



Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD)
Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Department of Resource Management B.Sc., Interior Design and Resource Management

Programme Outcomes:

1. Attain and apply fundamental knowledge in basic concepts of Science
2. Gain Competency to communicate effectively
3. Develop critical thinking for innovations
4. Identify problems and suggest appropriate scientific and technological solution
5. Function individually or as a team in work environment
6. Acquire research skills to inquire, synthesize and articulate solution for community
7. Access and apply ICT tools for learning
8. Exhibit professional ethics and norms for social development
9. Implement acquired knowledge in basic sciences for lifelong learning
10. Promote Individual entrepreneurial skills

Programme Specific Outcomes:

1. Demonstrate domain-specific job clarity while applying learning focused toward life skills.
2. Showcase a successful application of learnt potential and stand out as competent graduates.
3. Improve the chances of success in the career by becoming a responsible designer

Scheme of Instruction & Examinations (For students admitted from 2023-2024 & onwards)

Part	Subject Code	Name of paper / Component	Hours of Instruction / Week T+T/T+P	Scheme Examination				
				Duration of Exam	CIA	CE	Total	Credit
First Semester								
I	23BLT001/ 23BLH001/ 23BLF001	பொதுத்தமிழ்தாள் I- இக்கால இலக்கியம்/ Prose and Non Detailed Texts/ French I	2	3	50	50	100	2
II	23BAEEC1	Ability Enhancement Compulsory Course-I English for Communication	4	3	50	50	100	4
II	Generic Elective							
		Generic Elective - I Perspectives of Home Science	4+4	3	50	50	100	6
III	Discipline Specific Core Courses							
	23BIDC01	Basics in Interior Design and Resource Management	4+4	3	50	50	100	6
	23BIDC02	Introduction to Design and Visual Art	4	3	50	50	100	4
	23BIDC02P	Design Applications in Art	4	3	50	50	100	2
								6
IV	23BVBNC1/ 23BVBNS1/ 23BVBSP1	Skill Enhancement Course Value Based Course Elective I – NCC / NSS / Sports	3/2	2	60	40	100	4/1/1
		Games – Practical	1		-	-	-	
Total								28/25

Second Semester									
I	23BLT002/ 23BLH002/ 23BLF002	பொதுத்தமிழ்தாள் II - அற இலக்கியம்/ Grammar, Translation and General Essay / French II	2	3	50	50	100	2	
II	23BAEES1	Ability Enhancement Compulsory Course-II Environmental Studies	4	3	50	50	100	4	
Generic Electives									
II	23BENGE2A/ 23BENGE2B/ 23BENGE2C/ 23BENGE2D	Generic Elective - II Introduction to Literature / British Literature / Modern Indian Literature / New Literatures in English	5+1	3	50	50	100	6	
III Discipline Specific Core Courses									
	23BIDC03	Furniture and Furnishings	4	3	50	50	100	4	6
	23BIDC03P	Home Furnishings	4	3	50	50	100	2	
	23BIDC04	Residential Space Planning	4	3	50	50	100	4	6
	23BIDC04P	Computer Applications in Drafting	4	3	50	50	100	2	
IV	23BVBNC2/ 23BVBNS2/ 23BVBSP2	Skill Enhancement Course Value Based Course Elective-I – NCC / NSS / Sports	3/2	2	60	40	100	4/1/1	
		Games – Practical	1		-	-	-		
								Total	28/25
Third Semester									
I	23BLT003/ 23BLH003/ 23BLF003	பொதுத்தமிழ் தாள் III - சமய இலக்கியம் / Ancient and Modern Poetry / French III	2	3	50	50	100	2	
II	Generic Elective								
		Generic Elective III	5+1	3	50	50	100	6	
III Discipline Specific Core Courses									
	23BIDC05	Floriculture and Landscape Designing	4+4	3	50	50	100	6	
	23BIDC06	Art in Residential and Commercial Space	4	3	50	50	100	4	
	23BIDC06P	3Ds Max in Interior Design	4	3	50	50	100	2	6
IV Skill Enhancement Courses									
	23BSBCS1	Skill Based Compulsory Course – I Communication Skill	4P	3	50	50	100	2	
		Skill Based Elective Course - II	4P	3	50	50	100	2	
	23BVBNC3/ 23BVBNS3/ 23BVBSP3	Value Based Course Elective I – NCC / NSS / Sports	3/2	2	60	40	100	4/1/1	
		Value Based Course Elective II	2	-	100	-	100	2	
								Total	30/27

Fourth Semester									
I	23BLT004/ 23BLH004/ 23BLF004	பொதுத்தமிழ் தாள் IV - சங்க இலக்கியம் / Introduction to Functional Hindi and Journalism / French IV	2	3	50	50	100	2	
II	Generic Elective								
		Generic Elective IV	5+1	3	50	50	100	6	
III	Discipline Specific Core Courses								
	23BIDC07	Principles of Housekeeping	4	3	50	50	100	4	6
	23BIDC07P	Commercial Art in Interior Decoration	4	3	50	50	100	2	
	23BIDC08	Building Services for Interiors	4+4	3	50	50	100	6	
IV	Skill Enhancement Courses								
	23BSBSS1	Skill Based Compulsory Course – III Soft Skill	4P	3	50	50	100	2	
		Skill Based Elective Course - IV	4P	3	50	50	100	2	
	23BVBNC4/ 23BVBNS4/ 23BVBS4	Value Based Course Elective I – NCC / NSS / Sports	3/2	2	60	40	100	4/1/1	
		Value Based Course Elective III	2	-	100	-	100	2	
							Total	30/27	
Internship during Summer Vacation for 30 days									
	Fifth Semester								
III	Discipline Specific Core Courses								
	23BIDC09	Basics in Architecture	4	3	50	50	100	4	6
	23BIDC09P	Model Making Workshop	4	3	50	50	100	2	
	23BIDC10	Family Resource Management	4+4	3	50	50	100	6	
	Discipline Specific Elective Courses								
	23BIDDE1	DSE - I Project and Internship	5+1	3	50	50	100	6	
	23BIDDE2 – 23BIDDE3	DSE – II Theory + Practical / Theory + Tutorial	5+1	3	50	50	100	6	
IV	Skill Enhancement Courses								
	23BVBNC5/ 23BVBNS5/ 23BVBS5	Value Based Course Elective I – NCC / NSS / Sports	3/2	2	60	40	100	4/1/1	
							Total	28/25	
	Sixth Semester								
III	Discipline Specific Core Courses								
	23BIDC11	Principles of Ergonomics	4+4	3	50	50	100	6	
	23BIDC12	Professional Practice and Management	4	3	50	50	100	4	6
	23BIDC12P	Portfolio Presentation	4	3	50	50	100	2	
	Discipline Specific Elective Courses								
	23BIDDE4 - 23BIDDE7	DSE - III Theory + Practical / Theory + Tutorial	5+1/ 4+4	3	50	50	100	6	
	23BIDDE4 -	DSE - IV	5+1/	3	50	50	100	6	

	23BIDDE7	Theory + Practical / Theory + Tutorial	4+4						
IV	Skill Enhancement Courses								
	23BVBNC6/ 23BVBNS6/ 23BVBSP6	Value Based Course Elective I – NCC / NSS / Sports	3/2	2	60	40	100	4/1/1	
								Total	28/25
								Over all total	172/154

➤ **Ability Enhancement Compulsory Courses**

- English for Communication
- Environmental Studies

➤ **Skill Enhancement courses**, are Skill Based and / or Value Based which are aimed at providing hands on training, competencies, skills etc. and may be opted by the students from the electives offered by the departments or from SWAYAM MOOCs / NPTEL

Skill Based courses

- Skill Based Compulsory Course I – 23BSBCS1 – Communication Skill during 3rd semester
- Skill Based Compulsory Course III - 23BSBSS1 – Soft Skill during 4th semester
- Skill Based courses offered by Resource Management department

S.No	Skill Based Elective courses (II / IV)	Semester	Hours of Instruction	Credit/Course
1.	23BIDSE1-Floral Art	3 & 4	4P	2
2.	23BIDSE2-Creative Arts and Crafts			
3.	23BIDSE3-Basics of Interior Design			

• **Value Based Courses - Elective I**

Value Based Courses Elective I	Subject Code	Semester	No of .Credits
NCC/ NSS/ Sports	23BVBNC1-6/	1-6	24 Credits
	23BVBNS1-6/		6 Credits
	23BVBSP1-6		6 Credits

• **Value Based Courses - Elective II/III offered by Resource Management department**

Value Based Courses Elective II/III	Subject Code	Semester	Hours of Instruction	Credit / Course
Green practices for sustainable living	23BIDVB1	3&4	2 Hrs	2

➤ **Discipline Specific Elective Courses** should be related to their own core which may be from SWAYAM MOOCs / NPTEL also

- All the courses have 6 credits with 4 hours of theory and 4 hours of practical or 5 hours of theory and 1 hour of Tutorials.

S.No	DSE Courses	Semester	Hours of Instruction	Credits
			Theory + Practical / Theory + Tutorial	
1.	23BIDDE1 Project and Internship	5	5+1 hours	6
2.	23BIDDE2 Entrepreneurship	5	5+1 hours	6
3.	23BIDDE3 Fundamentals of Research	5	5+1 hours	6
4.	23BIDDE4 Kitchen Design	6	4+4 hours	6
5.	23BIDDE5 Alternate Sources of Energy	6	5+1 hours	6
6.	23BIDDE6 Waste Management for Health and Wellbeing	6	5+1 hours	6
7.	23BIDDE7 Principles of Ancient Sciences in Buildings	6	5+1 hours	6

➤ **Generic Elective Courses** offered for other disciplines / departments

- A Core Course offered in a Discipline / Subject may be offered as a Generic Elective for other departments.

S.No	Generic Elective Courses	Semester	Hours of Instruction	Credits
			Theory + Practical / Theory + Tutorial	
1.	23BIDGE1 Perspectives of Home Science	1	4+4	6
2.	23BIDGE2 Interior Decor	3	5+1	
3.	23BIDGE3 Hospitality Management and Housekeeping	3	5+1	
4.	23BIDGE4 Health Ergonomics	4	5+1	
5.	23BIDGE5 Consumer Economics and the Green Consumer	4	5+1	
6.	23BIDGE6 Indian Art and Architecture	4	5+1	

Total credits to earn the degree

1. Part I Components - 8 Credits (Languages)
2. Part II Components – 32 Credits (Ability Enhancement Compulsory Courses – 8 Credits and Generic Elective Courses – 24 Credits)
3. Part III Components - 96 Credits (Discipline Specific Core Courses 72 Credits and Discipline Specific Elective Courses - 24 Credits)
4. Part IV Components – 36/18 (Skill Enhancement Courses – Skill Based Courses – 8 Credits, Value Based Courses Elective I (NCC/NSS/Sports) – 24/6/6, Value Based Elective Courses II & III – 4 Credits)

5. Minimum One Course should be from SWAYAM MOOCs/ NPTEL.

One to 4 Courses may be from SWAYAM MOOCs/NPTEL for Credit Transfer in DSE / Generic Elective.

