

Syllabus for B. Voc. in Interior Design



**Dr. Babasaheb Ambedkar Technological University,
Lonere 402 103 Taluka - Managaon, Dist. Raigad (M.S.)**

Semester III

Sr. No.	Course Code	Name of the Course	Teaching scheme			Evaluation Scheme			Credits	Total Marks
			L	T	P	IA	MSE	ESE		
General Education										
Theory										
1	BVIDC301	Interior Construction -3	2	0	3	25	0	25	3	50
2	BVIDC302	Interior Basic Services	3	0	0	25	0	25	3	50
3	BVIDC303	Interior Materials & Products-3	3	0	0	25	0	25	3	50
4	BVIDC304	Computer Fundamentals	3	0	0	25	0	25	3	50
Total									12	200
Skill Components										
Lab/Practical										
5	BVIDL305	Interior Design Studio -3	0	0	10	40	0	60	6	100
6	BVIDL306	Interior Working Drawings & Representation Skills -1	0	0	4	25	0	25	3	50
On-Job-Training (OJT)/Qualification Packs (Any One)										
7	BVIDE317	Allied skill Sector Council Qualification Pack /Job role - NSQF level 5,6,7	200(Working Hours)						9	150
Total									18	300

SEM-III

Total Subjects : 07 (6 + 1 OJT)

Total Credits : 30

Total Marks : 500

THEORY: In Internal Assessment Marks= Sessional Work + Attendance+ Assignments
End Semester Marks= Theory Paper Marks

PRACTICAL: In Internal Assessment Semester Marks= Attendance+ Term Work
End Semester Marks= Practical + Oral

Abbreviations: L: Lecture Hours, T : Theory Hours, S: Studio Hours, P: Practical Hours, OR: Oral, IA: Internal Assessment
ESE : End Semester Exam

Assessment of PR / OR / TW:

- 1) All orals and practicals are to be assessed by external & internal examiners.
- 2) All TW are to be assessed by internal examiner only.

Semester IV

Sr. No.	Course Code	Name of the Course	Teaching scheme			Evaluation Scheme			Credits	Total Marks
			L	T	P	IA	MSE	ESE		
General Education										
			Theory							
1	BVIDC401	Interior Construction -4	2	0	3	25	0	25	3	50
2	BVIDC402	Interior Secondary Services	3	0	0	25	0	25	3	50
3	BVIDC403	Interior Materials & Products-4	3	0	0	25	0	25	3	50
4	BVIDC403	Computer Graphics	3	0	0	25	0	25	3	50
								Total	12	200
Skill Components										
5	BVIDL405	Interior Design Studio -4	0	0	10	40	0	60	6	100
6	BVIDL406	Interior Working Drawings & Representation Skills -2	0	0	4	25	0	25	3	50
On-Job-Training (OJT)/Qualification Packs (Any One)										
7	BVIDE417	Allied skill Sector Council Qualification Pack /Job role - NSQF level 5,6,7	200 (Working Hours)						9	150
								Total	18	300

SEM-IV

Total Subjects : 07 (6 + 1 OJT)

Total Credits : 30

Total Marks : 500

THEORY: In Internal Assessment Marks= Sessional Work + Attendance+ Assignments
End Semester Marks= Theory Paper Marks

PRACTICAL: In Internal Assessment Semester Marks= Attendance+ Term Work
End Semester Marks= Practical + Oral

Abbreviations: L: Lecture Hours, T : Theory Hours, S: Studio Hours, P: Practical Hours, OR: Oral, IA: Internal Assessment
ESE : End Semester Exam

Assessment of PR / OR / TW:

- 1) All orals and practicals are to be assessed by external & internal examiners.
- 2) All TW are to be assessed by internal examiner only.

