Masters of Design

M .Des (Interior Design)

2 Years Degree Program

ABOUT THE PROGRAM:

A masters degree in interior design is a post graduate degree program that teaches students interior design; the art of changing the living workspace into a more effective setting, for everyday use. The aim is to make the resulting setting most attractive to everyone.

Program Educational Objectives (PEOs)

At the end of the program, the student will be:

PEO 1. Demonstrate critical thinking as they identify, analyze, and solve interior architecture and design problems through completion of interior design studio projects. Apply creative and critical thinking to solve interior environment problems from a human-centered approach and apply this knowledge to design solutions.

PEO 2. Demonstrate preparation for global design practice by incorporating cultural norms of user populations and applying that knowledge to design solutions that support globally diverse end user

PEO 3.Demonstrate effective visual, verbal, and written communication

PEO 4. Use basic sketching techniques to communicate ideas,

PEO 5. Plan, implement and present a design project,

Program Objectives (POs):

PO 1. To Demonstrate social responsibility by designing sustainable interior environments that support indoor environmental quality and improve the quality of life for occupants

PO 2. To make produce realistic images and simple animations of a product,

PO 3. Engage in integrative professional design practice by contributing interior architecture and design expertise to collaborative design teams

PO 4. To train multidisciplinary designers to use their creativity, design thinking, and design process to bring new ideas, products, and value to companies, communities, and people.

PO 5. Apply creative process techniques in synthesizing information, problem-solving and critical thinking.

PO 6. Demonstrate and employ hand drawing and drafting principles to convey concepts.

PO 7. Use basic fabrication methods to build prototype models for hard-goods and soft-goods and packaging.

PO 8. Knowledge of contemporary issues.

PO 9. Understanding of professional and ethical responsibility.

PO 10. Identify problems, anticipate challenges, design and conduct surveys and experiments and interpret data to explore possible solution

Masters of Design -Curriculum Component

Sem	Core Course (20)	DSE	GE (2)	PBL	Project	Total Credits
I	CC-I (4) CC-II (4) CC-III (4) CC-IV(4)	DSE-I (4)	-	10		**30**
II	CC-I (4) CC-II (5) CC-III (5)	DSE-II (3)	GE-I (3)	10		**30**
III	CC-I (4) CC-II (4) CC-III (5)	DSE-III (4)	GE-II (3)	10		**30**
IV	Post Graduation Internship and Dissertation	-	-	-	-	**30**
Total	**43**	**11**	**6**	**30**	**-**	**120**

DSE: Discipline Specific Elective

GE: Generic Elective

PBL: Project Based Learning

Scheme for M.Des (Interior Design)

	First Year – Semester First										
Course Code	**Course Title**	**Contact Hours per Week**			**Credits**	**ETE Duration (Hours)**	**Weightage**				
		L	**T**	**P**			MSE	ASG	TA	ATTD	ESE
ID20M101	BASICS OF DRAFTING		-	4	4	3	30	05	05	10	50
ID20M102	ELEMENTS OF INTERIOR DESIGN	1	-	3	4	3	30	05	05	10	50
ID20M103	BASICS OF FURNITURE	-	-	4	4	3	30	05	05	10	50
ID20M104	BASIC ERGONOMICS	1	-	3	4	3	30				50
	DSE-I			4	4	3	30	Continuous assessment			50
PB20M101	PROJECT BASED LEARNING - I	-	-	10	10	2	50 (assessments by panel of Experts)				50
		Total			**30**						

MSE- Mid Sem Exam, ASG- Assignment, TA- Teacher's Assessment, ATTD-Attendance, ESE- End Sem Exam