Basics in Interior Design and Resource Management

Semester I
23BIDC01

Hours of Instruction/week: 4+4
No. of Credits: 6

Objectives: Prepare students to:

1. Understand and interpret the principles of art in Interior design and decipher the nuances of Indian Interior design
2. Use the elements and principles to create beautiful designs and interiors
3. Know the concept, nature and role of home management in the changing world
4. Understand the motivating factors and their interrelatedness
5. Develop decision making and management skills in use of resources in different stages of family life cycle

Unit 1: Introduction to Interior Design and Home Management

Conceptual meaning of Interior design and Interior decoration
History, growth and development of Interior decoration in India. Characteristics of Indian Interior Design-cultural and ethnic influences. Definition and functions of an Interior designer. Qualities of a good designer in visual and graphic arts. Relation of good taste and perception of Interior Design
Concept of management; role of home management in changing world; need for management, Home maker as manager; qualities of an efficient home maker; obstacles for good management

10

Unit 2: Basic Design Fundamentals

Definition and classification of design - structural and decorative, natural and man-made, vernacular and technological, requirements of good structural and decorative design. Purpose of designing. Classification of decorative design- naturalistic, conventional, geometric, abstract, historic and biomorphic. Types of design decisions-functional and visual or aesthetic designs.
Elements of design - Line-types-actual, implied, psychic; Line and direction-vertical, horizontal, diagonal, curved, zigzag; characteristics of line - creation and use
Shape - two dimensional; categories: geometric and organic or free forms, positive and negative shapes. Forms-three dimensional; categories: rectilinear and curvilinear. Space - positive and negative. Size, Texture - classification; Pattern and ornamentation - use in Interior décor

15

Unit 3: Design Principles

Principles of design: meaning and the basic five design principles; use in art and interior design. Balance, Rhythm, Harmony, Proportion and Emphasis - meaning, types (classification) and methods of achieving; their role in Interior designing.
Colour - Sources of colour, Colour as an element in Interior designing.
Colour theories and application, Prang colour and Munsell colour system; Qualities of colour; Colour schemes - concept and classification - related and contrasting colour schemes

10

Evaluation of design-criteria for evaluation.

Unit 4: Motivating Factors in Management

Values, goals and standards; Values - types - intrinsic and instrumental, factual and normative values; personal values, Parker's values

10

Goals- meaning and definition, classification of goals – long term, intermediate and means end goals

Standards: concept, classification, attributes – clarity, flexibility and reality changing standards, criteria for choosing standards; standard of living Interrelationship of values, goals and standards

Definition, relation of decision making to management.

Types of decisions – non programmed and programmed, group and individual decision, social and economic decision, routine and conscious decision, technical, legal and political decisions, central and satellite decision

Unit 5: Management Process and Family life cycle

15

The Management Process: Concept and definition

Planning- steps in planning, characteristics, role of planning, limitations of planning

Organizing – process, importance

Controlling – characteristics, process, requirements for effective control system, steps

Evaluation – characteristics, methods

Concept of the family life cycle -Stages of family life cycle

Recent trends; management of resources in different stages

Total Hours 60

Related Practicals

Hours of Instruction/ week: 4

S.No

List of Exercises

1. Fundamental elements of design in 2-D and their definitions; point, line, shape, form, space, texture, value, color and material
2. Introduction to the principles of design in 2- D and 3-D - unity, balance, symmetry proportion, scale, hierarchy, rhythm, contrast, harmony, focus, use of grids, creating repetitive patterns.
3. Concepts of geometry Introduction to different 3-D forms and primitive forms, shapes and understand the behavior when combined. Transformations of 2-D to 3-D.Modify natural forms and apply on two dimensional and three dimensional objects
4. Study and analyse forms, patterns and colour schemes in nature. Primary, secondary, tertiary colors, color wheel, color schemes color value, intensity, and modification of color hues – tints, shades, neutralization. Color charts – types, making and using. Color harmony, use of color harmony.
5. Design Sheets of Colour Scheme Effects-Achromatic, hue, value, intensity with suitable medium, Application of various colour harmonies in room interiors and observe the effects of colour on each – living, bedroom, pooja, children's room
6. Evaluate art objects for design – elements, principles, colour and purpose
7. Free hand drawing of geometrical figures
Free hand drawing of certain pieces of furniture
Free hand drawing of designs to be incorporated as elements in interior design e.g. Designs of cornice, ornamented pillars, carved chair etc
8. Value imbibed and its adoption in day-to-day life, Obstacles faced and Steps taken to achieve goals and standards
9. Draw decision making tree indicating the different process involved by quoting an example

10. Plan an event by adopting management process

Total Hours - 60

Text Books:

1. Chaudhari, S.N., (2005), "Interior Design", Jaipur: Aavishkar Publishers, India.
2. Kasu, A.A., (2005), "Interior Design", Delhi: Ashish Book Centre
3. Shaw, R.B., (2003), "Interiors by Design", London, New York: Ruland Peters and Small
4. Mann, M.K., (2004). "Home Management for Indian Families". New Delhi: Kalyani Publication
5. Seetharaman, P., (2005), "Introduction to Family Resource Management". New York: CBS Publishers, London.

Reference Books:

1. Campbell, G., (2006), "The Grove Encyclopedia of Decorative Arts", New York: Oxford University Press.
2. Thornton, P., (2000), "Authentic Decor: Domestic Interior", 1620–1920. London: Seven Dials.
3. Sharma, N., (2006), "Home Management, Ahmedabad": Murari Lal Publishers
4. Shukul, M and Gandotra, V.,(2006) "Home Management and Family Finance", New Delhi: Dominant Publishers
5. Sharma, V., (2005). "Modern Home Management. Jaipur": Shree Niwas Publications

Course outcomes: On completion of the Course, students will be able to:

1. Interpret, draw, analyze and evaluate designs for their functionality
2. Distinguish designs of functional value from those of aesthetic value
3. Comprehend significance of design concepts as an integral component of man's living styles from bygone days
4. Adopt efficient homemaking skills with good managerial potentials
5. Practice values, identify goals and set standards in day-to-day living

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PSO 1	PSO 2	PSO 3
CO 1	H	H	H	M	M	L	H	H	L	M	M	H	H
CO 2	H	H	M	M	L	M	L	M	M	M	H	H	H
CO 3	H	H	H	H	M	M	M	M	H	M	H	H	H
CO 4	H	M	M	M	M	L	-	H	H	H	H	H	H
CO 5	H	M	L	M	H	H	-	H	M	L	H	H	H

Introduction to Design and Visual Art

Semester I
23BIDC02

Hours of Instruction/week: 4
No. of Credits: 4

Objectives: Prepare students to:

1. Understand and interpret the principles of art in interior design and decipher the nuances of interior design
2. Understand the qualities of lighting as design element
3. Learn skills on recent trends in use of colour and lighting in functional contexts

Unit 1: Introduction to Visual Art

Meaning and philosophy of art; categories of art related to interior design and architecture: visual, plastic, decorative, applied arts. Type of arts - visual art and graphic art; visual design and graphic design. 10

Concept of design; ABC of basics of design – Aesthetics, Basic design and Creativity, their significance in design development. Varieties of art: Art, abstract and surreal

Unit 2: Fundamentals of Art

Types of visual art – applied art, industrial design, graphic design, fashion design, interior design, decorative art, Art Nouveau and Art deco 10

Meaning, importance and use in visual and graphic arts Point or mark. Purpose of designing.

Unit 3: Visual and Graphic Art in Accessories

Definition and importance of accessories as art forms. Classification – functional, decorative and both. Selection of accessories, placement of accessories - location and back ground for accessories, Difference between accessories and collection 15

Pictures as accessories - types of picture, selection of pictures, mounting , framing and hanging . Art-painting, drawings, prints, photographs, reproductions and posters
Crafts-pottery, blown and stained glass, wood craft, basket making Sculpture and Antiques

Plants and flowers as accessories

Unit 4: Visual Techniques

Sources of light - natural, artificial lighting. Benefits of effective lighting in the house. The Color spectrum, physiology of vision. Sources of lighting – natural and artificial lighting. Natural: source- sun-merits. Artificial: sources-incandescent & fluorescent-merits and demerits. Types of lighting – general lighting, task lighting, accent lighting. Requirements for good lighting; measurement of lighting. Methods of artificial lighting – direct, indirect, semi direct, semi indirect, direct-indirect. Architectural lighting - diffused, cove, panel, spot, concealed etc., 13

Lighting accessories – switches, sockets, fuse, outlets, lamp holders, lamps and shades

Planning lighting for different rooms- living, dining, study, kitchen, washrooms.

Unit 5: Application of Colour and Light in Interiors

Use of color and light in various functional contexts. Residential interiors-living room, bed room, children’s room, kitchen, bathroom. Non-Residential interiors- hotels and motels, restaurants, showrooms, retail outlets, schools and colleges, health care facilities. Factors affecting colour and lighting in interiors - planning lighting for interiors – home and commercial space. Psychological effects of colour. 12

Modern features in use of color and lighting in residential and commercial spaces.

Trendy materials in lighting and lighting fixtures.

Total Hours 60

Text books:

1. Choudhury, A.K.R., (2000). "Modern Concepts of Colour and Appearance". New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.
2. Pile, J., (2003), "Color in Interior Design, New York: McGraw Hill Companies
3. Shaw, R.B., (2003), "Interiors by Design", London, New York: Ruland Peters and Small
4. Pile, J., (2003), "Interior Design", 3rd Ed, New Jersey, USA: Pearson
5. Piotrowski, C, (2004), "Becoming an Interior Designer", New Jersey, USA: John Wiley & Sons,

Reference Books:

1. Frank, I, (2000), "The Theory of Decorative Art: An Anthology of European and American Writings", 1750–1940. New Haven: Yale University Press.
2. Campbell, G. (2006), "The Grove Encyclopedia of Decorative Arts", New York: Oxford University Press.
3. Thornton, P. (2000), "Authentic Decor: Domestic Interior", 1620–1920. London: Seven Dials.
4. Faulkner, R. and Faulkner, S. (1987). Inside Today's home, New York: Rinehart Winston, London.
5. Holtzschue, L., (1995). Understanding Color - An introduction for Designers, New York: John Wiley and Sons

Course outcomes: On completion of the Course, students will be able to:

1. Appreciate role of designs in various contexts, cultures and ethnic influences and apply visual elements and principles in designing interiors
2. Customize/ optimize use of visual arts, accessories and antiques for decorating interiors
3. Gain knowledge on human visual system, visual perception and fundamentals of art
4. Appraise recent trends in use of colour and lighting in interiors
5. Design and solve complex colour and lighting problems using the knowledge gained.

