitions screens, false ceilings etc,) Printmaking for interiors-Digital printing and Hand print making (Engra ving, Woodblock/Woodcut, silk screening).

Module IV	**SUPER GRAPHICS**	Develop super graphics designs for interior spaces, including signage, information graphics. Define methods for creation/production of the design on site.

References:

1. Bruno Munari, Design as art,
2. M. Barnard (2002). Art, Design and Visual Culture (Güliz Korkmaz, Transl.). Ankara: Utopia Publishing House.
3. Ellen Lupton, Graphic Design: The New Basics

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – II

MID – 206 ELECTIVE-II (B. PARAMETRICISM IN INTERIOR DESIGN)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- The aim is to introduce the students to parametric design as an important aspect of interior design
- To understand in depth, the various factors influencing generative design and creation of forms along with the associated building materials.

Module I	**Introduction to Parametric Design**	Definition. Early examples of analogue parametric design. Ideal Geometry vs. Parametric Form Finding. Generstive Design Processes. Algorithm aided Design. Parametricism as a style.
Module II	**Era of Parametricism**	Evolution of Parametric design in succession to Post Modernism and Fordism. Parametricism 1.0 vs Parametricism 2.0. Theories of Patrik Schumacher, Lars van Vianen, Daniela Ghertovici.
Module III	**Introduction to parametric design modelling**	Software modelling via tools like Autodesk 3DS Max, Rhinoceros_3D, Grasshopper 3D, Autodesk Revit, Dynamo, etc.

References:

1. Parametricism 2.0: Rethinking Architecture's Agenda for the 21st Century, by Patrik Schumacher.
2. AAD Algorithms-Aided Design, by Arturo Tedeschi.
3. Computational Design Thinking: Computation Design Thinking, by Achim Menges.

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID – 206 Elective-II (C. PSYCHOLOGY OF SPACES)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
		SESSIONAL ASSESMENT			ESE					
LECTURE	PRACTICAL/ TUTORIAL	CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- Develop understanding of inter disciplinary thinking process.
- Use concepts of psychology to rational design interventions/ processes.
- Learn to apply psychology right from developing briefs, to circulation diagrams, to the final design of spaces

Module I	**Psychology behind Designs**	Introduction to importance of psychology in built environment; Environmental Psychology; Fundamentals of Environmental Psychology; Introduction to Behavioral Science.
Module II	**Psychological concepts in Design (Behavioral Science) -I**	Environmental Behavioral studies (Behavior's vis-à-vis Environments) , Concept of Space and Place, User Groups and concept of Settings, Fits and Misfits.
Module III	**Psychological concepts in Design (Behavioral Science) -II**	Mental Models; Gestalts Principles; Irwin Altman's 4 Concepts (Privacy, Territoriality, Crowding and Personal Space); Proxemics; Psychology of Color; Psychology of Shapes; Von Restorff Effect.
Module IV	**Case Studies**	Case study based on the above-mentioned concepts and Subsequent mapping on 4 design typologies Offices Housing Public Buildings Educational Campus

References:

1. Psychology for Architects (Architectural Science) by David Canter (1974)
2. Why architecture matters | Psychology in Architecture Author – Paul Goldberger (2009)
3. The Architecture of Happiness, Author – Alain de Botton (2006)
4. Handbook of environmental psychology | Psychology in Architecture Author – Robert B. Bechtel and Arza (2003)
5. Psychology of Architectural Design Author – Omer Akin (1989)
6. Color Psychology and color therapy; A factual study of the influence of color on human life Author – Faber Birren (2016)

Faculty of Architecture and Planning, AKTU, Lucknow
M.ARCH. IN INTERIOR DESIGN SEMESTER – II

MID – 206 ELECTIVE-II (D. GRAPHIC REPRESENTATION: AR & VR.)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- To understand fundamental computer vision, computer graphics and human-computer interaction Techniques related to VR/AR.
- To understand geometric modeling and Virtual environment universally.
- To relate and differentiate VR/AR technology.
- To use various types of Hardware and software in virtual Reality systems.
- To implement Virtual/Augmented Reality applications; enhancing graphical representations for Interior Designers.