	First Year – Semester Second										
Course Code	**Course Title**	**Contact Hours per Week**			**Credits**	**ETE Duration (Hours)**	**Weightage**				
		L	**T**	**P**			MSE	ASG	TA	ATTD	ESE
ID20M201	ESTIMATING & COSTING	4	-	-	4	3	30	05	05	10	50
ID20M202	INTERIOR MATERIALS & SPECIFICATION	2	-	3	5	3	30	05	05	10	50
ID20M203	FURNITURE & FURNISHINGS	1	-	4	5	3	30	05	05	10	50
ID20M204	DSE II	-	-	3	3	3	30	05	05	10	50
ID20M205	GE – I	3	-		3	3	30	05	05	10	50
PB20M201	PROJECT BASED LEARNING-II	-	-	10	10	2	Continuous assessment				50
	SUMMER INTERNSHIP			5	5	2	*To be assessed in next semester*				50
		Total			**30**						

MSE- Mid Semester Exam, ASG- Assignment, TA- Teacher's Assessment, ATTD-Attendance, ESE- End Sem Exam

	Second Year – Semester Third										
Course Code	**Course Title**	**Contact Hours per Week**			**Credits**	**ETE Duration (Hours)**	**Weightage**				
		L	**T**	**P**			MSE	ASG	TA	ATTD	ESE
ID20M301	INTERIOR LIGHTING & ACOUSTICS	1	-	3	4	3	30	05	05	10	50
ID20M302	WORKING DRAWINGS	-	-	5	5	3	30	05	05	10	50
ID20M303	INTERIOR SERVICES	1	-	3	4	3	30	05	05	10	50
ID20M304	DSE III		-	4	4	2	30	05	05	10	50
ID20M301	GE – II	3	-	-	3	3	30	05	05	10	50
PB20M301	PROJECT BASED LEARNING-III	-	-	5	5	3	30	Continuous assessment			50
PB20M302	SUMMER INTERNSHIP			5	5	3	30	Continuous assessment			50
		Total			**30**						

MSE- Mid Sem Exam, ASG- Assignment, TA- Teacher's Assessment, ATTD-Attendance, ESE- End Sem Exam

	Second Year – Semester fourth										
Course Code	**Course Title**	**Contact Hours per Week**			**Credits**	**ETE Duration (Hours)**	**Weightage**				
		L	**T**	**P**			MSE	ASG	TA	ATTD	ESE
ID20M401	Post Graduation Internship and Dissertation		-	60	30		50	100	50	50	200
		Total			30						

MSE- Mid Semester Exam, ASG- Assignment, TA- Teacher's Assessment, ATTD-Attendance, ESE- End Sem Exam

Discipline Specific Electives Tracks

SN	Code	Semester	Tracks
1.	ID20M105	I	Landscape Interiors & Exteriors
2.	ID20M106	I	Model Making
1.	ID20M204	II	Project Management
2.	ID20M205	II	Design for Society, Culture & Heritage
3.	ID20M206	II	Advanced Typography
1.	ID20M304	III	Set & Exhibition Design
2.	ID20M305	III	Digital Studios
3.	ID20M306	III	Contemporary Interiors

Code	**BASICS OF DRAFTING**	**Total Lecture:60**
ID20M101		**0-0-4-4**
Learning Objectives:	Design Learners need to learn to visualize and communicate their concepts/ideas through various representation techniques like freehand drawing and sketches through manual and digital methods.	
Pre-requisites:	NIL	
UNIT	**CONTENT**	**HOURS**
I	Introduction to Drafting, Drafting tools, surface and Fundamentals Pencils, Parallel bar, set-square, variety in sheets(sizes), scales etc.	12
II	Fundamentals of Drafting Vocabulary of Architecture, Scaling, Lines, Symbols, lettering, etc	14
III	Orthographic Drawings ,Section Drawings	14
IV	Isometric Drawings-Grid, projection of 3D Geometry, Analytical drawings	12
V	Digital Drafting -AutoCAD	8
Course Outcomes		
After successful completion of course students will able to:		
CO1	Develop an understanding of various marking devices and surfaces and learn to draw through observation and using motor skills	
CO2	Develop skills to understand the size, scale, and proportion, surface textures through drawing techniques of line, shapes and volume.	
CO3	Develop techniques of various methods of visual representation such as longhand drawing, isometric drawings, perspective drawing.	
CO4	Illustrate the ability of design idea through 2d and 3d visuals	
CO5	To observe the environment and draw exterior and interior spaces	