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	H	H	H	M	M	M	L	-	H	H	H	H	H
CO 2	H	H	H	L	L	L	-	M	M	H	H	H	H
CO 3	H	H	H	L	L	L	-	M	M	H	H	H	H
CO 4	H	H	H	H	M	H	M	M	L	M	H	H	H
CO 5	H	M	H	H	H	H	M	M	M	M	H	H	H

Design Applications in Art

Semester I
23BIDC02P

Hours of Instruction/week: 4
No. of Credits: 2

Objectives: Prepare students to:

1. Produce a variety of creative responses through exploration of art ideas
2. Understand various design principles
3. Apply the knowledge gained in producing two dimensional and three dimensional compositions in art works.
4. Understand the power and precision of basic shapes in drafting

S.No

List of Exercises

1. Identify and research a particular aspect of art and design – paintings, graphic media, and photographs for their design, composition, colour combinations, its applications and representation of ideas
2. Design greeting cards for different occasions
3. Develop designs suitable for various decorations – Floor, carpet, wall hanging, posters and other areas.
4. Identify the suitable pictures for different rooms; Practice mounting of pictures following law of margins – vertical, horizontal and square pictures
5. Develop designs (basic motif) involving elements and use in various applications in interiors – fabric design, stained glass, stencil painting, mural and collage involving all the principles of composition
6. Arrange areas applying the elements, principles and colours in residential and commercial displays –living room, bed room, dining room, Pooja- reception areas textile showroom and handicrafts
7. Using Computer - Meaning, importance, basic parts of a desktop computer and laptop computer. Working of Computers – Input, output, processing, keyboard layout and data entry, command or special keys, basic typing rules.
8. Using Software – Files & documents, folders and directories, saving files and documents, printing, exit or quit, menus, installing new software, backing up files, compression and decompression
9. Introduction to AutoCAD software, Screen structure, Coordinate systems- Absolute, Relative Rectangular, Relative Polar Coordinate, Units, Limits, Zoom.
10. Basic shapes: Line, Arc, Circle, Rectangle, Polygon, Spline, and Ellipse, Polygon, Rectangle and other shapes

Total Hours 60

Text Books:

1. Kasu, A.A, (2005), "Interior Design", Delhi: Ashish book centre, India.
2. Lal.R and Rana.R(2015), "A Textbook of Engineering Drawing: Along with an introduction to AutoCAD"®, New Delhi: IK International Publishing House.

Reference Books:

1. Chaudhari.S.N, (2006), "Interior Design", Jaipur: Avishkar publishers, India.
2. Rao,P.M, (2005), "Interior Design – Visual Presentation", USA :John Wiley and Co Sons.
3. Shaw.R.B, (2003), "Interiors by Design", New York: Ruland Peters and small CICO Book

Publications, London.

Course outcomes: On completion of the Course, students will be able to:

1. Use and apply various elements and principles on two dimensional and 3 dimensional compositions
2. Develop designs suitable for various applications
3. Practice various techniques in creating art
4. Adopt scale, dimensioning and lettering techniques in presentation drawings
5. Gain knowledge in basic shapes in drafting

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	H	H	H	M	M	L	H	M	M	H	H	H	H
CO 2	H	H	H	M	M	M	L	M	H	H	H	H	H
CO 3	H	H	H	H	M	M	L	H	H	H	H	H	H
CO 4	H	H	H	H	M	L	L	M	M	H	H	H	H
CO 5	H	H	H	H	M	H	M	L	H	H	H	H	H

Furniture and Furnishings

Semester II
23BIDC03

Hours of Instruction/week: 4
No. of Credits: 4

Objectives: Enable students to

1. Understand and develop the art and skill of designing furniture for various purposes in home interiors
2. Gain knowledge on selection, arrangement, care and maintenance of furniture
3. Understand the role of fabrics used in interiors
4. To incorporate fabrics applications in interiors

Unit 1: Significance of Furniture and Furnishings

Furniture- Meaning and importance, classification, factors influencing furniture decisions – family needs, preferences, availability, principles of design and financial limit. 10

Furnishings- Importance of furnishings, textile vs. fabric, textile and fabric selection, selection criteria in relation to background of walls, floors and ceilings. Types and selection of rugs and carpets, fabric finishing and specifications

Unit 2: Furniture types and Textile for interiors

Furniture-traditional furniture, contemporary – 20th Century furniture, modern – features of modern furniture and modular furniture 15

Types of furniture – built in furniture – movable furniture –upholstered furniture - Sectional furniture - systems furniture – readymade furniture.

Fabrics for interiors - introduction, Interior fabric, element, design, colour and application, classification of fabrics for Interiors - Introduction, types of fabric and its applications.

Interior textiles for rooms - Bedroom - Materials and its applications in sheets, pillow cases, blankets, mattress covers, dust ruffles. Bathroom - shower curtains and caps, terry towels, robes, Living room-throw pillows, cushions, upholstery, table clothes, lampshade, Dining –table linens, runners, hand towels and kitchen – apron, dishcloths, kitchen towels, oven mitts.

Unit 3: Display of Furniture and Furnishings

Arrangement of furniture using principles of design, general guiding concepts in arranging furniture, planning furniture for selected activities. 13

Window types - dormer, ranch, picture, window wall, double hung, sliding, casement, awning, bay, bow, french window, arch window.

Window treatments – hard window treatment – blinds, shutters, screens, panels, short screens, lambrequin, shades and curtains.

Soft Window Treatment– curtains & draperies –one way draw, tieback, crisscross, casement, glass curtain. tier, ruffles, cafe, and double hung draw. styles of hanging

Decorative curtain head – cornice, swag, cascade, valance. Accessories for window curtains.

Unit 4: Construction Materials and Methods

Furniture materials – wood – teak, rose wood, walnut, cedar, mahogany, pine, birch, sal and ply wood, bamboo, cane, metals, plastics, leathers glass rattan. 12

Modern materials – wood based panels such as plywood , MDF, HDF, Particle board , pre laminated boards; fiber glass, veneers

Finishes- Shaping, carving, tapestry, turning, fluting, reeding, joining and finishes joining of furniture - types of joints

Upholstered furniture, upholstering – types, methods and materials used
 Furnishings-Steps involved in fabric preparation. Methods of transferring pattern markings on to the fabric. Measuring for construction of curtain, methods of drafting curtains, draperies, pillow covers, slip covers and cushion covers. Construction of furnishings and Selection. Prepare a budget for the cost involved in furnishing a house

Unit 5: Care and Maintenance

Care of different types of furniture – wood, metals, plastic, and cane. Furniture polishes – types, natural and synthetic varnishes
 Care and Maintenance of soft furnishings – curtains, draperies, carpets and rugs. mending, darning, laundering, and storage of furnishings

10

Total Hours 60

Text Books:

1. **Gandotra V, Shukul M and Jaiswal N**, (2011). “Introduction to Interior Design and Decoration”, New Delhi: Dominant publishers, India
2. **Chaudhari.S.N**, (2006), “Interior Design”, Jaipur: Aavishkar Publisher, India
3. **Stuart.L**, (2013) “Furniture Design: An Introduction to Development, Materials and Manufacturing”, Laurence King Publishing, London.
4. **Anita.T**, (2011), “Textiles for Apparel and Home Furnishing”, New Delhi: Sonali Publications, India.
5. **Kharuna.S**, (2012), “Fabrics for Fashion and Textile Design”, New Delhi: Sonali Publications, India.

Reference Books:

1. **Faulkner, R. and Faulkner,S**, (1987). Inside Today’s home, New York: Rinebart Winston, India.
2. **Mendelson, C.** (2005). “Home Comforts the Art and Science of keeping house”, New York: Scriber Company, London.
3. **Stepat, D.Van**, (1991). “Introduction to Home Furnishings. New York”: The Macmillan Company, London.
4. **Premavathy .S, Sonia.B and Preeti. M**, (2005), “An Introduction to Family Resource Management”, New Delhi: CBS Publishers & Distributors, India.
5. **Rose Sinclair**, (2015), “Textiles and Fashion-Materials, Design and Technology”, UK: Wood head Publishing Limited- Elsevier.
6. **Hillard.E**, (2000), “Brilliant Colour at Home”, London- Kyle Eathie Ltd, New York.

Course outcomes: On completion of the Course, students will be able to:

1. Identify and select furniture for different areas of a residence
2. Analyze the furniture for the process involved, joints, joineries used and finishes applied in furniture construction
3. Understand the composition, construction, and finishes applied on fabrics for furnishings
4. Analyze the importance and selection of furnishing materials in relation to backgrounds on walls.
5. Care and maintenance of furnishings

CO / PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	H	H	L	M	H	-	L	H	M	-	M	-	H
CO2	H	L	H	M	L	-	L	L	M	M	H	H	H
CO3	H	L	M	M	L	-	-	L	M	H	H	M	M
CO4	H	M	M	M	H	-	-	L	M	H	H	H	H
CO5	H	H	H	M	M	-	-	L	L	L	H	H	H

Home Furnishings

Semester II
23BIDC03P

Hours of Instruction/week: 4
No. of Credits: 2

Objectives: Prepare students to:

1. Develop and apply designs to enrich furnishings used in the interior
2. To enable the students to learn to construct basic furnishings
3. Understand art and apply its principles in the creation and selection of textiles.

S.No

List of Exercises

1. Basic hand stitches- temporary -types –functional and decorative and Permanent Basic decorative stitches- hand and machine embroidery
2. Surface enrichment of fabrics –applique, cut work, drawn thread work, sequins, mirror work, beadwork, sequins, mirror work
3. Seam-plain seam, run and fell seam, french seam, mantua maker seam, piped seam
Seams Finishes- double stitched, pinked finish, stitched and pinked seam, herring bone seam, hem stitched, overcast, in edge , net-bound , bound ,zig zag
4. Dart-single pointed dart, double pointed dart
Tuck- Pin tuck, cross tuck, piped tuck, shell tuck.
5. Pleats- knife pleat, box pleat, inverted pleat, accordion pleat, sun ray pleat, pinch pleat, kick pleat. gathers
6. Steps involved in fabric preparation, methods of transferring pattern markings on to the fabric.
7. Methods of drafting curtains, draperies, pillow covers, slip covers and cushion covers.
8. Construction of different types of curtains and styles of hanging curtains
9. Construction of pillow and cushion covers
10. Care and maintenance of soft furnishings – stain removal, mending, darning

Total Hours 60

Text Books:

1. Luke. H., (1996). Soft furnishings, New Holland publishers Ltd, Singapore.
2. Wilhide, E and Copestick, I. (2000). Contemporary decorating, conran octopus Ltd., London.
3. Philips B, (2000). Hamlyn book of decorating, octopus publishing Ltd, London.
4. Clifton.c. etal (1991). The complete Home decorator conran octopus Ltd, London.

Reference Books:

1. Levine M (1998). Living rooms, Rockport publishers, USA.
2. Mary Mathews, (1996). Practicals Clothing Construction Part I and Part II Cosmic Press

Course outcomes: On completion of the Course, students will be able to:

1. Create furnishings using sewing machine and basic hand stitches.
2. Compare the methods of drafting, pattern marking for various soft furnishings.
3. Apply suitable hard and soft window treatments for interiors
4. Construct different types of curtains, draperies pillow covers, slip covers and cushion covers.
5. Knowledge on removal of stains , mend and darn the furnishings

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	H	L	H	M	L	L	-	H	H	H	H	H	H
CO 2	H	L	M	L	L	L	-	H	M	H	H	H	H
CO 3	H	H	H	H	M	L	L	L	M	H	H	H	H
CO 4	H	H	M	H	M	M	L	M	M	M	H	H	H
CO 5	H	M	M	H	M	L	L	M	M	M	H	H	H

Residential Space Planning

Semester II
23BIDC04

Hours of Instruction/week: 4
No. of Credits: 4

Objectives: Enable students to:

1. Understand the concept of life space and principles of planning
2. Learn use of materials at different levels or stages of a building construction and aesthetic concepts of using finishes in buildings
3. Imbibe the knowledge on mechanical services in buildings
4. Understand the implications of energy in building design

Unit 1: Site Planning and Housing Design

Site Planning for housing. Selection of site for housing, consideration of physical characteristics of site, location factors, orientation, climate, topography, landscaping. Integration of services and parking. Housing design relating to Indian situations – traditional housing, row housing, cluster housing, apartments, high-rise housing. Principles of planning, Building standards and by-laws **10**

Unit 2: Planning Space

Biological needs, ecological concerns, cultural influences, Psychological effects – privacy, personal space, territoriality, crowding, Planning a space – people, location and orientation, resources available, Planning objectives – utility, economy, beauty and character **10**
Concept of space planning – functions of house. Assessing activities and estimating space requirements for activities, Space allocation and planning.