Semester

III

Syllabus

Subject Name: Interior Construction -3		
Course Code : BVIDC301		Semester: III
Weekly Teaching Hours: TH: 02 ST: 3		Scheme of Marking TH: 25 IA: 25 Total: 50
TH Exam Duration: 01 Hours		Scheme of Marking PR: --
Credit :03		
Objective: To equip the learner with various structural systems, Floor system, Roofing systems and means of construction, assembly and joinery through detailed working drawings.		
Content		Hours
Unit – I	1.0 Floor Systems:	15
	Single floor in wood and steel with different floor finishes. Introduction to double floor in steel. Mezzanine floors.	
Unit – II	2.0 Stairs:	10
	Construction of Staircases in wood, steel, decorative staircases & ramps. Principles, codes and planning of Staircases & ramps. Single and double flight wooden staircase and dog-legged RCC, metal staircase. Principles of steel spiral stairs.	
Unit – III	3.0 Special Doors:	10
	Types based on mode of operation, material and positioning. Sliding, Sliding and Folding, Pivoted and Hinged, Swing, Revolving etc.	
Unit – IV	4.0 Special Windows:	15
	Types based on mode of operation, material and positioning. Sliding- multiple track windows. Bay windows, Casement window, Top hung and side hung etc	
Unit – V	5.0 Structural Systems:	10
	Introduction to different structural systems for buildings:-Load bearing brick/stone masonry - its application in interior field. RCC frame structure with column, beam, slab, cantilevers etc. – its application in interior field. Steel framed construction with different rolled sections - its application in interior field	

Reference/Text Books		
Name of Authors	Title of the Book	Publisher
Bindra, S.P. and Arora, S.P.	Building Construction: Planning Techniques and methods of Construction,	Dhanpat Rai Pub.,
W.B.Mckay	Building Construction Vol.-IV-fourth edition	Orient Blackswan, 1992
Sushil Kumar.	T.B. of Building Construction	Standard Pub. Delhi
Dr. B.C. Punmia,	A text book of building construction	Laxmi Publications
T. D. Ahuja and G. S. Birde	Fundamentals of Building Construction	Dhanpat Rai Pub.
Roy Chudley	Building Construction Handbook	Routledge
Francis D. Ching	Building Construction Illustrated	Wiley publishers, 2

Name of the Subject : Interior Basic Services		
Course Code : BVIDC302		Semester: III
Weekly Teaching Hours: TH: 03 ST: 00		Scheme of Marking TH: 25 IA: 25 Total: 50
TH Exam Duration: 01 Hours		Scheme of Marking PR: --
Credit :03		
Objective: The student should have adequate knowledge of various services used in interior design projects, their types, characteristics, application, installation method and means, so that the student must be able to judiciously select services which are the most appropriate to a given situation/specific project.		
Content		Hours
Unit – I	Water Supply : Hot and cold water supply system Geyser and boilers, types and sizes of pipes, water supply fittings to bathrooms, WCs, sink, bathtubs, washbasins, bidets, showers, urinals, etc. Sanitary fixtures like water closet, Uropean and Indian, urinals, bath tubs, bidets, washbasin, etc. soap tray, towel rods, shower curtains etc.	10
Unit – II	Plumbing works for Kitchens, toilets, baths, washing machines, dishwasher, refrigerator, loft tanks etc.	10
Unit – III	Detail for bath Tubs, Rain Shower, Jacuzzis, Bath enclosure, Multi-functional shower panels sauna, sensors.	10
Unit – IV	Drainage : Principles of drainage; Materials for drains - Traps their types, function and uses. Earthen pipes, Cement pipe, P.V.C. pipes and C.I. pipes. Sanitary fixture - WCs, washbasins, bath tubs, sinks -their types, sizes. Septic tank - types, sizes, etc.	10
Unit – V	Thermal And Sound Insulation : Introduction to Thermal and Sound insulation. Thermal conductivity of different material, Introduction to Acoustics and its application to interiors. Acoustical defects such as Echo, Reverberation, Sound foci and methods of correction, Sound absorbing materials. Methods of achieving thermal and sound insulation in different interior spaces.	10
Unit – VI	Fire Fighting : Introduction to Firefighting services in interiors. Fire detection, Fire alarm etc. Types of fire Fighting systems and their application in interiors.	10

Reference/Text Books		
Name of Authors	Title of the Book	Publisher
Rangawala, S.C	Engineering Materials	Charter publishing house, Anand 1963.
Rangawala, S.C	Water supply and sanitary Engineering	Publishing house, Roorkee
Pratap R.M (1988)	Interior Design Principles and practice	Standard publishers distribution, Delhi
Madan Mehta & James Johnson	Architectural Acoustics, Principles and Design	
Donald Hoff	Building services and Equipment's	Library of congress Cataloguing in Publication Data