Text Books:	I.H. Morris, Orient Longman, Chennai -*Geometrical drawing for Art students* M.S. Kumar, D.D. Publications, Chennai *Engineering Drawing*
Reference Books:	• Allen Tate- Harper & Row Publishers, New York, 1987. *The making of interiors- An introduction* • Sherrill Whiton- Prentice Hall, Fourth Edition- 1974-*Interior Design & Decoration*

Code	**ELEMENTS OF INTERIOR DESIGN**	**Total Lecture:60**
ID20M102		**1-0-3-4**
Learning Objectives:	Design Learners need to learn to visualize and communicate their concepts/ideas through various representation techniques like freehand drawing and sketches through manual and digital methods.	
Pre-requisites:	NIL	
UNIT	**CONTENT**	**HOURS**
I	Elements of Interior Design-Line-Horizontal ,Vertical, Diagonal, Curved Color-Color combination in interiors & furniture	12
II	Elements of Interior Design: Spaces-Negative &Positive space, Working on workstation, Pattern ,shapes in working	12
III	Elements of Interior Design: Lighting-Natural, diffused, Artificial, Texture in finishing's	12
IV	Principle of Design-Balance, Emphasis, Harmony, Contrast, Rhythm Etc, Mood in interiors	12
V	Design project basis of Interior Theory	12

Course Outcomes

After successful completion of course students will able to:

CO1	Develop an understanding of various marking devices and surfaces and learn to draw through observation and using motor skills
CO2	Develop skills to understand the size, scale, and proportion, surface textures through drawing techniques of line, shapes and volume.
CO3	Develop techniques of various methods of visual representation such as longhand drawing, isometric drawings, perspective drawing.
CO4	Illustrate the ability of design idea through 2d and 3d visuals
CO5	To observe the environment and draw exterior and interior spaces
Text Books:	1. Jack Hobbs, Richard Salome: The *Visual Experience.* 2. Jesse Russel and Ronald Cohn: *Observational Learning.* 3. David Hamlyn :*Perception, Learning and the Self* Arielle Eckstut and Joann Eckstut: *Secret Language of Color*
Reference Books:	• William Hardy & Steve Adams – New Burlington books, London, 1988. *The Encyclopedia of Decorative Styles* – • W. Wong; Principles Of Two Dimensional Design, John Wiley And Sons, 1972 • J. Bowers; Introduction To Two---Dimensional Design: Understanding Form And function, John Wiley & Sons, 1999 • L. Hotzschue; Understanding Colour, VNR, 1995 • Itten, Johannes; The Art of Color: The Subjective Experience and Objective