Unit 3: Components of Building

Meaning and concept of building materials. Classification of building materials **15**
Components of a building – Sub structure and superstructure ; foundation, flooring, walls, ceiling and roof,
Methods of construction-load bearing and framed structure, Levels of construction, Allocation of space for various activities – Social space, work space and private space
Different type of construction materials used in Interiors- structural systems and different type of techniques used in construction -properties trends and usability of the material
Features of construction of building components: foundation, plinth, beam, column, slab, wall, roof, lintel, door, window, staircase

Unit 4: Construction and Finishing Materials

Materials used at various levels of building – foundation, basement, plinth, wall, roof, ceiling, flooring, beams and columns, etc., Use, types, characteristics, advantages and disadvantages of brick, stone, sand, cement, wood, metals, glass and plastic. Selection factors **15**
Wall finishes – plastering, white washing, paint, wall paper, wood panelling, metal wall covers, tiles; use, selection, merits and demerits. Floor finishes – cement, mosaic, marble, tiles, wood, asphalt tiles, resilient materials; use, selection, merits and demerits. Finishes applied to other areas.
Roof – wood, metal, slate, tile, asphalt shingles, glass fibre shingles. Ceiling - false ceiling, plaster of paris, metal, glass, wood, acoustical ceiling materials, light ceiling – thermocol; use, selection, merits and demerits
Green building and sustainable practices. Disaster resistance and mitigation. Prefabrication

Unit 5: Institutions Supporting and Housing Situation in India**10**

Types of housing, housing scenario, housing problems-causes and remedial measures, Housing schemes in India

Financial institutions - HDFC, HUDCO, Nationalised Bank and LIC, Research Institutions - NBO, CBRI, SERC, Standards Institutions – Need for standardisation, types of standards, BIS and its role

Total Hours 60**Text Books:**

1. **Veena Gandotra and Sarjoo Patel**,(2006), 'House for Family Living', New Delhi: Dominant Publishers, India.
2. **Arora, S.P and Bindra, S.P.**, (2013) A Text book of building Construction. New Delhi: Dhanpat Rai Publications,India.
3. **Rangwala, S.C.**,(2008). Engineering Materials. Gujarat: Charotar Publishing House, India.
4. **Kasu**, (2005), 'Interior Design', Mumbai: Ashish Book Center, India.
5. **Leger.E**, (2003), 'Complete Building Construction', London: Wiley-dream tech India Pvt Ltd, UK.

Reference Books:

1. **Raychaudhuri Dutt, Debjani**,(2002), 'How Best to Plan and Build Your Home: A Total Guide forthe Owner',Jaipur: Pustak Mahal, India.
2. **Tolpin, Jim**,(2001), 'New Family Home Creating the Perfect Home for Today and Tomorrow', New Delhi: Taunton Press, India
3. **Usha Shrikant**,(2002), 'Designs for a Lifetime',Chennai: Honesty Publishers, India.
4. Projects and Repairs using Concrete, Brick, Block and Stone (2000). Creative Publishing International
5. Grondzik, Kwok, Stein and Reynolds, (2002), 'Mechanical and electrical equipment for buildings', (11th Ed)

Course outcomes: On successful completion of the Course, students will be able to:

1. Demonstrate knowledge of space designing and its principles
2. Identify key issues in housing finance, affordability and technology systems
3. Identify and select proper construction materials and finishes for building construction
4. Demonstrate knowledge of properties of various building materials
5. Differentiate systems like mechanical, electric and electronic systems

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	L	H	H	H	M	L	L	-	L	M	L	M	M
CO 2	L	H	M	H	M	L	L	-	L	M	L	M	M
CO 3	L	L	M	H	L	L	L	-	L	M	M	H	M
CO 4	L	L	-	H	L	L	M	L	L	L	L	L	H
CO 5	M	H	M	H	L	M	L	-	L	H	L	M	M

Computer Applications in Drafting

Semester II
23BIDC04P

Hours of Instruction/week: 4
No. of Credits: 2

Objectives: Enable students to:

1. Develop basic skills in the use of drawing instruments and drafting techniques
2. Improve skills in presenting 2D, 3D manual drawings and isometric drawings
3. Understand the basics of residential drawing
4. Create 2D representations of 3D objects as plan view, elevations and sections

S.No	List of Exercises
1	Orientation to drafting tools – table, boards, mini drafter, instruments box, set square and ‘T’ square; drafting medium – paper, tracing paper, film and drawing materials
2.	Scale & Lettering -engineering drawing, Scale: full size, true scale, enlarging scale, reducing scale, Border lines, name plate, Lettering: single stroke, double stroke, vertical/ inclined, upper case, lower case and numerals, Dimensioning- meaning types – illustrating different types of dimensioning methods
3	Geometrical Construction-Introduction, points and lines, angles, triangles, quadrilaterals, polygons, circles and arcs ,Bisecting a line or an arc ,Divide a straight line into a given number of equal parts
4	Construction of planes and solid -Draw a regular Polygon – given one side – 2 methods – Pentagon, Hexagon and Octagon
5	Perspective drawing-one point perspective and two point perspective, visual ray and vanishing point method
6	Drafting Settings in Auto CAD-Editing tools – erase undo, move, copy, mirrors, rotate, trim, extend, scale, stretch, array, offset, fillet, and chamfer
7	Properties : colour, line type, line type scale, line weight, layer text; annotating: text & hatching, b hatch, h edit, p line, p edit, and ADC. Dimensions – linear, aligned, radial, diameter, arc length, jogged, continuous, baseline, dimension style.
8	Drawing: designs for door and window grill, gate, doors, stair systems
9	Drafting house plans Symbols; standards used in drawing house plans Drawing a floor plan with settings, layers and dimensions, and to scales’
10	Drawing house plans for various income group – low, middle and high, Reading and judging house plans, building plan, site plan, roof plan, elevations, sections

Total Hours 60

Text books:

1. Natarajan K. V, (2006), “A Text Book of Engineering Graphics,” Chennai: Dhanalakshmi Publishers, India.
2. Bhavikatti,S.S and Chitawadgi,M.V, (2017), ‘Building and Drawing’, Hubli
3. Maureen Mitton, (2004), ‘Interior Design Visual Presentation-A Guide to Graphics,Models and Presentation Techniques’,New Jersey: John Wiley and Sons, USA.
4. Arora,S.P and Bindra S.P(2005), Building Cnstruction, Delhi:DhanpatRaiPulications, India

Reference books:

1. **Raychaudhuri Dutt, Debjani**,(2002), 'How Best to Plan and Build Your Home: A Total Guide for the Owner', Jaipur: PustakMahal, India
2. Teach yourself Auto CAD, GIBBS, BPE publication New Delhi.
3. **Omura, G.** 2005, Mastering Auto CAD 2005 and Auto CAD LT 2005, BPB Publications, New Delhi.
4. **Saxena, S.** (2003), A first course in computers, Vikas Publishing house, New Delhi

Course outcomes: On successful completion of the Course, students will be able to:

1. Use drawing instruments and drafting techniques
2. Exhibit drafting skills to express design ideas
3. Draft perspective projections using different method
4. Understand geometric construction and Produce 2D Orthographic Projections
5. Demonstrate dimensioning concepts and techniques in 3D presentation

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	H	L	M	H	M	H	H	M	M	M	H	H	H
CO 2	H	H	H	H	M	L	H	H	M	M	H	H	H
CO 3	H	H	H	H	L	M	M	H	H	H	H	H	H
CO 4	H	H	H	H	M	L	H	H	M	H	H	H	H
CO 5	H	H	H	H	M	H	M	H	H	M	H	H	H

Floriculture and Landscape Designing

Semester III
23BIDC05

Hours of Instruction/week: 4+4
No. of Credits: 6

Objectives: Prepare students to:

1. Gain knowledge to identify and cultivate ornamental plants
2. Understand the importance of cut flowers and their scope in floriculture industry
3. Learn about rising of different types/styles of gardens
4. Draft landscape plans for commercial and residential sectors

Unit 1: Introduction to Landscape Garden

Definition, Importance and Scope of Floriculture, Classification of ornamental plants- Annuals, Biennials and Perennials, Types of Garden-English garden, French garden, Mughal garden, Japanese Garden, Italian garden, Persian garden Styles of Garden-Formal, Informal and Free Style

10

Unit 2: Principles and Components of Garden

Beauty Principles-Balance, Proportion, Scale, Rhythm and Harmony
Garden Components-Trees, climbers and creepers, edges and hedges, topiary and trophy, lawn, sunken garden, garden adornments, green house
Prospects for entrepreneurship – saleable products, plants- saplings, cut flowers, value added products like flower arrangement, bouquet etc

10

Unit 3: Indoor Gardening and Interior Landscaping

Indoor Gardening - Factors considered for growing indoor plants, selection and placement of indoor
Plants, Types of indoor plants, care and maintenance, Bonsai-plants suitable for bonsai culture, techniques and styles, Terrarium – conceptual meaning, creating terrarium, Accessories in indoor gardening – pools, fountains, aquarium
Interior Landscaping – Meaning, elements & principles, features, benefits, Designing the creative interior landscape

17

Unit 4: Establishment of Lawn

Meaning, Importance & purpose of lawn, Preparation of land for laying lawn, Methods of raising lawn, types of lawn grass, Plants suitable for lawn, Ready to use lawns as saleable products, Care and Maintenance

18

5

Unit 5: Landscaping the Public Areas

Landscaping the educational institutions and industries, Landscaping the residential areas, Landscaping hospitals, airways and railway, Landscaping IT parks, Xeriscaping -Water efficient gardens/landscaping

Total Hours 60

S.No

Related Practicals

Hours of Instruction/ week: 4

1. Identification of different ornamental plants – collection of plants
2. Visit to landscape garden
3. Visit nursery to be familiarise with various ornamental plants

4. Make an album to depict the garden components
5. Draw plans for various types of garden
6. Demonstration on creating landscape garden, terrarium, bonsai, xeriscape, lawn
7. Workshops on flower arrangement – types and styles
8. Workshops on bouquet making, flower tying, garland making
9. Survey of florists, nursery owners and ornamental garden professionals
10. Interview the Hotel/ Hospital/ Corporate people about the gardens in their premises

Total Hours 60

Course outcomes: On completion of the Course, students will be able to:

1. Distinguish different ornamental plants and their commercial/ aesthetic significance
2. Comprehend methods of propagation and commercialization of ornamental plants
3. Analyse value addition of ornamental plants and flowers for aesthetics and entrepreneurship
4. Draft sketches/ drawings/layouts of various gardens
5. Develop landscape garden on their own applying the elements and principles

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	-	H	M	-	L	M	-	L	L	M	L	M	H
CO 2	M	H	H	H	M	L	L	M	H	L	M	M	M
CO 3	M	H	H	H	-	L	M	L	H	M	M	M	M
CO 4	H	H	H	H	L	M	M	L	M	M	M	M	H
CO 5	M	H	H	H	M	M	H	-	M	H	M	M	H

Art in Residential and Commercial Space

Semester III
23BIDC06

Hours of Instruction / week: 4
No. of credits: 4

Objectives: Enable students to

1. Understand, define and grasp key terms and principles involved in the components of commercial art.
2. Obtain a broad understanding of displays and be able to employ strategies for making timely and attractive, profitable display decisions in retail industry to attract customers
3. Develop awareness and appreciation of different materials in arts and aesthetics.
4. Apply the principles in creating art objects for home decoration.
5. Describe the theory and methods behind biomimicry

Unit 1: Concept of Interior Elements

10

Meaning and significance of art in the home. Factors affecting art forms – Geography, community, materials, individuality and appearance.