Module I	**Introduction to Virtual Realty**	Virtual Reality and Virtual Environment: Introduction, Computer graphics, Real time computer graphics, Flight Simulation, Virtual environment requirement, benefits of virtual reality, Historical development of VR, Scientific Landmark. Virtual realty for Graphic designers their tools and models.
Module II	**Computer Graphics and Geometric Modeling**	Introduction, The Virtual world space, positioning the virtual observer, the perspective projection, human vision, stereo perspective projection, Color theory, Conversion From 2D to 3D, 3D space curves, 3D boundary representation, Simple 3D modeling, 3D clipping, Illumination models, Reflection models, shading algorithms. Geometrical Transformations: Introduction, Frames of reference, Modeling transformations, Instances, Picking, Flying, Scaling the VE, Collision detection.
Module III	**Virtual Environment**	Input: Tracker, Sensor, Digital Gloves, Movement Capture, Video-based Input, 3D Menus & 3D Scanner etc. Output: Visual /Auditory / Haptic Devices. Generic VR system: Introduction, Virtual environment, Computer environment, VR technology, Model of interaction, VR Systems. Animating the Virtual Environment: Introduction, The dynamics of numbers, Linear and Nonlinear interpolation, the animation of objects, linear and non-linear translation, shape & object in between, free from deformation, particle system. Physical Simulation: Introduction, Objects falling in a gravitational field, Rotating wheels, Elastic collisions, projectiles, simple pendulum, springs, Flight dynamics of an aircraft. Virtual environment stimulation of interior projects.
Module IV	**Augmented Reality**	Taxonomy, technology and features of augmented reality, difference between AR and VR, Challenges with AR, AR systems and functionality, Augmented reality methods, visualization techniques for augmented reality, enhancing interactivity in AR environments, evaluating AR systems.

Module V	**Development Tools and Frameworks**	Human factors: Introduction, the eye, the ear, the somatic senses. Hardware: Introduction, sensor hardware, Head-coupled displays, Acoustic hardware, Integrated VR systems. Software: Introduction, Modeling virtual world, Physical simulation, VR toolkits, Introduction to VRML.
Module VI	**AR / VR Applications**	Introduction, Engineering, Entertainment, Science, Training.

References:

1. Grigore C. Burdea, Philippe Coiffet , Virtual Reality Technology, Wiley 2016
2. Alan B. Craig, Understanding Augmented Reality, Concepts and Applications, Morgan Kaufmann, 2013.
3. Alan Craig, William Sherman and Jeffrey Will, Developing Virtual Reality Applications, Foundations of Effective Design, Morgan Kaufmann, 2009.
4. John Vince, "Virtual Reality Systems ", Pearson Education Asia, 2007. 5. Anand R., "Augmented and Virtual Reality", Khanna Publishing House, Delhi.

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID – 301 INTERIOR DESIGN STUDIO-III

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	8	30	70	100	-	50	50	150	5	-

OBJECTIVES:

- The aim is to introduce the students to Interior Design and their Elements and Principles
- To understand in depth, the factors influencing interior Design, space usage and spatial quality of smaller scale designs.
- Apply varied presentation skills fr formulating Interior Design Proposals.

Module I	**Experiential Design & Identity**	Understanding designed environments on human total experiences including sensorial, cognitive, emotional, social, and behavioral experiences triggered by interior design cues.
Module II	**Design Exercise**	Design development of large campuses like Hotels, Resorts, Office Complexes etc, keeping in consideration the scale of the project and seamless integration of all spaces with respect to theme. Design of furniture, lighting and various other elements of interior design to develop an experiential identity for the project.

References:

1. Basics Interior Design 02: Exhibition Design, By Pam Locker
2. Design Objects and the Museum, Joanna Weddell, Liz Farrelly
3. Museum Display Design, by Jasmin Yu
4. Museum Architecture and Interior Design, by Manuelle Gautrand

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID – 302 DISSERTATION

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	-	50	50	-	50	50	100	3	-

OBJECTIVES:

- The aim is to conduct research on a theoretical Background that may be applicable in the Final Thesis
- The objective is to select themes and topics suitable for application in an Interior Design Based Thesis.
- The findings of the Research will be presented in Report format that may form the initial chapters of the Thesis in next semester.

Each student is expected to submit one or more synopsis for finalization of his/her topic.
After finalization of topic, by set of faculty members, the student shall be allotted one or more faculty member(s)/Guide(s) under whose guidance he/she has to carry out his/her dissertation.