Subject Name: Interior Materials & Products -3		
Course Code :BVIDC303	Semester: III	
Weekly Teaching Hours: TH: 03 Tut: 00	Scheme of Marking TH: 25 IA: 25 Total: 50	
TH Exam Duration: 01 Hours	Scheme of Marking PR: --	
Credit :3		
<p>Objective: Introduction of advanced materials and products that are used in Interior and Architecture in the current day and age. Knowledge of these materials and their implementation will help in the enhancement and upliftment of projects. It will also cater to the specific use of products keeping in mind the final utilization and precautionary measures that need to be consciously considered while designing.</p>		
Contents		Hours
Unit – I	Introduction to the concept of water proofing. Types of indoor waterproofing systems. Materials and techniques used for water-proofing. Water proofing materials and systems for basement. Importance, stages, methods and techniques of waterproofing, Chemicals in Construction (Admixtures, Sealants)	06
Unit – II	Fire safety & hazard management: Causes of occurrence spread of fire. Concept & understanding of Fire rating system for various materials & spaces. Warning systems, Fire extinguishers. Study of fire regulations for interior spaces. Space planning for fire prevention & control. Fire escapes, Fire doors, fire staircase – lifts etc. Means of escape. Fire retardant materials and their applications in interiors. Different materials used for insulations.	06
Unit – III	Concept of heat and solar insulation in building interiors. Thermal insulating materials and their applications in interiors.	06
Unit –IV	Floor coverings- - softwood, hardwood- resilient flooring - linoleum, asphalt tile, vinyl, rubber, cork tiles - terrazzo , marble & granite – properties, uses & laying. Floor tiles- ceramic glazed, mosaic and cement tiles- properties, uses and laying, details for physically handicapped. Special flooring materials- metals,glass, wood, PVC etc.	06
Unit –V	Paints and Surface finishes: Composition, properties and methods of application of different types of paints: Oil, synthetic enamels, acrylic and other plastic emulsions and formulations, interior and exterior grade paints. Natural and synthetic clear varnishes, French polish. Cement based paints. Application of different types of paints and polishes in interiors. Special paints for interiors paints like texture paints etc.	06

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

Subject Name: Computer Fundamentals	
Course Code :BVIDC304	Semester: III
Weekly Teaching Hours: TH: 03 Tut: 00	Scheme of Marking TH: 25 IA: 25 Total: 50
TH Exam Duration: 01 Hours	Scheme of Marking PR: --
Credit:3	
Objective : The learner will be introduced to the basic knowledge of Computer as a tool. To understand general use of computers and use of computer for design of 2 dimensional objects.	

Content		Hours
Unit – I	INTRODUCTION TO BASICS OF COMPUTER (HARDWARE) Use of Computers in the field of Interior Design. Different parts of Computers & Their functions. Input & Output Devices (Monitor, Keyboard, Mouse, Scanner, card reader, pen drive, CD Disk, Floppy Disk, Portable Hard Disk, Printer, Plotter, Projector, etc.) Hard ware of Computers.	02
Unit – II	INTRODUCTION TO BASICS OF COMPUTER (SOFTWARE) Windows operating systems. Microsoft Office Software.(Word, Excel, PowerPoint, etc)	03
Unit – III	INTRODUCTION TO COMPUTER AIDED 2D DRAFTING Understanding the use of drawing tools, object editing, drawing objects, filing and setting drawing units, scales, limits that size and dimensioning, lettering. Setting up of drawing of various simple objects with complete text and dimensioning.	08
Unit – IV	ADVANCE COMPUTER AIDED 2D DRAFTING Advance command programming – Transparent overlays, hatching utilities, assigned colour and line type, use of multi-line, style, block, symbol library, manipulation for accurate drawings, incorporating the above mentioned utilities.	08
Unit – V	PRODUCTIVITY TOOLS Introduction to tools of productivity – Blocks, slide facilities, script files and attributes. Understanding concepts of View port, concept of object linking and editing session.	05
Unit – VI	INTRODUCTION TO 3D DRAFTING Introduction to 3D modeling techniques and construction planes, drawing objects, 3D surfaces, setting up elevation and thickness, and use of dynamic projections. Solid modeling with driving, primitive command and Boolean operations. Use of region modeling & solid modifiers.	10

Reference/Text Books		
Name of Authors	Title of the Book	Publisher
V. Rajaraman	Principles of Computer Programming	Prentice Hall of India
Byron S.Gottfried	Theory and Problems of Programming with C.Schaum’s outline series	McGraw Hill Publishing Co.
Autodesk	Auto CAD Reference Manual	Autodesk UNC, 1998
Sham Tickoo	Understanding Auto CAD – 14	
John.F. Pile	Interior Design, 2nd edition, illustrated	H.N.Abrams
Virginia Andersen	Microsoft Office Access 2007	

Lab/ Practical- Interior Design Studio - 3

Course Code :BVIDL105	Semester:III
Weekly Practicals: ST: 10 Tut: 00	Scheme of Marking TH: --
TH Exam Duration:--	Scheme of Marking PR: 60, IA: 40, Total: 100
Credit:6	

Content

Objective

The learner is expected to apply advanced skills to planning of residential interior spaces with clear understanding and usage of contemporary materials, construction techniques and services required for the design project. Study and application of anthropometry, ergonomics, basic design principles and components related to hospitality environment.