	Rationale of Color, Wiley Publications,1997

Code	BASICS OF FURNITURE	Total Lecture:60
ID20M103		0-0-4-4
Learning Objectives:	To help the students understand about the various anthropometric aspects, human factors & other design criteria involved in the design of furniture. To make the students understand about the various materials & technology involved in the making of furniture.	
Pre-requisites:	NIL	
UNIT	CONTENT	HOURS
I	**HISTORY OF FURNITURE DESIGN**-Greek, roman, Gothic, Renaissance, Industrial Revolution	12
II	**PRINCIPLES OF DESIGN & DETAILINGS-** Materials & finishes – Wood, Glass, Metal, Plastics and Upholstery - include various finishes. • Fabrication Techniques involved • Multiple Utility Oriented Approaches to Furniture Design.	12
III	**ROOM PLANS AND FURNITURE ARRANGEMENT**- Types of furniture – Built in furniture – Movable furniture – Systems furniture – Specially Designed furniture – Readymade furniture – Modular, Knockdown & Economy Furniture. Traffic pattern and furniture layout for residence, commercial and office areas	12
IV	**DESIGNING & DETAILING** - • Residential Furniture – Seating, Sleeping, Storage & Children's furniture •	12
V	**DESIGNING & DETAILING** - Commercial furniture – Showcases, Counters, Display units, Restaurant furniture, Bar furniture • Office furniture – Adjustable desks & storage, Mobile & Resilient chairs, Portable chairs, Movable Tables, Lounge seating.	12
Course Outcomes		
After successful completion of course students will able to:		
CO1	Understand and apply human factors data such as ergonomics, anthropometrics, and phonemics to furniture design	
CO2	Student will be creative and experimenting, continuously willing to push the project forward, exploring different design opportunities, oriented towards generating unique design solutions.	
CO3	Identify and evaluate key contextual factors that influence furniture design including historical and cultural precedents, materials development, fabrication techniques and technologies, budget and market considerations, and sustainability.	
CO4	Illustrate the ability of design idea through 2d and 3d visuals	
CO5	To observe the environment and draw exterior and interior spaces.	
Text Books:	*1.* Leslie Martin; MACMILLAN- *Architectural Graphics* *2.* Jolhe D A , Tata McGraw Hill , New Delhi -*Engineering Graphics* 3. Francis D.K. Ching, John Wiley & Sons, New York -*Interior Design*	
Reference Books:	1. Joseph Aronson , Crwon Publishers, New York- *The Encyclopedia of Furniture* 2. Sherril Whiton, Prentice Hall; *Interior Design & Decoration*	

Code	BASIC ERGONOMICS	Total Lecture:60
ID20M104		0-0-4-4
Learning	Design Learners need to learn to visualize and communicate their concepts/ideas through	

Objectives:	various representation techniques like freehand drawing and sketches through manual and digital methods.	
Pre-requisites:	NIL	
UNIT	**CONTENT**	**HOURS**
I	**Ergonomic principles-** its importance and application in designing- residential interior spaces with focus on special population	10
II	**ANTHROPOMETRIC** - relation of human body measurements to furniture design and work station design study of body postures and its importance in designing work spaces ,study of body postures and its importance in designing work spaces	14
III	.**DRAFTING OF ANTHROPOMETRIC –** Kitchen, Sanitary, Bedroom, living, dining etc.	14
IV	Applying Ergonomics to a Workplace Problem	10
V	Project Study	12
Course Outcomes		
After successful completion of course students will able to:		
CO1	Develop an understanding to increase awareness of the need for and role of ergonomics in occupational health.	
CO2	Develop skills to understand the size, scale, and proportion, surface textures through drawing techniques of human factor.	
CO3	Develop techniques to obtain basic knowledge in the application of ergonomic principles to design o industrial workplaces and the prevention of occupational injuries	
CO4	Illustrate the ability of design idea through 2d and 3d visuals	
CO5	To understand the breadth and scope of occupational ergonomics.	
Text Books:	1.W.B.Mckay –Building construction Vol1 –Longmans, UK 1981 2.W.B.Mckay –Building construction Vol 3 –Longmans, UK 1981	
Reference Books:	Leslie Martin; MACMILLAN- *Architectural Graphics*	

Code	**MODEL MAKING**	**Total Lecture:60**
ID20M105		**0-0-4-4**
Learning Objectives:	To introduce the students to basics of Model making with various materials.	
Pre-requisites:	NIL	
UNIT	**CONTENT**	**HOURS**
I	**INTRODUCTION TO MODEL MAKING** Introduction to concepts of model making and various materials used for model making	10
II	**BLOCK MODELLING** • Preparation of base for models using wood or boards • Introduction to block models of buildings (or 3D Compositions) involving the usage of various materials like Thermocol, Soap/Wax, Boards, Clay etc.	10