Module I	**Stage I** **Dissertation Plan** **Marks = 5**	Aims, Objectives, Hypothesis, Methodology, Scope & limitations. Brief literature review.
Module II	**Stage II** **Mid Term Review** **Marks = 15**	Detailed literature review, Case studies, Data collection & analysis. Revised dissertation plan.
Module III	**Stage III** **Final Stage** **Marks =15**	Final presentation of dissertation on incorporating jury suggestions, Draft report.
Module IV	**Stage IV** **Final Report** **Marks = 15**	Submission of Final report (10 – 15 thousand words) after incorporating suggestions of jury. It shall be duly referenced in standard format.

COMPOSITION OF JURY PANEL FOR EVALUATION OF DISSERTATION AT EVERY STAGE

There shall be one or more jury panels. Each panel shall consist of the following -

- Senior faculty member, an architect, (Professor/Asso. Professor) of the Department of the parent institution.
- Junior faculty member, an architect, (Asst. Professor) of the Department of the parent institution.
- Thesis Guide(s).
- There shall be three juries/presentations for each student in order to assess Stage I, Stage II and Stage III.
- The assessment of Stage IV, i.e. Final Report shall assessed by the same set of jury members as in Stage III.

Further the Dissertation Coordinator will act as facilitator.

References:

1. Raman Meenakshi and Sharma Sangeeta, “Technical Communications – Principles and Practices”, Oxford
2. University Press, New Delhi.
3. Kate L.Tourabian, A manual for Writers of Research Papers, Theses and Dissertation, 8th edition.
4. Joseph Gibaldi, MLA handbook for Writers of Research Papers.

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M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID – 303 DESIGN THEORY – EXPERIENTIAL DESIGN, AND CRITICAL WRITING

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESSMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	1	15	35	50	50	-	50	100	3	3hrs

OBJECTIVES:

- To introduce the students to experiential design strategies, principles, and philosophies, focusing on interior design.
- To familiarize the students with the process of critically analyzing contemporary practices and works using the tools and philosophies learnt in the course.
- To familiarize the students with the procedure of writing an analytical article / paper on the observed works or practices.

Module I	**Introduction to Health and Well-Being**	Understanding the concept of human health and well-being and how interior design plays a role. Enabling this understanding through practical examples and professional lectures.
Module II	**Introduction to Phenomenology**	Understanding the concept of place making and phenomenology and how interior design plays a role. Enabling this understanding through practical examples and professional lectures.
Module III	**Introduction to Methods of Analysis and Critical Writing**	Building on previous courses on research and article writing, expanding the range of analysis tools and enhancing the skill of critical writing. Analyzing existing practices in the field on interior design and their works to create a better understanding of the subject.

References:

1. Michelle Galindo, Japanese Interior Design
2. Basil Ionides, Colors and Interiors
3. S. Lloyd and H. W. Muller, History of World Architecture - Series, Faber and Faber Ltd., London, 1986
4. Christian Norberg-Schulz, Meaning in Western Architecture, Praegur, 1975
5. Looking Beyond the Structure: Critical Thinking for Designers, Micheal Eng, 2009
6. Phenomenology in Architecture, Steven Holl
7. Eyes of the Skin, Juhanni Pallasma
8. The Poetics of Space, gaston Bachelard
9. From the Things Themselves, Benoit Jacquet
10. Experiencing Architecture, S. E. Rasmussen
11. Phenomenology of Perception, Maurice M. Ponty
12. Dwelling, Place and Environment: Towards a Phenomenology of Person and World, Seamon, David, Mugerauer, Robert

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID – 304 WORKING & SHOP DRAWINGS

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	15	35	50	50	0	50	100	3	3hrs

OBJECTIVES:

- To understand and making drawing/ details necessary for final execution of a project.
- To integrate all services & shop drawings and relevant working details in the working drawings of the project.