The course concentrates on larger scale spaces with an emphasis on planning commercial spaces.

The course also examines the connection between abstract design principles and the physical and visual environments.

Contents

- Design of Studio Apartment of Small or medium size not exceeding 50.00 sq.mts. (Carpet Area)
- Large multilevel luxury residence such as a Penthouse, Bungalow etc. (Carpet Area between **200.0 to 300.00 sq.mts**)
- Planning for retail activity – anthropometrics – types of Shop layouts Modular units.
- Exhibition spaces – display for exhibition
- Lighting design for commercial spaces – task/display/atmospheric/focal lighting
- Coloring commercial spaces – coding/decoding/visual communication
- Design of commercial Environments such as Malls, Shopping Arcades Etc.

Evaluation

Continuous assessment of sessional work may consist of sketches, perspective drawings, scale drawings(, study models in various materials, case studies, visit reports, power point presentations etc.

Design portfolio should consist of Project Brief, Client profile, Theme Sheet, Measurement Plan/ Furniture Layout Plan/ Flooring Layout/ Reflected Ceiling Layout/ Electrical Layout/ Lighting Layout, Sectional Elevations/ Perspective Views).

References:

1. Karlen Mark, Space planning Basics, Van Nostrand Reinhold, New York, 1992.
2. Joseph D Chiara, Julius Panero, & Martin Zelnick, Time Saver standards for Interior Design & space planning, 2nd edition, Mc-Graw Hill professional, 2001.
3. Francis.D. Ching & Corky Bingelli, Interior Design Illustrated, 2nd edition, Wiley publishers, 2004.
4. Julius Panero & Martin Zelnick, Human Dimension & Interior Space : A source book of Design Reference standards, Watson – Guptill, 1979.
5. Maureen Mitton, Interior Design Visual Presentation: A Guide to Graphics, Models, and Presentation Techniques. John Wiley and Sons, 2003
6. Mark.W. Lin, Drawing and Designing with Confidence: A step-by-step guide, Wiley and Sons, 1993.
7. Robert Rengel, Shaping Interior Space, Fairchild Books & Visuals ,2002

Lab/ Practical- Interior Working Drawings & Representation Skills -1

Course Code :BVIDL306

Semester:III

Weekly Practicals: ST: 04 Tut: 00

Scheme of Marking TH: --

TH Exam Duration:--

Scheme of Marking PR: 25, IA: 25, Total: 50

Credit: 3

Content

Objective

The students learn to draw working drawings used for building construction.

Reading of working drawing, their co-relation and cross-referencing in various technical projections like plans, elevations, sections, detailing etc.

To introduce the students the making of complete presentation and the essentials of presentation skills.

To equip the students with various tools of sketching and rendering like pencils, pens, charcoal, ink brushes etc.

Contents

Working Drawings:

- Concept of working drawings & its need & importance in interior.
- Drawing & drafting of plan. Beam layout & column layout
- Development of elevation. Horizontal & transversal sections
- Details of stair case
- Detailing of all drawings, lettering, dimensioning .Submission details
- Working drawing of different types of doors and windows.
- Working drawing of wall murals, reflected ceiling plans and flooring patterns, paneling, motifs and any other important details.
- Working drawing of work station, living room furniture, bedroom furniture and dining tables.

Representation Skills:

- **Colouring Study**
Introduction of colors, Usage of water colors, poster colors, pen & ink, rendering techniques, etc.
- **Drawing And Sketching Interior Environments**
Drawing and sketching interior environments, one point interior perspective, two point interior perspective, refined linear perspective methods, two point plan projection method, and perspective traced from photographs.
- **Rendering With Pen And Ink**
Introduction to pen and ink rendering, materials, media and tools, rendering orthographic projection drawings, rendering perspective drawings.
- **Rendering With Colour Pencils And Sketch Pens**
Rendering of interior perspectives with colour pencils and sketch pens – stroke effects, smudge effects – use of schoeller and kent sheets – leather cartridge etc.
- **Rendering With Poster/Water Colours**
Use of kent/ cartridge sheets for poster colours and waterman/cartridge sheets for water colours – transparency effects in water colours – block effects in poster colours.
- **Sciography**

Evaluation

Continuous assessment of sessional work consists of Reports/ Presentation and analytical work etc.