III	**DETAILED MODELLING** • Making detailed models which include the representation of various building elements like Walls, Columns, Steps, Windows/glazing, Sunshades, Handrails using materials like Mount board, Snow-white board, acrylic sheets. • Representing various surface finishes like brick/stone representation, stucco finish etc. • Various site elements – Contour representation, Roads/Pavements, Trees/Shrubs, Lawn, Water bodies, Street furniture, Fencing etc.	10
IV	**INTERIOR MODELS OF INTERIOR SPACES** Making models of the various interior spaces such as • Residences • Offices • Retail Spaces • Recreational Spaces Scaled models of furniture.	15
V	Introducing the techniques of planning, chiseling & jointing in timber to learn the use of hand tools. Exercise involving the design of simple furniture and making a model of the same.	15
Course Outcomes		
After successful completion of course students will able to:		
CO1	Develop an understanding of various marking devices and surfaces and learn to draw through observation and using motor skills	
CO2	Develop skills to understand the size, scale, and proportion, surface textures through drawing techniques of line, shapes and volume.	
CO3	Develop techniques of various methods of visual representation such as longhand drawing, isometric drawings, perspective drawing.	
CO4	Illustrate the ability of design idea through 2d and 3d visuals	
CO5	To observe the environment and draw exterior and interior spaces	
Text Books:	• Jannsen, Constructional Drawings & Architectural models, Karl Kramer Verlag Stuttgart, 1973. • 3. Harry W.Smith, The art of making furniture in miniature, E.P.Duttor Inc., New York, 1982.	
Reference Books:	• BENN, The book of the House, Ernest Benn Limited, London	

Code	**LANDSCAPE INTERIOR**	**Total Lecture:60**
ID20M105		**0-0-4-4**
Learning Objectives:	To develop an understanding about the design of interior landscape with special emphasis on the choice and care of plant materials used in the interior spaces. To study about the various landscaping elements and their application in interior spaces	
Pre-requisites:	NIL	
UNIT	**CONTENT**	**HOURS**
I	**INTERIOR LANDSCAPING** Definition, classification of plants, indoor plants and their functions, layout & components, Floriculture – commercial, ornamental, Selection of plants & pest control.	10
II	**PHYSICAL REQUIREMENTS OF PLANTS** Physical requirements of plants – light, temperature, water, planting medium, soil separator, weight of plants, acclimatization & maintenance. Techniques to meet physical requirements	10

III	**INTERIOR LANDSCAPING ELEMENTS & PRINCIPLES** Various interior landscaping elements – water bodies - pools, fountains, cascades Plants, rocks, artifacts, paving & lighting, Design guidelines- plant texture & colour, plant height, plant spacing.	15
IV	**ROOF AND DECK LANDSCAPE** Protection of the integrity of the roof and structure, provisions for drainage, light weight planting medium, irrigation, selection of materials, water proofing, provision for utilities and maintenance.	15
V	**EXERCISE ON INTERIOR LANDSCAPE** Courtyard design • An outdoor room design • Terrace garden	10
Course Outcomes		
After successful completion of course students will able to:		
CO1	Develop an understanding of various marking devices and surfaces and learn to draw through observation and using motor skills	
CO2	Develop skills to understand the size, scale, and proportion, surface textures through drawing techniques of line, shapes and volume.	
CO3	Develop techniques of various methods of visual representation such as longhand drawing, isometric drawings, perspective drawing.	
CO4	Illustrate the ability of design idea through 2d and 3d visuals	
CO5	To observe the environment and draw exterior and interior spaces	
Text Books:	• Time saver standards for landscape architecture • Planting design by Theodore D.Walker,VNR Publications New York.	
Reference Books:	• Landscaping Principles and Practices by Jack E.Ingels,Delmar Publishers.	