Module I	**WORKING DRAWINGS**	Making complete set of working drawings for a small-scale interior project designed by the student. The drawings to incorporate all necessary information complete with schedule and all specifications. The Working Drawings to include: • Floor plan(s). • Furniture layout plan • Reflected ceiling plan • Sectional Elevations • Open Elevations
Module II	**SERVICES DRAWINGS & SHOP DRAWINGS**	Making complete set of services drawings & obtaining relevant shop drawings from venders for the above said project. The drawings to incorporate services details complete with schedule and all specifications. The Services Drawings/Shop Drawings to include: • Lighting plan • Electrical layout • Plumbing layout • HVAC layout • Fire detection & Fire fighting details • Security system • Automation system • Public address system
Module III	**WORKING DETAILS**	Making complete set of working details for the above said project. The drawings to incorporate details complete with schedule and all specifications. The Working Details to include: • False ceiling details • Wall paneling details • Loose & fixed Furniture details • Door, window frame & shutter details • Flooring pattern & details • Toilet details. • Kitchen / Pantry Details. • Other relevant details
Module IV	**FINISHES DRAWINGS**	Making complete set of finishes drawings for the above said project. The drawings to incorporate finishing schedule and all specifications. The Finishing drawings to include: • Schedule of finishes • Color scheme

References:

1. Various prevalent codes

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M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID – 305 FABRICATION & MANUFACTURING PROCESSES

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESSMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	50	-	50	100	3	3hrs

OBJECTIVES:

- To introduce the students to various tools and equipment in the industry available for manufacturing of various items like furniture, hardware etc.
- To study the wide range of possibilities and limitations of these equipment in deriving unique design solutions
- To understand the process of manufacturing from small scale to large scale

Module-1	**Introduction to Manufacturing Processes & Techniques**	Understanding the various manufacturing processes from low investment handcraft to high tech 'no hands' processes of production. Studying the possibilities and limitations of various materials.
Module-2	**Introduction to Fabrication techniques**	Introduction to various fabrication techniques like Spinning, Sandcasting, Machining, Die –casting, Press working, Slotting, Shearing, Gas Welding, Arc Welding, Milling, Pipe rolling, Sheet Rolling, Drawing, extrusion, etc. Application of Lathe machine.
Module-3	**Introduction to Mass Manufacturing & Production**	Understanding the concept of mass production, customization option and variety, scalability, and finishing.

References:

1. Digital Fabrication in Interior Design: Body, Object, Enclosure, edited by Jonathon Anderson, Lois Weinthal
2. Design for CNC: Furniture Projects and Fabrication Technique, By Gary Rohrbacher, Anne Filson, Anna Kaziunas France, Bill Young
3. Furniture Design, By Stuart Lawson
4. Toward a New Interior, By Lois Weinthal
5. Manufacturing Material Effects: Rethinking Design and Making in Architecture, by Branko Kolarevic, Kevin Klinger
6. Construction and Detailing for Interior Design, By Drew Plunkett
7. Prefab Architecture: A Guide to Modular Design and Construction, By Ryan E. Smith

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M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID – 306 ELECTIVE-III (A. SUSTAINABLE INTERIOR DESIGNS AND ALTERNATE MATERIALS)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- To introduce the students to components of Sustainable Interiors
- Give awareness of available technology and standards
- Distinguish alternate materials for interior design

Module I	**Concept of Sustainability in Interiors**	Concept of sustainable interiors. Application of various policies for sustainable interior designing. Principles of sustainable interior design. Green interiors and its advantages.
Module II	**Indoor Environmental Quality**	Efficient use of space, energy and water in sustainable interiors. Efficiency of elements associated with Indoor Environmental Quality like indoor air quality, acoustic comfort, thermal comfort and visual comfort. Constructional guide lines for maintaining indoor environmental quality. Use of indoor landscaping.
Module III	**Alternate Materials in Interior Design**	Material selection and application as design criteria for sustainable interiors. Use of proven traditional sustainable materials & technologies in designing interior spaces like adobe, bamboo, managed forests, recycled/up-cycled materials, prefabricated construction, renovation and restoration. Comparative energy performance emission performance and financial performance.

References:

1. Sustainability in Interior Design Book by Sian Moxon
2. Ching, Frank. Illustrated Guide to Interior Architecture. New York: Van Nostrand Reinhold, 1987
3. Sustainable Building Materials and Materials for Energy Efficiency edited by Mohammad Arif Kamal
4. Alternative Building Materials and Technologies by K.S. Jagadish
5. Handbook of Alternative Materials in Residential Construction by Richard Bynum and Daniel Rubino
6. Introductory Chapter: Indoor Environmental Quality by Muhammad Abdul Mujeebu
7. Indoor Environmental Quality by Thad Godish

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M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID – 306 ELECTIVE-III (B. IOT AND SMART DESIGN)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- The aim is to introduce the students to concept of IOT (Internet of things) and its application in interior design and architecture industry