References:

1. De Chiara and Callender – Time Saver Standards for interior design, 1982.
2. De Chiara et al – Time Saver standards for interior design and space planning, Mcgraw Hill, 1982.
3. Interior Design Visual Presentation 2nd and 3rd Edition-Maureen Mittom
4. Architects Sketching and Rendering techniques for designers and architects.-Stephen.A.Klimet

Semester III - On-Job-Training (OJT)/Qualification Packs (Any One)

Subject Name: Senior Interior Designer FFS/Q9104 or Any Allied Skill Sector Council Qualification Pack /Job role - NSQF level 5,6,7	
Course Code : BVIDE317	Semester: III
Weekly Skilling Hours: PR: 24 Tut: 00	Scheme of Marking TH: 00, IA: 00, Total: 00
PR Exam Duration: -	Scheme of Marking PR: 150, IA: 00, Total: 150
Credit: 9	
Syllabus as approved by Skill Sector Council	

***Skill Practical assessment will be done rules/ procedure of respective Skill Sector Council of India.**

Semester

IV

Syllabus

Subject Name: Interior Construction -4		
Course Code : BVIDC401		Semester: IV
Weekly Teaching Hours: TH: 02 ST: 3		Scheme of Marking TH: 25 IA: 25 Total: 50
TH Exam Duration: 01 Hours		Scheme of Marking PR: --
Credit :03		
Objective: To equip the learner with various false ceiling systems, false floors, smart materials and different furniture means of construction, assembly and joinery through detailed working drawings.		
Content		Hours
Unit – I	1.0 False Ceiling :	15
	Brief study of wooden, metal and aluminium framing for false ceiling, false ceilings with POP, Gypsum Boards, PVC, Glass, Acoustic Boards with suitable material framing, fixing of boards / Sheet including light fittings, etc.	
Unit – II	2.0 Raised Flooring :	15
	Concept of raised flooring. Materials used and construction details. Raised floor for commercial spaces and I.T. rooms etc.	
Unit – III	3.0 Detailing of Building Furniture & Fittings :	15
	Details of built in elements like Kitchen Counters, Cupboard, Sofa, Bed, Cabinets, Toilet fittings etc. Materials and construction details, Ergonomics involve with above mentioned elements.	
Unit – IV	4.0 Introduction of Lift and escalators (technology)	15
	Concept of Lift and Escalator in a building, details of construction, placement and design(Numbers) requirements of lifts and escalators etc.	

Reference/Text Books		
Name of Authors	Title of the Book	Publisher
Joseph De Chiara & Jhon Callender	Time Savers standards for building types (all volumes)	McGraw-Hill
Susan Dawson	Architects Working Details	
W.B.Mckay	Building Construction Vol.-IV-fourth edition	Orient Blackswan, 1992
Andy Rae	Furniture and Cabinet construction	The Taunton Press
Roy Chudley	Building Construction Handbook	Routledge
Francis D. Ching	Building Construction Illustrated	Wiley publishers, 2