Semester-II

Code	ESTIMATING & COSTING	Total Lecture:30
ID20M201		4-0-0-4
Learning Objectives:	To equip the students to prepare the Estimate in order to foresee the cost of the work or to implement an interior design project & also to monitor / control project cost.	
Pre-requisites:	NIL	
UNIT	CONTENT	HOURS
I	**INTRODUCTION TO ESTIMATION:** Estimation – definition, purpose, types of estimate, and procedure for Estimating the cost of work in order to implement an interior design project or to make products related to interior design like furniture, artifacts etc.	6
II	**RATE ANALYSIS & ESTIMATION FORMAT :** Rate Analysis – definition, method of preparation, quantity & labour estimate for woodwork, steelwork, Aluminum work, glass & its rate for different, thickness & sections, finishing (enamel paint, duco paints, melamine, DU coats, Hand polishing, veneering and laminating) for walls & ceilings. Electrical & plumbing products, wiring, ducting etc., and laying of tiles & wall paneling in the estimate format of the project	6
III	**DETAILED ESTIMATE :** Detailed Estimate – data required, factors to be considered, methodology of preparation, abstract of Estimate, contingencies, labor charges, bill of quantities, different methods of estimate for interior design works, methods of measurement of works	6
IV	**COSTING OF FIXTURES & FITTINGS:** Cost of the following items: electrical fitting like, luminaries, fan, cables, switches etc., tiles in skirting & dado, cement plaster, joinery in wood, steel & aluminum, painting to walls – cement paint, oil paints , distemper acrylic emulsion, enamel paint painting to joinery, varnishing, French polishing plumbing equipments like piping, shower panels ,cubicles, tubs, Jacuzzis , taps, motors, fountains, false ceiling of aluminum panels, steel & wooden frame work, thermocol etc. wall paneling of ceramic tiles & other tiles of materials suitable for the same, partitions made of materials like aluminum wood, steel etc	6
V	**INTRODUCTION TO SPECIFICATION :** Specification – Definition, purpose, procedure for writing specification for the purpose of calling tenders, types of specification. Specification for different item related to interior design project – woodwork for furniture window frames & pelmets, partitions etc also of materials like steel aluminum glass of various kind. Wall paneling & false ceiling of materials like aluminum, steel, wood, electrical, plumbing, air-contioning & fire fighting equipments.	6
Course Outcomes		
After successful completion of course students will able to:		
CO1	Develop an understanding of various marking devices and surfaces and learn to draw through observation and using motor skills	
CO2	Develop skills to understand the size, scale, and proportion, surface textures through drawing techniques of line, shapes and volume.	
CO3	Develop techniques of various methods of visual representation such as longhand drawing,	

	isometric drawings, perspective drawing.
CO4	Illustrate the ability of design idea through 2d and 3d visuals
CO5	To observe the environment and draw exterior and interior spaces
Text Books:	1. M. Chakraborti, .Estimation, Costing, Specification and Valuation in Civil engineering. **2.** 2. Dutta, Estimating and Costing, S. Dutta and Co., Lucknow 1983
Reference Books:	• S. C. Rangwala, Elements of Estimating and costing, Charoter publishing House, Anand, India, 1984. • 2. The interior designers guide: to pricing, estimating budgeting. By Theo Susan

Code	**INTERIOR MATERIALS & SPECIFICATION**	**Total Lecture:75**
ID20M202		**2-0-3-5**
Learning Objectives:	Design Learners need to learn to visualize and communicate their concepts/ideas through various representation techniques like freehand drawing and sketches through manual and digital methods.	
Pre-requisites:	NIL	
UNIT	**CONTENT**	**HOURS**
I	Basic Building components: Elementary knowledge of different components. Study of constituents, properties and uses of different building materials	15
II	**STONES:** Various types, their properties and uses in interior of various types such as offices, residences, restaurants, shops, etc. **BRICKS/TILES:** Qualities of various buildings, types of bricks and their uses in various types of interiors. Clay products- tiles, terracota, ceramics - uses and application.	15
III	**PLASTERS** : Different types of plaster finishes - neeru, sand, faced, rough cast, peeble -dash, gypsum their defects & repairs, various mixes used in plaster curing and finishing of plaster, Mud plaster, ingredients, advantages and disadvantages of special materials used in Plastering, Plaster of Paris, barium, gypsum, etc	15
IV	**Glass:** Types and Manufacturing of glasses. Treatments on glass. Glass in building industry. Interior use of glass. Properties, sizes, design, price and availability of : Sheet, Plate, Wired, Laminated, Safety, insulating, colored, tinted, heat resistant and glass blocks.	15
V	**THERMAL ACOUSTIC MATERIALS:** Study of different types of materials used for sound proofing. Properties and use of the following : Polyurethane products such as low density and high density, fiber glasses	15