Module I	**Introduction to IOT**	Concept and Application of Internet of Things (IOT) in architecture and Interior design. IOT standards and components of IOT system. Relevance of IOT for the future.
Module II	**Basics of Networking**	Hardware components of networking and various types of protocols used for IOT. TCP/IP Communication.
Module III	**Application in Interior Design**	Concepts of smart lighting, smart home automation and home Entertainment systems. Indoor climate control and its applications.
Module IV	**Virtual Reality and Augmented Reality for Interior design**	Virtual Reality and Augmented Reality for Interior design –Learning basic. Concepts of VR & AR, terminologies and application in interior Design presentations. Using digital VR & AR tools through software using Plugins. Color selection / material selection /furniture selection using AR

References:

1. Getting started with the internet of things: Connecting sensors and microcontrollers to the cloud.- book by Cuno Pfister.
2. The SMARTHOME –Book , Andrew Howe.
3. Home Automation with Arduino

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M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID – 306 ELECTIVE-III (C. CRAFTS AND FUTURE)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- The aim is to discuss the relation between crafts and contemporary interior design practices.
- It aims to look at future of craft practices and interior design.
- The course will try to sensitize the pupils towards crafts, craft clusters and design intervention in addition to a foresight for future craft based design concepts and prototypes.

Module I	**Crafts and craft clusters**	Crafts, culture and future Crafts and adaptaability Anticipated potentials of the sector Individual Assignments (research work and report / presentation plates)
Module II	**Crafts and design interventions**	Understanding the processes of design intervention Group Assignments (Field work/case study and presentation plates)
Module III	**Application: Design explorations**	Research and application of design ideas, working in collaboration with craftsmen / craft cluster Individual/group assignments (drawings and report/presentation plates)

References:

1. Handmade in India by M.P. Ranjan and Aditi Ranjan
2. India's Craft Tradition by Kamaladevi Chattopadhyay
3. Crafts Atlas of India by Jaya Jaitley
4. The craft traditions of India by Jaya Jaitley
5. Naqsh - the Art of Wood Carving of Traditional Houses of Gujarat: Focus on Ornamentation by Jay Thakkar

Faculty of Architecture and Planning, AKTU, Lucknow

M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID – 306 ELECTIVE-III (D. Marketing Management and Entrepreneurship Development)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESSMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	15	35	50	-	-	-	50	2	-

OBJECTIVES:

- The aim is to introduce the students to basics of marketing management and entrepreneurship development
- To expose the students to fundamental concepts of management, its processes and behavioral dynamics in organizations.
- To develop competencies in the students to setup small scale manufacturing unit related to interiors and interior accessories like furniture and interior product lineage and to encourage the concept of self-employment and to be an employer (job creator).
- To understand and incorporate the basics in interior design for growing the business.

Module I	**Basic Principles of Marketing Management**	Definition & Core concept, marketing tools, P"s- product, price, place and promotion Market segmentation, targeting and positioning & analyzing the marketing environment. Study consumer behavior, needs and motivation, group dynamics, social surroundings and consumer perception. Promotion mix-direct selling, advertising, sales promotion and public relations. Brand evaluation and new trends in marketing.
Module II	**Entrepreneurship Development**	Definition & Concept, Evolution of Entrepreneurship, Characteristics and Skills of Entrepreneurship, Intrapreneurship, Entrepreneur Vs. Intrapreneur. Role of Entrepreneurship in Economic Development. Women Entrepreneurship in India. Role of Government in promoting Entrepreneurship in India. MSME Policy of India. Financial Support System for Entrepreneurship in India.

References;

1. Entrepreneurship development and management by R. K. Singhal
2. Strategic Entrepreneurship by P. K. Gupta
3. Construction management and accounts by V. N. Vazirani & S. P. Chandola
4. Principles of management by Y. K. Bhushan
5. Stoner, R. James A.F., Edward Freeman Daniel R Gilbert Jr., Management 6TH Ed, .PrenticeHall of India
6. Essentials of management by Koontz H and Weitrich, Tata, McGraw-Hill Education, Delhi.
7. Principles & Practice Of Management (Paper Back), Author: T.N.Chhabra, Publisher: Dhanpat Rai & Co (P) Ltd, Delhi
8. Management by James A.F.Stoner, Philip.W.Yetton, Jane F.Craig, Kim D.Johnston, Second Edition. Prentice Hall of India, Delhi