Name of the Subject : Interior Secondary Services		
Course Code : BVIDC402		Semester: IV
Weekly Teaching Hours: TH: 03 ST: 00		Scheme of Marking TH: 25 IA: 25 Total: 50
TH Exam Duration: 01 Hours		Scheme of Marking PR: --
Credit :03		
Objective: In this semester the learner will be introduced to the principles of lighting, heating, ventilation and conditioning of air as applicable interior spaces.		
Content		Hours
Unit – I	Basics of Lighting : Illumination standards and artificial lighting design and lighting power density.Day light integrated lighting systems, timers and sensors.Different types of illuminations.Automation in lighting industry	10
Unit – II	Lighting Fixtures and Applications : Study of lighting fixtures and fittings used in interior spaces, special lighting systems for malls or displays.Planning lighting for different work areas, Matching light with site such as drawing room, bed room, study, bath, kitchen, etc. and public places like offices, theatres, exhibition, display and such other areas including basic knowledge of materials, finishes and maintenance	10
Unit – III	Electrical : Provisions of standards and energy codes related to interior electrical services. Conduit - types and uses.Fixing of electrical fixtures and switches. Preparation of electrical layout for residences by symbolic representation as per IS : 962/1967 including selection of matching fittings.Study of different wiring systems.	10
Unit – IV	Air Conditioning And Ventilation : Fundamentals of Heating, Ventilation and Air Conditioning, Basic principles, laws and terminologies related to HVAC. Natural and artificial ventilation. Introduction to different kinds of air conditioning system and their merit and demerits for air conditioning (Window, Split and Central).Selection criteria, design / structural considerations and energy requirements for above mentioned air conditioning systems. Ducting principles, layout schemes and placement of air conditioner outlets in central air conditioning systems.	10
Unit – V	Modern Air Conditioning Systems : Emerging Trends in HVAC and other Miscellaneous Topics.Passive Heating and Cooling Systems.Energy Saving through Design, Operation and Maintenance.Emerging Technologies – VRV, VRF, Heat Recovery Systems, etc.Developing Air Conditioning layouts for their current design exercise.	10
Unit – VI	Communication : Telephone, Computers, PBX and other communication devices.	10

Reference/Text Books		
Name of Authors	Title of the Book	Publisher
John.F. Pile,	Interior Design, 2nd edition,	illustrated, H.N.Abrams, 1995.
Wanda jankowski,	Lighting : In Architecture and Interior Design,	pbc intl, 1995.
Moore Fuller,	Concepts and practice of Architectural Day lighting,	Van Nostrand Reinhold co., New York, 1985.
David Egan. M.	Concepts in Architectural lighting	Mcgraw Hill Book company, New York, 1983.
A. Ananthanarayana.	Basic Refrigeration and Air Conditioning	McGraw Hill Education; Fourth edition
Walter T. Grondzik, Alison G. Kwok, Benjamin Stein	Mechanical and Electrical Equipment for Buildings	John Wiley & Sons

Subject Name: Interior Materials & Products -4		
Course Code :BVIDC403		Semester: IV
Weekly Teaching Hours: TH: 03 Tut: 00		Scheme of Marking TH: 25 IA: 25 Total: 50
TH Exam Duration: 01 Hours		Scheme of Marking PR: --
Credit :3		
<p>Objective: Introduction of advanced materials and products that are used in Interior and Architecture in the current day and age. Knowledge of these materials and their implementation will help in the enhancement and upliftment of projects. It will also cater to the specific use of products keeping in mind the final utilization and precautionary measures that need to be consciously considered while designing.</p>		
Contents		Hours
Unit – I	Eco friendly materials :Characteristics, classification, properties, energy behavior, intelligent environments. Recycled and ecological materials & energy savings materials and use in interiors. Innovative ecofriendly materials for indoor wall cladding, flooring and other interior elements.	06
Unit – II	Special cladding materials used in interiors.Wall papers, Fabric for wall lining. Flooring/Cladding materials - such as stones, granite, slate, marble, mosaic and cement tiles & ceramic tiles, P.V.C. and metallic claddings, Aluminium composite panel in wall cladding.	06
Unit – III	Different materials used as furnishing materials, Different types of carpets : Loop pile and Cut pile, installation, application and maintenance. Different carpet materials.Linoneum and other drugets for interiors. Other Furnishings : Bed cover, cushion covers - their designs, stitchings, (handloom, mill made, tufted candlewick, khadi and other types - both woven and printed).Table liner bath mats, toilet sets, etc. Latest items of furnishings.	06
Unit –IV	Curtain Materials (Draperies): Cotton curtains; Silk curtains; Cotton silk mixed; Synthetic fibre curtain; Woollen curtains; Synthetic and wool blended curtains; Flame resistant property. Wrap and weft texture, dyes blends, weight, cost, care of the above. Types of curtains like plain, french pleated, etc.Lining materials, Fittings used - Curtain rods, rings, railing, hooks, sliding, stage curtains.Venetain blinds and space curtains.	06
Unit –V	Upholstery Covering Material (Tapestries & Other Items): Introduction to various kinds of tapestries and their basic distinguishing qualities : Cotton, Silk, Synthetic, Woolen, Raxine, Leather Blended To study the their properties, design, dye,texture, size, weight, stitching and Care. Cushioning materials: Springs; Jute, cotton, foams, rubber. Miscellenous Items: cane, jute, leather straps, slip covers, fasteners, etc.	