Interior Elements-Role of walls, roofs, floors, staircase, doors and windows, light, colour and texture along with furniture.

Basic concepts of Shaping and Enrichment of different materials. Wood – methods of shaping and decorating – printing, varnish, shellac, lacquer. Wood work – cutting, turning, carving, Inlay; Metals and Alloys – Enrichment of metals- aluminium, bronze, brass, silver, copper and gold; Ceramics – Ornamentation on ceramics – earthenware, stoneware, chinaware, porcelain and terracotta; Glass – Enrichment – etching, engraving, cutting, enamelling, painting. Use of glass in home.

Unit 2: Residential Art Designs

10

Study of symbolic figures, forms and motifs of different periods

Traditional Indian Designs :Designs and motifs used on surfaces and objectives including pottery, stone and metal ware, wood crafts, carpets, textiles, lamps and other handicrafts of creative designs.

Contemporary Indian Designs And Motifs :Designs and motifs used in carpets, textiles, lamps, vases, handicrafts, wood, stone and metal ware

Indian Folk Designs: Folk designs and motifs used on walls, floors and utility objects, such as Madhubani, warli, rangoli, Sankhera, etc.

Quantity of Illumination

Factors affecting the quantity of illumination in a room: room proportion, colour, texture and cleanliness of room surface, lamp lumen, lamp lumen depreciation ;Competition of room index, coefficient of utilization, maintenance factor of luminance; Planning lighting installation for a given interior space

- Introduction to Biomimicry and Systems

Unit 3: Visual Merchandising

10

Introduction, Objectives, Techniques, Visual Merchandising at different stores- apparel store, furniture store, gift store. store exteriors - store signs, facade; banners planters and awnings, elements of display. Product display –hierarchy of product display , Exhibition spaces – display for exhibition; Lighting design for commercial spaces task/display/atmospheric/focal lighting; Colouring commercial spaces –

coding/decoding/visual communication

Unit 4: Store Management in Merchandising

15

Introduction, Objectives, Types of stores, Location of a store, Types of retail locations, Planning a store layout, Point of purchase display; Types of store layouts- grid layout, forced-path layout, free-form layout, boutique layout, combined layout, Store layout-- general arrangement, principles and factors; Store space allocation, Heads of space allocation in a store, Managing customer navigation in a store, General rules of customer Traffic in a store, The loop for guiding the shoppers through a store

Unit 5: Window Design and Interior Display

15

Window Display: Meaning and definition, Concept and objectives of window design, significance of display; windows, highpoints, focal points, nesting tables, staircase landings, step raisers, lift area, pennants/danglers, cash counters, space on hire like pillars and entrances; Purpose and importance of display, Rules of display planning, Display settings, Store design, Merchandising : Types of merchandise, merchandise display - exterior and interior, Merchandise presentation strategies, Seasonal displays, other techniques of merchandise placement, Colour blocking, physical materials used to support the display, components of display, Useful display fixtures - Shelves, Gondolas, Round racks, Four ways, Saccades and fixation, Replenishes, Planogramming.

60

Course Outcomes: On completion of the Course students will be able to:

1. Identify elements needed for appropriate displays.
2. Understand the different art forms and their elements
3. Locate possible problems in putting layouts together and work out ways of sorting them out
4. Practice as successful entrepreneurs by creating displays and adopting appreciable display methods.
5. Apply art in creating aesthetic interiors.

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	H	H	L	M	H	-	L	H	M	-	M	-	H
CO 2	H	L	H	M	L	-	L	L	M	M	H	H	H
CO 3	H	L	M	M	L	-	-	L	M	H	H	M	M
CO 4	H	M	M	M	H	-	-	L	M	H	H	H	H
CO 5	H	H	H	M	M	-	-	L	L	L	H	H	H

3Ds Max in Interior Design

Semester III
23BIDC06P

Hours of Instruction / week: 4

No. of credits: 2

Course Objectives: Enable students to:

1. Develop skills in creating building and interior designs using 3Ds Max
2. Create details from a given drawing
3. Use softwares to give effective and realistic outputs and presentation

List of Exercises:

1. **Introduction to 3Ds Max:** Viewport Navigation, Viewport Configuration , Object Selection Methods, Units Setup
2. **Introduction to tools** -Standard and Extended Primitives; Splines ;Boolean Operations Modifier List
3. **Introduction to Materials** ;Animation for Visualization ;*Lights with mental ray*
4. **Drawing line plans**- elevations and section of interior spaces showing location and placement of various elements. Drawing house plans for various income group – low, middle and high
5. **Standardisation of Interior elements** windows and doors- sizes, standards and locations. Counters (kitchen, reception, banks etc.),
6. **Standardisation of Accessories** lighting fixtures and air conditioning gadgets, Toilet fixtures, office automation system. Furniture standards (sizes of domestic and public furniture); Toilet and Kitchen equipment - sizes and standards
7. **Designing of residential interiors** i.e. (Drawing rooms, Bed room, Lobby, Living room, Kitchen, toilet) with specific application of various building materials and interior finishes.
8. **Drawing furniture and accessories** suitable for Residential and commercial space
9. **Design of commercial interior environments** – Store interior, exterior, window display , Visual Graphics, photography and signage
10. **Designing and planning space for various commercial purposes** - restaurants, and hotels, public utility services, airport, educational institutions, hospitals, railway stations Malls, Shopping Arcades

Total Hours - 60

Course Outcomes: After completion of the Course, students will be able to

1. Draw ground floor, first floor plan, elevation and cross section using AutoCAD.
2. Create elevation and detailed drawings in 3D
3. Develop interiors using 3Ds Max.
4. Visualise building interiors and exteriors using 3Ds Max.
5. Edit and present the image using Photoshop

Software used: AutoCAD, 3Ds Max, Photoshop

CO /PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO 1	PSO 2	PSO 3
CO 1	M	H	H	M	H	-	-	M	L	L	L	M	H
CO 2	M	H	H	M	H	-	-	M	L	L	L	M	H
CO 3	M	H	H	M	H	-	-	M	-	-	L	-	H
CO 4	M	H	H	M	H	-	-	M	L	-	-	M	H
CO 5	M	H	H	M	H	-	-	M	L	-	L	M	H



Principles of Housekeeping

Semester IV
23BIDC07

Hours of Instruction/week: 4
No. of Credits: 4

Objectives: Prepare students to:

1. Understand the concepts of Housekeeping
2. Develop skills in Housekeeping services
3. Gain knowledge on housekeeping equipment and supplies

Unit 1: Housekeeping Concepts

Meaning, functions of housekeeping, , importance of housekeeping, need for good housekeeping, areas of housekeeping; Types of restaurants, Classification of Hotels; Housekeeping in different Institutions- commercial sector and welfare sectors, departments that housekeeping Co-ordinates with—reception, catering, interior decoration and other related departments 10

Designing Concepts- Interior designing – using various elements of art, principles of design, Designing of Lobby, Guest Rooms, Restaurants, Ethnic restaurants, etc

Introduction to Front office- Definition - Layout of Front office, The changing trends in Front Office and different front office equipment

Unit 2: Role of Interior Designing in Hotel Management

Planning the Commercial Space based on General office design ; Office functions: space requirements; Office features: reception, conference/meeting room, record room, workstations and equipments, pantry, lunchroom, rest rooms/toilets. 10

Design of Restaurants, Cafeteria & Fast Food Centre - Guest Contact Area, Eating Area. , Cooking Area. Interior designing for multi functional Restaurants and Banquet halls, multi level planning, design and detailing of various work spaces, interactions zones.

Design of hospitality spaces such as theme based restaurants, corporate banquet venues etc

Designing of Educational Facilities Class Rooms, Library (small), Hostel

Designing of Retail Outlets (Books Shops, Boutique, Gift shops, Jewellery Store, Footwear, departmental Store) -General principles related to the type of outlet, Various areas designated ,Storage, Trial rooms

Unit 3: Accessories and Table services

Architectural designs in commercial buildings - basic concepts, features of Hotel architecture 15

Accessories: Pictures, flower arrangement; floor decoration and indoor plants

Tablesideservice: French Service, Russian Service, English Service, American Service;

Table Settings: Formal and Informal, Indian and Western Style

Table Appointments-Linen, Cutlery, Glassware and Table Napkins- Different Types of Folding.

Platter carving: fruits & vegetables for carving, leaf and floral garnish designs for plating arrangements, displays and cocktail presentation, geometric patterns and carving techniques

Spatial and service standards for five star hotels – integration of interior design schemes for rooms, restaurants, bars, health clubs, shopping arcade and other guest areas with the general theme of the hotel.

Special ideas for suites and banquet halls – contemporary interior schemes to integrate new concepts in lighting and materials.

Unit 4: Planning Trends in Housekeeping- Planning Guest Rooms, Bathrooms, Suites, Lounges, Planning for the provision of leisure facilities for a guest, Colour schemes, 13

Lighting concepts & planning, Layout of a hotel room, lighting plan
 Furniture and furnishing in hotels, Selection and arrangement, grouping of furniture according to their purpose, Types of windows, curtains, valences and blinds in Hotel
 Soft coverings and accessories: linen: Classification, characteristics, type and Importance of linen in office premises. Selection, procurement and storage of linen for rooms. Material management in effective linen service such as carpets, curtains, upholstery etc, Weaves qualities of Textile fibers Characteristics & uses of fabrics, Finishes applied to fabrics
 Bed making procedures: types of services and beds, maintenance and distribution of linen

Unit 5: Renovation and Refurbishment

12

Renovation: Definition, purpose of renovating, types of renovations, reasons, barrier to renovations, suitability, renovation process and problems, need for renovation ; Areas of concern: walls, floor, ceiling/roof, wood work, electrical, plumbing, sanitary, furniture & furnishing; Importance of Restoration -historical heritage, economical significance , ergonomical significance and design trends

Refurbishment: Importance of refurbishment and redecoration, temporary closure and continuous occupancy, critical path for renovation for rehabilitation, activities during renovation and post renovation

Energy conservation methods & eco-friendly concepts

Total Hours 60

Text Books

1. **Park, K.**, (2003), "Preventive and social medicine", Jabalpur: M/s Banarsidas Bhanot Publication.
2. **Aggarwal, D.K.**, (2006), "House Keeping and Management", Delhi: NCT Printers and Publishers, India.
3. **Andrews** (2007), "Text Book of Hotel Housekeeping", Chennai: Tata McGraw-Hill Education publication, India.
4. **Andrews** (2007), "Textbook of Front Office Mgmt & Operation", Chennai: Tata McGraw-Hill Education Publication, India.