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M.ARCH. IN INTERIOR DESIGN SEMESTER – III

MID –307 (PROFESSIONAL TRAINING)

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	PRACTICAL/ TUTORIAL	SESSIONAL ASSESMENT			ESE					
		CT	TA	TOTAL	THEORY	VIVA	TOTAL			
-	-	-	-	-	-	Yes	-	0	0	-

OBJECTIVES:

- To expose the students to the profession of Interior Design and foster links with industry,
- To enable the students to gain the kind and range of practical experience which will prepare them for their likely responsibilities, immediately after qualifying M. Arch. (Interior Design) Course.

Introduction	The 'Professional training' should be regarded as an important academic activity. Howsoever good the arrangement of training may be, the trainee student, still, has the responsibility to use his own initiative in making the best use. The student should try to seek a variety of experiences in his/her 'Training office' to acquaint himself/herself with various works, procedures etc. of Interior Design. The student is expected to work in any project related to Interior design. Each student shall undergo professional training for a minimum 4 weeks in an establishment approved by the coordinator. the professional training is non-credit course and each student is required to submit a training certificate and a portfolio of the works undertaken by him/her. The portfolio should contain a brief introduction of the organization, list of work undertaken, description of individual projects worked upon, role of the student supported by verification by the organization.
Note	The student is required to undertake short training after 2 semesters of course study, in any government, or private organization undertaking Interior Design works. The said organization (Proprietor/Partner/Director/Head of Department/Chief Architect etc.) shall have at least 10 years of working experience and should have Interior Design projects. The practical training shall be for a minimum period of 4 weeks. The practical training will commence during the summer break between second and third semester. However, if due to certain unavoidable issues, any student is unable to take the training after the 2nd semester, he/she shall take the training after the completion of the 4th Semester. If the student as per the clause mentioned above is unable to take the training after the completion of the 2nd Semester, his/her 3rd semester results shall reflect carryover. Once the student has completed the training after the 4th Semester all his/her results shall be declared. The results shall reflect if the student has completed training successfully and satisfactorily or not after assessing the performance through Viva. In the Marksheet it will be mentioned: "Training Completed, Satisfactory Performance"

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M.ARCH. IN INTERIOR DESIGN SEMESTER – IV

MID – 401 THESIS

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
		SESSIONAL ASSESSMENT			ESE					
LECTURE	PRACTICAL/ TUTORIAL	CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	18	-	250	250	-	250	250	500	15	-

OBJECTIVES:

2. To prepare a student to independently handle and present all aspects of an Interior design solution, from its evolution to the final solution incorporating the learnings from the previous semesters.
3. To develop students' ability to handle specific aspects/thrust areas of Interior design relevant to the topic.
4. To do research on related thesis topics and formulate the findings.
5. Interior Design proposal of a residential, commercial, institutional, recreational spaces, that may incorporate the done research.

INTRODUCTION

The multiple challenges of variety of interior spaces offer unlimited scope for the choice of an Interior design thesis. The selection of the thesis subject may result either from the issue/s involved, or from the challenges of design, or from the inherent and acquired aptitude of a student, which they wish to perfect and present. The variety of intentions gives students a choice to select the thesis topic from a purely hypothetical to a 'live' programme, as long as the topic can result in a tangible interior design solution. Consequently, the size of the project has no relevance in the selection of the topic, the riding clause being the topic's relevance to serve the laid down specific objectives inherent in the philosophy of the institution.

1. To maintain uniformity in results and standards, the thesis presentation shall be in two distinct compartments: a report comprising of all the preliminary studies required for the thesis topic and the final design solution
2. The Thesis report shall consist of all relevant contextual studies: user, place and time to enable the formulation of design criteria.
3. The design solution shall be in the form of drawings and models of the concept and design and shall further include presenting at least one specific aspect relevant to the selected topic in complete detail
4. The report, in duplicate, shall be submitted in a bound form with prints/photographs of all the drawings and model's
5. All relevant/ pertinent drawings, sketches, models from previous stages to be put up for the jury to show evolution of design