Reference/Text Books		
Name of Authors	Title of the Book	Publisher
Lisa Godsey	Interior Design Materials and Specifications	Bloomsbury Publishing India Private Limited
Elizabeth Wilhide	The Interior Design Directory	Quadrille Publishing Ltd
J.Rosemary Riggs	Materials and Components of Interior Architecture	Pearson; 8 edition
Francis D.K.Ching	Interior Design Illustrated	Wiley; 4 edition
Chowdary, K.P.	Engineering Materials used in India	Oxford and IBH, New Delhi

Subject Name: Computer Graphics

Course Code :BVIDC404	Semester: IV
Weekly Teaching Hours: TH: 03 Tut: 00	Scheme of Marking TH: 25 IA: 25 Total: 50
TH Exam Duration: 01 Hours	Scheme of Marking PR: --
Credit:3	
Objective : The learner will be introduced to the basic knowledge of Computer as a tool. To understand general use of computers and use of computer for design of 2 dimensional objects.	

	Content	Hours
Unit – I	INTRODUCTION TO BASICS OF COMPUTER (HARDWARE) Use of Computers in the field of Interior Design. Different parts of Computers & Their functions. Input & Output Devices (Monitor, Keyboard, Mouse, Scanner, card reader, pen drive, CD Disk, Floppy Disk, Portable Hard Disk, Printer, Plotter, Projector, etc.) Hard ware of Computers.	02
Unit – II	INTRODUCTION TO BASICS OF COMPUTER (SOFTWARE) Windows operating systems. Microsoft Office Software.(Word, Excel, PowerPoint, etc)	03
Unit – III	INTRODUCTION TO COMPUTER AIDED 2D DRAFTING Understanding the use of drawing tools, object editing, drawing objects, filing and setting drawing units, scales, limits that size and dimensioning, lettering. Setting up of drawing of various simple objects with complete text and dimensioning.	08
Unit – IV	ADVANCE COMPUTER AIDED 2D DRAFTING Advance command programming – Transparent overlays, hatching utilities, assigned colour and line type, use of multi-line, style, block, symbol library, manipulation for accurate drawings, incorporating the above mentioned utilities.	08
Unit – V	PRODUCTIVITY TOOLS Introduction to tools of productivity – Blocks, slide facilities, script files and attributes. Understanding concepts of View port, concept of object linking and editing session.	05
Unit – VI	INTRODUCTION TO 3D DRAFTING Introduction to 3D modeling techniques and construction planes, drawing objects, 3D surfaces, setting up elevation and thickness, and use of dynamic projections. Solid modeling with driving, primitive command and Boolean operations. Use of region modeling & solid modifiers.	10

Reference/Text Books		
Name of Authors	Title of the Book	Publisher
V. Rajaraman	Principles of Computer Programming	Prentice Hall of India
Byron S.Gottfried	Theory and Problems of Programming with C.Schaum’s outline series	McGraw Hill Publishing Co.
Autodesk	Auto CAD Reference Manual	Autodesk UNC, 1998
Sham Tickoo	Understanding Auto CAD – 14	
John.F. Pile	Interior Design, 2nd edition, illustrated	H.N.Abrams
Virginia Andersen	Microsoft Office Access 2007	

Lab/ Practical- Interior Design Studio - 3

Course Code :BVIDL105	Semester:III
Weekly Practicals: ST: 10 Tut: 00	Scheme of Marking TH: --
TH Exam Duration:--	Scheme of Marking PR: 60, IA: 40, Total: 100
Credit:6	

Content

Objective

The learner is expected to apply advanced skills to planning of residential interior spaces with clear understanding and usage of contemporary materials, construction techniques and services required for the design project. Study and application of anthropometry, ergonomics, basic design principles and components related to hospitality environment.

The course concentrates on larger scale spaces with an emphasis on planning commercial spaces.

The course also examines the connection between abstract design principles and the physical and visual environments.

Contents

- Design of Studio Apartment of Small or medium size not exceeding 50.00 sq.mts. (Carpet Area)
- Large multilevel luxury residence such as a Penthouse, Bungalow etc. (Carpet Area between **201.0 to 300.00 sq.mts**)
- Planning for retail activity – anthropometrics – types of Shop layouts Modular units.
- Exhibition spaces – display for exhibition
- Lighting design for commercial spaces – task/display/atmospheric/focal lighting
- Coloring commercial spaces – coding/decoding/visual communication
- Design of commercial Environments such as Malls, Shopping Arcades Etc.