Reference books

1. **Matt A. Casado**, (2011), "Housekeeping Management", Pennsylvania State University - Wiley Publication.
2. **Raghubalan** (2009), "Hotel Housekeeping: Operations and Management", Edition 2, Reprint, India: Oxford University Press.
3. **G. Raghubalan and R.Smrtee**, (2015), "Hotel Housekeeping: Operations and Management", Edition 3, India: Oxford University Press.
4. **Bhatnagar S.K** (2002), "Front Office Management", Frank Bros. & Co. (Publishers) Ltd.
5. **Alexander, N J, Mercoust Brace**, *Designing Interior Environment*, Havanovich Inc.
6. **Cerver F A**, *Commercial Space, Office Design & Layout*, Rotovision SA
7. **De Chiara Joseph & John**, *Time Saver Standards for Architectural Types & Interior Design & Space Planning*, McGraw Hill Book Co.

Course outcomes: On the completion of the Course, students will be able to:

1. Appraise the role of housekeeping in various buildings.
2. Identify the housekeeping areas in a building
3. Develop personal abilities in housekeeping to work in commercial establishments.
4. Practice personal grooming and etiquette.
5. Adopt good waste management practices as an efficient housekeeping method.

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	M	H	-	L	-	L	-	H	H	-	L	H	H
CO 2	H	H	M	M	L	-	H	-	M	H	M	L	-
CO 3	-	M	H	L	L	H	-	M	L	-	M	H	-
CO 4	-	H	H	M	-	M	M	L	-	-	M	L	H
CO 5	-	H	H	M	-	L	M	M	H	H	H	M	-

Semester IV
23BIDC07P

Commercial Art in Interior Decoration

Hours of Instruction/week: 4
No. of Credits: 2

Objectives: Prepare students to:

1. To develop understanding of the basic forms and the fundamentals of drawing and design
2. Provide a wide range of imaginative ideas by the investigation of different artistic concepts.
3. Get an understanding of the fundamental and more complex aspects of many forms of art, as well as their identity
4. Refer to the way of doing or the application of human creative skill typically in Commercial art

S.No

List of Exercises

1. On the basis of composition, colour, pattern and texture do the exercises - decorative designs of murals, wall paper, posters, textiles, carpets wall hanging, etc. Historic, National, Regional, Seasonal, Festivals, motifs and patterns.
2. Visual and Graphic Art in Accessories – Develop art pieces for different rooms. Develop product design using waste resources at residential and commercial sector.
3. Display of various products/commodities, display and mimic their scopes for sales promotion. Store display, window display, exhibition display, wall display, counter display and Island display
4. Designing of logo trademarks, poster, banner, leaflets, hoarding
Design store exteriors including store signs, façade, planters and awnings
5. Illustrate the types of store layouts – grid, forced-path and free-form layouts, customer navigation in a store.
6. Concept of planning merchandise and Residential space: Selection of the theme and preparing in display scheme based on it
7. Create focal points – using game module, musical instruments, window displays, seasonal displays in store outlets and residences, propose designs for danglers, posters and decorating pillars and staircase landings.
8. Design of Interior Layouts for a Restaurant / Cafeteria, a Store or Health Facility, a Boutique, a Conference Room and a Polyclinic
Presentation drawings (plans and perspectives)
9. Table setting - Principles of table setting, Table decoration and table appointments, Styles in food service – Indian and western
Napkin folding
10. *Platter carving*: fruits & vegetables for carving, leaf and floral garnish designs for plating arrangements, displays and cocktail presentation, geometric patterns and carving techniques

Total Hours 60

Text books:

1. Kasu, A.A, (2005), "Interior Design", Delhi: Ashish book centre, India.
2. Toni. S, (2004), *The Sourcebook of Architectural & Interior Art*, China, GUILD LLC

Reference Books:

1. Asher, F.M. (2003), "Art of India – Prehistory to the Present", Encyclopedia Britannica Inc
2. Yang, J, (2003), "Art Deco 1910-39", Craft Arts International, 2003, Issue 59, PP. 84-87.
3. Meggs, P. B, (1983), "A history of graphic design", New York: Van Nostrand Reinhold.
4. Laura Perdew, (2015), A History of Art, Minnesota, Abdo Publishing, USA.
5. Bhat Pranav & Goenka Shanita, (1990), The Foundation of Art & Design, Mumbai, Lakani Book Depot, India.
6. Goldstein, H & Goldstein V, (1967), Art in Everyday Life, New Delhi, Oxford & IBH Publishing Company, India.

Course outcomes: On completion of the Course, students will be able to:

1. Understand the human creativity and imagination of art.
2. Develop designs suitable for various applications of commercial art.
3. Put into practice a variety of approaches to the creation of art utilizing the fundamentals and principles of visual arts.
4. Take on the shapes of artistic representations in a variety of mediums
5. Know about man's creative expressions through the practical assignments offering them an opportunity to realize their own potentiality in the field of Commercial Arts.

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	M	M	H	H	H	L	-	H	H	M	-	-	M
CO 2	L	L	H	M	H	-	-	M	H	-	-	M	M
CO 3	M	H	H	H	H	L	L	H	M	H	-	-	L
CO 4	M	M	H	M	-	M	M	H	M	M	-	M	M
CO 5	-	L	M	M	-	-	M	L	-	-	M	H	M

Building Services for Interiors

Semester IV
23BIDC08

Hours of Instruction/week: 4+4
No. of Credits: 6

Objectives: Prepare students to:

1. Understand the importance of various services in a building.
2. Study and draw the details of water supply and drainage system and their materials.
3. Identify the need and application of advanced security system for a building

Unit 1: Concept of building services in interiors

Electrical Considerations

15

Energy generation, distribution, supply; Wiring system, types of circuits – general, appliance and special purpose. Measurement of electricity, meaning of volt, watt and units, emergency power distribution, UPS, Human sensory devices, sensor – controlled devices.

Different system of lighting - Kinds and media; Planning lighting for different work areas,

(A) Matching light with site and other areas including basic knowledge of materials, finishes and maintenance.

(B) Preparation of electrical layout for residences by symbolic representation as per IS : 1962/1967/1989 including selection of matching fittings. Study of different wiring systems.

(C) Conduit - types and uses

Unit 2: Basics of water Supply and drainage System

Water Supply- Hot and cold water supply system Geyser and boilers, types and sizes of pipes, water supply fittings to bathrooms, Sanitary fixtures like water closet; European and Indian WCs, sinks - their types and sizes, bathtubs, washbasins, bidets, showers, urinals. Toilet Accessories - soap tray, towel rods, shower curtains. Jacuzzi, Bath enclosure, Multi-functional shower panels, sauna, sensor based fittings.

15

Drainage-Principles of drainage; Materials for drains - Traps - their types, function and uses. Earthen pipes, Cement pipe, P.V.C. pipes and G.I pipes. Waste disposal systems Septic tank - types, sizes, etc., sanitation systems (soak pits)

Unit 3: Safety and security systems

10

Fire safety and protection alarms, smoke alarms, burglar alarms, access control, visitor information, intruder alarm, intelligent services (BMS and BAS), interface with security consultant specialty systems, fire service - Fire detection, Fire alarm, fire Fighting Vertical Transportation-Staircase, Lifts, Escalators, Ramps and Vertical conveyors

Unit 4: Fundamentals of Thermal and Sound Insulation

10

Thermal conductivity of different material, HVAC , Acoustical defects such as Echo, Reverberation, Sound foci and methods of correction, Sound absorbing materials

Air conditioning and ventilation

Introduction to different kinds of air conditioning system and their merit and demerits for air conditioning (Window, Split ; Wall mount and floor standing , Cassette AC and Central air conditioning system).

Unit 5: Advanced Building system

10

Home automation system, Security surveillance & Access Control systems: Introduction, Use, Scope and Need CCTV : Equipment and network requirement, CCTV System and its application, IP/Network security system
Access Control: Access control systems, Access control Applications, Connecting domestic and office equipment/ devices with wireless automation, ICT networks

Total Hours 60**Related Practical****Hours of Instruction/ week: 4****S.No****List of Exercises**

1. Identify the types of lighting utilized specifically for work areas and lighting needs in diverse settings
2. Explore and illustrate the electrical symbol representations often used in residential electrical layouts
3. Develop an electrical layout with special reference to the requirement of equipment and its placement in home interiors.
4. Illustrate the plumbing plan of a residence including key aspects such as points and associated details, water inlets, outlets and for the installation of water based equipment, functional traps and their respective sorts.
5. Uncover the cutting-edge safety and security equipment used in innovative structures.
6. Check out the automation systems used in recently constructed buildings.
7. Create a report that describes the function of each home automation detected in buildings.
8. Perform a comprehensive market study to get data pertaining to contemporary heat insulation materials available in the market.
9. Based on an extensive investigation, identify the most efficient sound absorbing materials that may be used to achieve optimal acoustical outcomes.
10. Conduct a literature review on the investigation of building automation systems, CCTV, and their applications.

Total Hours : 60**Text books:**

1. Water supply and Sanitary Installations by Anand Chintaman panchdhari ; Published by New Age International Pvt. Ltd.
2. Handbook of Designing and installation services in high-rise building complexes by Er. B.K Jain ; Khanna publishers .
3. Plumbing and Sanitation (Hindi Edition) by S.K. Jain and Amit Aggarwal, Bhratiye Technical Publications.
4. Modern Basic Electrical and House wiring servicing by M.Lotia; Bpb publications.
5. Lighting for Interior Design by Malcolm inner published by Laurence king publishing.

Reference books:

1. Matt A. Casado, (2011), "Housekeeping Management", Pennsylvania State University – Wiley Publication.

2. Raghubalan (2009), "Hotel Housekeeping: Operations and Management", Edition 2, Reprint, India: Oxford University Press.
3. Raghubalan. G and R.Smritee, (2015), "Hotel Housekeeping: Operations and Management", Edition 3, India: Oxford University Press.
4. Bhatnagar S.K (2002), "Front Office Management", Frank Bros. & Co. (Publishers) Ltd.
5. Alexander, N J, Mercoust Brace, Designing Interior Environment, Havanovich Inc.
6. Cerver F A, Commercial Space, Office Design & Layout, Roto vision SA
7. De Chiara Joseph & John, Time Saver Standards for Architectural Types & Interior Design & Space Planning, Mc Graw Hill Book Co.