Course Outcomes

After successful completion of course students will able to:

CO1	Develop an understanding of various marking devices and surfaces and learn to draw through observation and using motor skills
CO2	Develop skills to understand the size, scale, and proportion, surface textures through drawing techniques of line, shapes and volume.
CO3	Develop techniques of various methods of visual representation such as longhand drawing, isometric drawings, perspective drawing.
CO4	Illustrate the ability of design idea through 2d and 3d visuals
CO5	To observe the environment and draw exterior and interior spaces

Text Books:	• Bindra, S.P. and Arora, S.P. Dhanpat Rai Pub.-*Building Construction: Planning Techniques and methods of Construction* • Moxley, R. Mitchell‟ s , Technical Press Ltd -*Elementary Building Construction* • Rangwala, S.C. Building Construction: John Wiley and Sons, Inc., New York- *Materials and types of Construction*
Reference Books:	• Sushil Kumar. Pub. Delhi -T.*B. of Building Construction Standard* • Chowdary, K.P. Oxford and IBH, New Delhi *Engineering Materials used in India*

Code	**FURNITURE & FURNISHINGS**	**Total Lecture:75**
ID20M203		**1-0-4-5**
Learning Objectives:	Students will focus on the craft of the Furniture -Maker, utilizing state of-the-industry procedures and equipment. Emphasis will be on wood and wooden products as a construction medium	
Pre-requisites:	NIL	
UNIT	**CONTENT**	**HOURS**
I	**INTRODUCTION TO WOOD** Wood as a building material: Identification, selection, application, types of wood, commercial Classification, nomenclature, structure Anatomy and Ultra structure, Conversion figure and natural defects, availability of wood products, wood based panels such as plywood , MDF, HDF, Particle board , pre laminated boards etc .	15
II	**THE BASICS OF FURNITURE CONSTRUCTION & TOOLS** Measurement and measurement systems, Furniture Construction: Drawers, Cadenza, dining chairs, sofa, settee, cots detail. Preparation for finishing, Furniture Materials Specifying timber, finishes etc . Detailed construction drawings & explaining construction and material finishes.	15
III	**PLYWOOD CONSTRUCTION TECHNIQUES** Plywood as a building material, Layout techniques and machining plans. Fabrication techniques - stapling, gluing. Furniture Joinery - screw joinery, nail joinery, Mortise & tenon joints, Dovetail joints, Dowel joints, Edge joints.	15
IV	**MODULAR FURNITURE:** Introduction to modular furniture, analyzing the need andcriteria for selection, materials used and constructional details.	15
V	**FURNITURE MODEL MAKING** Preparation of block models of furniture using wood, boards, leather, fabric, thermacol, clay, soap/wax etc.	15
Course Outcomes		
After successful completion of course students will able to:		
CO1	Develop an understanding of various marking devices and surfaces and learn to draw through observation and using motor skills	
CO2	Develop skills to understand the size, scale, and proportion, surface textures through drawing techniques of line, shapes and volume.	
CO3	Student presents the required deliverables - well- crafted drawings, models and other visual presentation material - to convincingly communicate the scope and content of the project in a meaningful and creative manner..	
CO4	Illustrate the ability of design idea through 2d and 3d visuals	

CO5	To observe the environment and draw exterior and interior spaces
Text Books:	1.S. C. Rangwala - - Charotar Publishing, Anand *-Engineering materials* 2.Francis D. K. Ching , VNR, 1975,- *Building Construction Illustrated*
Reference Books:	• Powell, Dick; Design Rendering Techniques: A Guide to Drawing and Presenting Design Ideas, Publisher: North Light Books, 1996 • W.B.Mckay –Building construction Vol1 –Longmans, UK 1981 • W.B.Mckay –Building construction Vol 3 –Longmans, UK 1981