Evaluation

Continuous assessment of sessional work may consist of sketches, perspective drawings, scale drawings(, study models in various materials, case studies, visit reports, power point presentations etc.

Design portfolio should consist of Project Brief, Client profile, Theme Sheet, Measurement Plan/ Furniture Layout Plan/ Flooring Layout/ Reflected Ceiling Layout/ Electrical Layout/ Lighting Layout, Sectional Elevations/ Perspective Views).

References:

8. Karlen Mark, Space planning Basics, Van Nostrand Reinhold, New York, 1992.
9. Joseph D Chiara, Julius Panero, & Martin Zelnick, Time Saver standards for Interior Design & space planning, 2nd edition, Mc-Graw Hill professional, 2001.
10. Francis.D. Ching & Corky Bingelli, Interior Design Illustrated, 2nd edition, Wiley publishers, 2004.
11. Julius Panero & Martin Zelnick, Human Dimension & Interior Space : A source book of Design Reference standards, Watson – Guptill, 1979.
12. Maureen Mitton, Interior Design Visual Presentation: A Guide to Graphics, Models, and Presentation Techniques. John Wiley and Sons, 2003
13. Mark.W. Lin, Drawing and Designing with Confidence: A step-by-step guide, Wiley and Sons, 1993.
14. Robert Rengel, Shaping Interior Space, Fairchild Books & Visuals ,2002

Lab/ Practical- Interior Working Drawings & Representation Skills -1

Course Code :BVIDL306	Semester:III
Weekly Practicals: ST: 04 Tut: 00	Scheme of Marking TH: --
TH Exam Duration:--	Scheme of Marking PR: 25, IA: 25, Total: 50
Credit: 3	

Content

Objective

The students learn to draw working drawings used for building construction.

Reading of working drawing, their co-relation and cross-referencing in various technical projections like plans, elevations, sections, detailing etc.

To introduce the students the making of complete presentation and the essentials of presentation skills.

To equip the students with various tools of sketching and rendering like pencils, pens, charcoal, ink brushes etc.

Contents

Working Drawings:

- Working drawing of different types of doors and windows.
- Working drawing of wall murals, reflected ceiling plans and flooring patterns, paneling, motifs and any other important details.
- Working drawing of work station, living room furniture, bedroom furniture and dining tables.

Representation Skills:

- **Colouring Study**

Introduction of colors, Usage of water colors, poster colors, pen & ink, rendering techniques, etc.

- **Drawing And Sketching Interior Environments**

Drawing and sketching interior environments, one point interior perspective, two point interior perspective, refined linear perspective methods, two point plan projection method, and perspective traced from photographs.

- **Rendering With Pen And Ink**

Introduction to pen and ink rendering, materials, media and tools, rendering orthographic projection drawings, rendering perspective drawings.

- **Rendering With Colour Pencils And Sketch Pens**

Rendering of interior perspectives with colour pencils and sketch pens – stroke effects, smudge effects – use of schoeller and kent sheets – leather cartridge etc.

- **Rendering With Poster/Water Colours**

Use of kent/ cartridge sheets for poster colours and waterman/cartridge sheets for water colours – transparency effects in water colours – block effects in poster colours.

Evaluation

Continuous assessment of sessional work consists of Reports/ Presentation and analytical work etc.

References:

5. De Chiara and Callender – Time Saver Standards for interior design, 1982.
6. De Chiara et al – Time Saver standards for interior design and space planning, McGraw Hill, 1982.
7. Interior Design Visual Presentation 2nd and 3rd Edition-Maureen Mittom
8. Architects Sketching and Rendering techniques for designers and architects.-Stephen.A.Klimet

**Semester III - On-Job-Training (OJT)/Qualification
Packs (Any One)**

Subject Name: Senior Interior Designer FFS/Q9104 or Any Allied Skill Sector Council Qualification Pack /Job role - NSQF level 5,6,7	
Course Code : BVIDE317	Semester: III
Weekly Skilling Hours: PR: 24 Tut: 00	Scheme of Marking TH: 00, IA: 00, Total: 00
PR Exam Duration: -	Scheme of Marking PR: 150, IA: 00, Total: 150
Credit: 9	
Syllabus as approved by Skill Sector Council	

***Skill Practical assessment will be done rules/ procedure of respective Skill Sector Council of India.**