Course outcomes: On completion of the Course, students will be able to:

1. Have a thorough knowledge on building services
2. Critically analyze various safety and security systems in buildings
3. Differentiate systems like mechanical, electric and electronic systems
4. Appraise role of communication systems in modern interiors
5. Comprehend human sensory devices used in interiors

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	M	H	-	H	H	-	M	M	-	-	-	L	H
CO 2	H	H	M	H	H	L	-	M	M	M	-	M	H
CO 3	H	M	H	H	H	H	-	H	M	L	-	M	H
CO 4	M	H	M	H	H	-	-	L	M	M	-	H	M
CO 5	H	H	L	H	-	M	-	L	-	L	-	M	M

Basics in Architecture

Semester V
23BIDC09

Hours of Instruction / week: 4
No. of credits: 4

Objectives: Enable students to:

1. Understand the scope and development of architecture
2. Identify masterpieces and architectural features of period styles
3. Gain knowledge on influential factors in architecture

Unit 1 : Development of Architecture (Prehistoric) Definition and aims and goals; importance, Principles and qualities of Architecture, Factors in architecture, Laws of architectural composition, general influences on architecture Prehistoric and historic architecture development -Mesolithic, Neolithic through Mesopotamia and Egypt- an overview	10
Unit 2: Elements of Architecture Elementary forms of construction - post and lintel – arches – cantilever Classical orders of architecture - Doric order, Ionic order, Corinthian order; Roofing techniques using arches, truss, vaults, domes, squinches and spherical Pendentive and corbelling	10
Unit 3 : Classical Period Pioneers in architecture- Greek, Roman and Gothic. Specific masterpieces - Greek - Acropolis, Propylaea, Parthenon, Agora and Erechtheum. Roman -Forum of Trajan, Colosseum, Baths of Trajan, Pantheon, Aqueducts and Apartment houses. Gothic - Chartres Cathedral, West Asiatic architecture-Sumerian , old Babylonian, Assysrian, Persian . , Japanese Architecture-characteristic feature and typical examples, Renaissance Architecture- characteristic feature with typical examples	15
Unit 4: Indian Architecture Indus valley civilization-Harappa and Mohenjodaro; Religious architecture - first rock cut and stone built temples. Buddhist architecture. Pallava's contribution- Mahabalipuram - five rathas, stone temple, Caves of Ellora, Kailasanatha temple. Medieval temples; Brahadiswara temple-Tanjavur;The towers of Bhuvaneshwar - Lingaraja temple, Sun temple at Konark, Khajuraho-Kandariya, Mahadeva Temple; new architecture, Architecture in Srilanka, Rajput - Jantar Mantar, Rajasthan architecture- City Palace in Udaipur, Mewar architecture, Dravidian architecture Use of sandstone by Hoysalas, Temples of Deccan - Belur and Halebid; Vijayanagara period, Srirangam, Madurai; understanding the importance of Kudu, Kutas, Salas and Bodigaye. Secular architecture - Bahai temples,- Islamic contributions in India - Master pieces-tombs, mosque, domestic buildings, Tajmahal.	15
Unit 5: Modern influences on architecture Architectural features of modern secular, religious, political, commercial and domestic buildings. Modern influences on architecture - methods, materials, finishes and techniques of construction, Great architect of modern age, Wonders of the world, landscape architecture–concepts, principles of composition, Influence of 'Vasthu Shastra' and Feng-shui' in architectural designs	10
Total Hours	60

Text Books:

1. **Crouch, Christopher**,(2000), 'Modernism in Art Design and Architecture', New York: St. Martins Press, USA.
2. **Curl, James Stevens**, (2006), 'A Dictionary of Architecture and landscape architecture' (Paperback), II Ed., London: Oxford University Press; ISBN: 0-19-860678-8, UK.
3. **Giachetti, R.E.**, (2010), 'Design of Enterprise Systems, Theory, Architecture, and Methods', Boca Raton, FL: CRC Press

Reference books:

1. **Asher, F.M.**,(2003), 'Art in India – Prehistory to the Present', Encyclopaedia Britannica, Inc..
2. **Michell, G**, (2000), 'Architecture and Art of Southern India In: The new Cambridge History of India', Replika Press Pvt. Ltd., Delhi.
3. **Parikh, A., Robertson, D., Lane, T., Hilliard, E. and Paine, M.**, (2000). The Ultimate Home Design Source Book, London: Conran Octopus Ltd., UK.

Course outcomes: On completion of the Course, students will be able to:

1. Identify rudiments of architecture and influential factors
2. Compare characteristic features of period style architecture
3. Appreciate influence of materials and methods in development of architecture
4. Adore architectural masterpieces for their uniqueness
5. Identify and appraise modern constructions adopting period styles for their similarities

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	M	H	-	L	-	L	-	H	H	-	H	H	M
CO 2	H	H	M	M	L	-	H	-	M	H	L	-	H
CO 3	-	M	H	L	L	H	-	M	L	-	H	-	-
CO 4	-	H	H	M	-	M	M	L	-	-	L	H	-
CO 5	-	H	H	M	-	L	M	M	H	H	M	-	-

Model Making Workshop

Semester V
23BIDC09P

Hours of Instruction / week: 4
No. of credits: 2

Objectives: To

1. Have an introduction to varied practices of model making
2. Have insight into the different aspects of commercial model making and demonstrate the techniques used in key areas
3. Do single model, enabling skill development which can enhance their career prospects

S.No

List of Exercises

1. Introduction and concept, various materials and tools used for model making
2. 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.
3. Scaled models of furniture
4. Developing building models - showing details on exterior components - Windows/Glazing, Doors, Sunshades, Wall Panel, Roof
5. Making detailed model which includes the representation of various building elements like Walls, Columns, Steps, and Handrails using materials like Mount board, Snow-white board, and acrylic sheets.
6. Creating models showing interior of house with furniture and other interior components.
7. Representing various surface finishes - brick/stone, stucco finish etc.
8. Various site elements – Contour representation, Roads/Pavements, Trees/Shrubs, Lawn, Water bodies, Street furniture, Fencing etc.
9. Making the models of the various interior spaces - Residences ,Offices ,Retail Spaces, Recreational Spaces
10. Presentation of developed models with colour, lighting and landscape design.

Total Hours : 60

Course Outcomes:

1. Comprehend the techniques of model making
2. Enjoy making prototypes of different buildings
3. Determine scale model requirements
4. Benefit from the hands-on experience gained for future career prospects
5. Appraise/ compare feasibility of different materials for making models

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	H	H	M	H	-	-	L	-	-	M	M	M	H
CO 2	M	H	M	L	M	L	-	M	H	H	H	M	M
CO 3	H	H	H	H	M	L	L	-	-	M	L	L	H
CO 4	M	H	M	M	L	-	M	L	L	L	L	L	H
CO 5	H	H	H	M	H	L	M	M	L	H	M	H	L

Family Resource Management

Semester V
23BIDC10

Hours of Instruction / week: 4+4
No. of credits: 6

Objectives: Enable students to

1. Recognize the resources available in a family setting
2. Understand the techniques involved in efficient use of available resources
3. Develop the skills in utilizing the available resources through residence programme.

Unit 1 : Overview of Resource Management and Time management in Family living 10

Resource Management – Meaning, definition; characteristics and classification of resources; Role of resources in family management; Factors affecting the use of resources; satisfaction derive in the use of resources

Time as a resource- time orientation and perception; Time demand during different stages of Family lifecycle -Beginning family, expanding family, contracting family. Time management – Meaning; importance; factors influencing time management. Tools used in time management – work unit, peak load, work curve, rest period and Time norms for household tasks. Effective use of time- leisure time, value and bases for time plans; Time Schedule- Factors to be considered in time plan and activity plan; Steps in making time plans; control of time plans and evaluating time plans.

Unit 2: Energy Management

15

Energy – Energy as a resource, Importance of energy, Energy demand in different stages of family life cycle; Factors affecting energy consumption and ways to control energy expenditure; Efforts based on home making activities- mental effort, visual effort, manual effort, torsal effort and pedal effort; Energy cost – light, moderate and heavy work; Fatigue – Definition, types – physiological, psychological and boredom fatigue; factors affecting fatigue; ways of overcome fatigue; controlling and evaluating energy.

Work Simplification- definition, importance, motion mindedness; work simplification techniques – process chart, operation chart, memo motion, cycle graph and path way chart; principles of body mechanics; Mundell's classes of change

Unit 3 : Money Management

15

Family Income – definition, Classification of family income- real income, money income and psychic Income; sources and ways of improving family income, factors affecting income and expenditure pattern. Methods of handling money income. Money transaction methods – NEFT, RTGS, IMPS, UPI, cheque, wire transfer. Means of supplementing family income, Steps in money management, Budget- importance, need, types, steps in making budget, factors affecting budget, advantage and disadvantages, obstacles in budgeting. Engel's law of consumption. Controlling – checking, mental and mechanical check; account keeping – importance of account keeping, systems, guidelines in keeping accounts; evaluation

Unit 4: Credit and Savings

Credit- need for credit, importance, classification, factors affecting cost of credit, 10

sources and types, legal credit instrument, guides to the wise use of credit; Savings-meaning, reasons for saving; objectives, need, types of saving institutions- Bank, Post Office, Insurance, Public Provident Fund, Unit trust of India, Chit funds; advantage, disadvantage. Investment- Meaning; principles of investment; types of investments-shares, debentures, bonds and mutual funds.

Unit 5: Residence Stay Programme

10

Concept and objectives; responsibilities under taken by students, Management process in action, Role of values, goals and standards, Individual decision and group decision in residence stay. Organizing the residence stay – planning menu and duties, preparing budget within the means, effective management of time, energy and money.

Total Hours 60

Related Practical

Hours of Instruction/ week: 4

S.No

List of Exercises

1. Develop a time plan and activity chart for three days- full working day, holiday and celebrations- Evaluate the time required for these three days and make suggestions for improvement
2. Find out the average time spent on various activities and classify the daily use for working, non-working and rest period
3. Find out the activities in which various types of fatigue is experienced
4. Draft family budget for different income groups- low income, middle income and high income family.
5. Draw pathway chart, process chart and operation chart for a specific activity and evaluate to simplify it.
6. Determine comfortable working heights for individuals of different heights at different levels - horizontal and vertical plane. counter height and work height
7. Draw suitable diagrams to show the methods of handling income with justification
8. Visit and write report on any two savings institution.
9. Residence stay - Prepare a week's menu, plan a market list, prepare duty chart and budget for a week, Calculate per day cost and daily time schedule, Prepare the leftover provisions list and calculate its cost value. Prepare report and do the evaluation.
10. Application of management process to organize an event– planning, organization and evaluation. Preparing– time schedule, list of invitees and planning menu (c) Planning of resources (d) Planning invitation and decoration (e) Budget planning (f) Executing an event (g) Event evaluation and reporting.

Total Hours 60

Text Books:

1. Nickell.P (2002), Management in Family Living, New York: CBS Publishers.
2. Pushpa Chakravorty (2007), Home Management, New Delhi: Pointer Publishers.
3. Rama Yadav (2009), Home Management, Jaipur: Alfa publications.
4. Varghese, M. A., Ogale n. N. and Srinivasan K. 1985, Home Management, New Age International (P) Limited, Publishers New Delhi
5. Shukul, Maneesha and GandotraVeena, (2006) Home Management and Family Finance, Dominant Publishers and Distribution, Delhi.

Reference books:

1. **Seetharaman Premavathy** (2005), Introduction to Family Resource Management, Chennai: CBS Publishers.
2. **Sharma and Niraja** (2006), Home Management, Ahmedabad: Murari Lal Publishers.
3. **Goel** (2016), Management of Resources for Sustainable Development, New Delhi: Orient Blackswan, Pvt. Ltd.
4. **Premavathy Seetharaman**, Sonia Batra and Preeti Mehra 2005, An Introduction to family resource Management, CBS Publishers and Distributors, New Delhi.
5. **Betty B. Swanson** 1981, Introduction to family Resource Management, Macmillan publishing co., Inc. New York.
6. **Sharma and Niraja** (2006), Home Management, Ahmedabad: Murari Lal Publishers

Course Outcomes: On completion of the Course the students will able to

1. Identify the resources and factors influencing the use of resources.
2. Understand use of tools in time management in day to day life.
3. Apply work simplification techniques while planning work.
4. Develop skills to draw a budget within the available income and to maintain accounts.
5. Manage efficiently the available resources during residence stay.