Module I	**Selection of the topic**	Synopsis - Identification of topic, needs of the study and outcome. Brief Description of Literature/ library/ case studies to form background.
Module II	**Stage -I** **Thesis Plan** **Marks:50**	Identify aims and objectives (for implementing the thrust area from dissertation in subsequent design proposals), methodology, scope, and limitations. Literature study from relevant research papers.
Module III	**Stage -II** **Literature Study** **Marks:50**	Detailed Case Studies identified for Thesis Project. Detailed Site Studies and Analysis. Thesis Project Concept and Sketch Design through drawings and models.
Module IV	**Stage -III** **Design Development** **Marks:50**	Design development in the form of Layout Plan(s), Floor Plan(s), Sections and Elevations, Views and Working Models fully explaining the Design, Specifications, Services Compliance.
Module V	**Stage -IV** **Final Jury** **Marks:50**	Finalized Detailed Drawings complete with thrust area details, 3D views, walkthroughs and models with Final Thesis report.

COMPOSITION OF JURY PANEL FOR EVALUATION OF DISSERTATION AT INTERNAL JURY STAGES:

- There shall be one or more jury panels. Each panel shall consist of the following -

1. Senior faculty member (Professor/Asso. Professor) of the Department of the parent institution.
2. Junior faculty member (Asst. Professor) of the Department of the parent institution.
3. Thesis Guide(s).

COMPOSITION OF JURY PANEL FOR FINAL (EXTERNAL) EVALUATION / EXAMINATION OF THESIS.

- There shall be one or more jury panels. Each panel shall consist of the following -

1. An Architect Director / Principal / Head of the Department / Course Coordinator of the parent institution/university.
2. An Architect Director / Principal / Head of the Department / Professor of other than the parent institution /university.
3. An eminent architect from the profession with at least 15 years of field experience.
4. Thesis Guide(s) as member, but not part of evaluation.

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M.ARCH. IN INTERIOR DESIGN SEMESTER – IV

MID – 402 PROFESSIONAL PRACTICE AND MANAGEMENT

PERIODS		EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
		SESSIONAL ASSESSMENT			ESE					
LECTURE	PRACTICAL/ TUTORIAL	CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	1	15	35	50	50	-	50	100	3	3hrs

OBJECTIVES:

- To familiarize the students with ethical and societal accountability of the profession and the professional.
- To familiarize the students with the legal authorities and laws which govern the profession and oversee an ethical fulfilment of duties and responsibilities.
- To familiarize the students with various types of legally binding documents and procedures.
- To familiarize the students with elementary knowledge of various instruments of legislation to safeguard the professional interest of architects and interior designers, and also societal interest.
- To familiarize the students with sound management practices for an interior design practice.

Module I	**Organization of Profession**	Introduction to the Professional Organizations e.g., the Indian Institute of Architects, Institute of Indian Interior Designers. Their objectives, working constitution, byelaws, categories of membership, election procedure etc.
Module II	**Professional Conduct, Conditions of Engagement**	Conditions of Engagement of an interior designer - Duties: Responsibilities and Liabilities of an interior designer towards the profession and society. Scale of Professional Charges and Mode of Payment etc., Code of Professional Conduct and ethics for interior designers. Nature of relationship between client and professional.
Module III	**Tenders and Contracts**	Concept of contract and essential elements of contract. Definition of tenders, need, and types. Preparation of tender documents and procedure for awarding tenders and award of projects. Patents, their needs and types.
Module IV	**Office Organization and Management, Site Management**	Setting up practice- Business organization, Types of offices proprietorship, partnership, Private Limited etc., Salaried appointments - public sector, private sector. Basic understanding of Income tax and GST. Basic understanding of Office accounting procedures. Site management for professional Interior designer - CPM, PERT, Bar Chart, etc..
Module V	**Arbitration**	Concept and need of Arbitration. Law governing arbitration in India – Salient features of the Indian Arbitration Act 1940 and provisions in subsequent amendments. Role of Arbitrator. Nature of arbitration. Appointment of arbitrator/s, Umpire, Conduct, Powers, and duties of arbitrators and umpires, Procedure of arbitration and preparation of awards etc.

References:

1. Council of Architecture, handbook of professional document.
2. Dr. Roshan H. Nanavati: Professional practice
3. Harry Siegel, Alan M. Siegel: A Guide to Business Principles and Practices for Interior Designers
4. IIID Code of Conduct
5. Madhav Devshaktu: Professional Practice
6. The Indian Institute of architects, The handbook of Professional Practice.