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	L	L	L	M	L	L	L	M	M	L	L	L	L
CO 2	M	H	H	L	M	L	M	L	L	M	M	H	M
CO 3	H	H	M	H	M	L	H	L	M	M	H	M	H
CO 4	M	H	M	-	M	L	M	L	M	M	H	H	-
CO 5	H	H	H	M	H	L	L	L	H	M	H	M	H

Principles of Ergonomics

Semester VI
21BIDC11

Hours of Instruction / week: 4+4

No. of credits: 6

Objectives: Enable students to

1. Understand the relationship between the goals of ergonomics with design goals
2. Build knowledge on human interaction with task and technology
3. Relate products, environments and performance on wellbeing considering human characteristics and limitations

<p>Unit 1: Significance and scope of ergonomics</p> <p>Aims, objectives and benefits of ergonomics, Definition, aspects and scope of ergonomics, Systems of work, The role of the ergonomist, Fitting the job to the person and the person to the job, Interfaces between job, person and environment</p>	10
<p>Unit 2 : Biological Ergonomics</p> <p>Anatomy and Physiology of Musculoskeletal -Skeletal system, Muscular-Contraction initiation, Tendons, Joints, ligaments and bursae and their Clinical significance in ergonomics. Anthropometry: Meaning, importance, methods of taking measurements; types of dimensions – structural and functional, Static and Dynamic, Anthropometry landmark: Sitting postures, squatting and cross-legged postures, Anthropometric measuring techniques, Applying work physiology -body metabolism, work capacity and fatigue</p>	15
<p>Unit 3 : Biomechanics</p> <p>Concept of biomechanics; work postures- postural variations and discomfort; measurement – physical work capacity, factors affecting energy requirement, caloric cost of various activities; methods of measuring costs, Types of Muscular Work, Muscular Fatigue , Types of Muscle Contractions, Measurement of Muscular Strength Factors affecting muscular activity, Energy expenditure for different activities and energy balance</p>	15
<p>Unit 4: Physical Factors of the Work Environment</p> <p><i>Lighting:</i> Visual acuity and colour vision, Measurement of light, Glare, Psychological aspects of indoor lighting contrast and glare ; <i>Noise:</i> Noise induced hearing loss, Thermal Environment: Body temperature regulation and acclimatization, thermal comfort and discomfort, Heat Disorders, Effects of temperature extremes, Vibration - Hand transmitted Vibration, Whole body Vibration, Vibration and its effects on human body</p>	10
<p>Unit 5 : Workplace Layout and Equipment Design</p> <p>Principles of workstation and system design, Risks to health: <i>Work-Related Musculoskeletal Disorders:</i> Types of Work-Related MSD's, Occupational safety and stress at workplace to reduce the potential fatigue, errors, discomforts and unsafe acts. Furniture support, Vertical arm reach and design application, Humanising design: Design and human compatibility, comfort and adaptability aspects</p>	10
Total hours	60

Related Practical**Hours of Instruction/ week: 4****S.No****List of Exercises**

1. Physiological Parameters: Recording basic physiological parameters such as Body weight, Height/Stature, Oral temperature, Pulse rate, Heart rate (at rest and different working conditions)
2. Understand the landmark and Anthropometric measurements of Individuals
3. Anthropometric measurements: Recording static and dynamic anthropometric data for different ergonomic design consideration a. standing measurements b. Sitting measurements c. Measurement of head, d. Measurement of diameter e. Measurement of girth f. Measurement of hand g. Measurement of foot
4. Statistical analysis of the data and interpretation of findings- Determining the relationship of anthropometric dimensions of workers with space requirements for some selected activities
5. Determination of muscle strength by dynamometer - hand grip strength, pinch strength
6. Understand fatigue at different levels of work – exercises, climbing stairs etc,
7. Measure and understand comfort zone, convenient reach –Maximum, minimum
8. Explore and experience effects of glare, measure light
9. Measure noise in different areas
10. Analyzing the recorded static and dynamic Anthropometric measurements for different design considerations such as - design of seat, work station, consumer products, furniture

Total hours 60**Text Books**

1. **Phillips, C.A.**,(2000),‘Human Factors Engineering’,New York: John Wiley and Sons, Inc., USA.
2. **ILO**,(2001) ‘Introduction to work study’, New Delhi: Oxford & IBH publishing Co. Ltd., India.
3. **Hughes P and Ferrett E.**, (2009), ‘Introduction to Health and Safety at Work’, Oxford, Elsevier Science.
4. **Stranks J.**, (2006), ‘Safety at Work’, Key terms, Oxford, Elsevier Science.

References:

1. **Bridger, RS**,(2003), ‘Introduction to Ergonomics’, 2nd Edition, Taylor &Francis.
2. **Stephen Konz and Steve Johnson**, (2007), ‘Work Design: Occupational Ergonomics’, 7th Edition Holcomb Hathway.
3. **Dul&Weerdmeester**,(2003),‘Ergonomics for Beginners’,Taylor& Francis.
4. **McKeown&Twiss**,(2001), ‘Workplace Ergonomics: A Practical Guide’, IOSH services.
5. **Dul J and Weerdmeester B.**, (2001),‘Ergonomics for beginners’, London: CRC Press, UK.
6. **R.S.Bridger**,(2003), ‘Introduction to Ergonomics’, Taylor &Francis.
7. **Wilson &Corlett**, (2005), ‘Evaluation of Human Work’,Taylor&Francis.

Course Outcomes: On completion of the Course students will be able to:

1. Distinguish the terms referring to health and safety and ergonomics

2. Identify and use ergonomic controls to reduce and prevent work-related disorders
3. Comprehend interrelatedness of work, worker and work environment on productivity
4. Adhere to safety principles during work performance
5. Relate significance of anthropometry to work place designing

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	M	H	-	L	-	L	-	H	H	-	H	H	M
CO 2	H	H	M	M	L	-	H	-	M	H	L	-	H
CO 3	-	M	H	L	L	H	-	M	L	-	H	-	-
CO 4	-	H	H	M	-	M	M	L	-	-	L	H	-
CO 5	-	H	H	M	-	L	M	M	H	H	M	-	-

Professional Practice and Management

Semester VI
23BIDC12

Hours of Instruction / week: 4
No. of credits: 4

Objectives: Enable students to:

1. Provide an overview of rules and regulations in Interior Design practice.
2. Impart awareness and technicalities of code of conduct in professional practice.
3. Gain knowledge on legal, technical, managerial skills and financial aspects of Interior design.

Unit 1: Role of Interior Designer in the society 10

Interior Design Profession as compared to other professions. Difference between profession and business. The *Institute of Indian Interior Designers* (IIID) and other organizations related to interior design profession. Interior Designers approach to works, ways of getting works: types of work, works partly executed by other Interior Designers. : precautionary steps to be taken before taking up the work, terms and conditions of between Interior Designer and client: commencement of work.

Unit 2: Issues of Professional Practice 10

Professional behavior, Ethics, Types of client, Contracts, Tenders, Arbitration etc., in the field of Interior Design field and current day context. Career opportunities, styles of interior design practice, relationship between client and professional, type of fees, process of fees negotiations, billing methods, tax liabilities, contracts – types of contracts – item rate, labour, lumpsum, cost plus percentage rate etc.

Unit 3 : Interior Designer's Duties 15

Drawings to be prepared : Interior Designer's relation with other parties connected with works - client, contractor, sub-contractors, consultants and authorities. IIID Code of professional conduct: scale of charges: units and mode of measurements, clerk of work and his duties, inspection of work, certificate of payment to contractor, bill of quantities, schedule of rates, tenders, public, limited and negotiated tender documents and allied formalities. Preliminary knowledge of Consumer protection Act and other related acts.

Unit 4: Office for Interior Design Practice 15

Lay out, staff structure, filing of records, correspondence and drawings, maintenance of accounts, presentations in meetings, recording minutes of meeting, promotional methods.

Unit 5: Documentation 10

Preparation of report by each student after visiting an interior designer's office. Knowledge on clients' needs their demographic details and decision making process. Study the scope of the project, budget of the client and their design preferences

Total Hours 60

Reference Books:

1. Indian Institute of Architects. H.B. Professional Practice , The Architects pub. Bombay. 62
2. Namavati. H. Roshan.(2001). Professional Practice. 8th ed, Lakshani Book Depot, Bombay,

3. Christine .M. Piotrowski, (2001).Professional practice for Interior Designers, 3rd edition, Wiley and sons,
4. Cindy Coleman, (2001) Interior Design Handbook practice, Mc Graw Hill professional, Ltd
5. Ronald Veitch, (1987). Professional practice for Interior Designers, Peguis Publishers, Ltd

Course outcomes: On completion of the Course, students will be able to:

1. Describe the need and purpose of professional practice in the field of Interior Design
2. Analyse the client needs, their budget and design preferences in a project
3. Examine the process of Project management .
4. Evaluate the cost of materials for construction work and thereby creating a budget for the project
5. Create design portfolio

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	H	H	L	M	H	-	L	H	M	-	M	-	H
CO 2	H	L	H	M	L	-	L	L	M	M	H	H	H
CO 3	H	L	M	M	L	-	-	L	M	H	H	M	M
CO 4	H	M	M	M	H	-	-	L	M	H	H	H	H
CO 5	H	H	H	M	M	-	-	L	L	L	H	H	H

Portfolio Presentation

Semester VI
23BIDC12P

Hours of Instruction / week: 4
No. of credits: 2

Objectives: Enable students to

1. Enable students to understand the Importance of portfolio and presentation
2. Impart skills for portfolio preparation
3. Make the students collect and compile their achievements and work

S.No

List of Exercises

1. Portfolio – meaning, concept, need for portfolio, types of portfolio – digital and manual, steps involved in creating a portfolio, softwares available for portfolio presentation
2. Planning layout, devices used – computer, website/ mobile, etc., colours – CYMK / RGB, paper types, print quality, etc., for portfolio presentation
3. Potential documents - Education / training – Certificates, syllabi, evaluations, transcripts, conferences, workshops attended, etc., evidences of problem solving, leadership, public speaking, writings, computer skills and other skills
4. 2D and 3D - Elevation, top view, front view interiors and landscape of a building and Creating structure or model with furniture, lighting, wall effects, properties, flooring, etc.,
5. Sample art and craft work achievements and various room arrangements – Practical, residence stay
6. Copies of record works done in different courses throughout the programme
7. Field exposure, involvement in departmental and institutional activities, Internship and project work
8. Colour board, mood board, story board, texture or pattern board, client board, Inspiration board – inspired residential interiors and exteriors, commercial interiors and exteriors
9. Awards / honours - professional achievements, news paper articles in which name or work was mentioned, etc.,
10. Prepare resume and submission of portfolio

Total Hours: 60

Course Outcomes: On completion of the Course students will be able to:

1. Understand the importance of portfolio presentation
2. Collect the achievements and work done
3. Plan and present their talent and work in an organized way
4. Use different methods to present portfolio
5. Appreciate and enrich the compiled document for career advancement

CO / PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3
CO 1	H	M	M	M	M	L	L	L	L	M	M	M	M
CO 2	H	M	M	M	M	-	M	L	L	M	M	M	M
CO 3	H	M	M	M	M	-	M	L	-	M	L	M	M
CO 4	M	L	M	L	M	-	L	L	-	L	L	M	L
CO 5	M	L	L	M	L	-	L	L	-	M	L	L	L