Tech Shashank PVT LTD

P.G Diploma in

Interior Design

Advanced Curriculam with Hands on Experience

COURSE TITLE	PG DIPLOMA IN INTERIOR AND FURNITURE DESIGN
COURSE CODE	BUI - 1352
MEDIUM	ENGLISH
QUALIFICATION	DIPLOMA / DEGREE
DURATION	ONE YEAR
CLASS TIMES	10:00am – 04:00pm

MARK ALLOTMENT	
THEORY	200 Marks
PRACTICAL	200 Marks
INTERNAL	100 Marks
TOTAL MARKS	500 Marks
PASSING MARKS	40/ 100

PG DIPLOMA IN INTERIOR AND FURNITURE DESIGN	
PAPER I	INTERIOR DESIGN CONCEPT
PAPER II	INTERIOR VASTU SHASTRA

PAPER I INTERIOR DESIGN CONCEPT

OBJECTIVES

1.Understanding various aspects such as form, scale, light, dimension, height, transitional elements affecting interior space.
2.Understanding and applying design vocabulary such as Point, Line, shape, colour, texture, area, mass, volume etc.
3.Understanding and applying design principles such as ratio, proportion, scale, balance, harmony, unity, variety, rhythm, emphasis.
4.Understanding the process involved in design including analysis, synthesis and evaluation.

UNIT – I INTERIOR SPACE

Space – definition; Interior space – spatial qualities: form, scale, outlook; structuring space with interior design elements; spatial form; spatial dimension – square, rectangle, curvilinear spaces; height of space; spatial transitions – openings within wall planes, doorways, windows, stairways.

UNIT – II DESIGN VOCABULARY

Form – point, line, volume, shape, texture & colour – in relation to light, pattern etc. and application of the same in designing interiors.

UNIT – III DESIGN PRINCIPLES

Ratio; proportions – golden section; relationships; scale; Balance – symmetrical, radial, occult; harmony; unity; variety; rhythm; emphasis.

UNIT – IV ANTHROPOMETRICS

Definition, theory of standard dimension based on human figures for activities, functions, circulation, furniture design, spatial requirements etc.
Study of Ergonomics
Design of Furniture for Living, Dining, Kitchen, Office etc.

UNIT – V DESIGN CONTROL

Design process – Analysis, synthesis, design evaluation; Design criteria –function and purpose, utility and economy, form and style; human factors –human dimensions, distance zones, activity relationships; fitting the space – plan arrangements, function, aesthetics.

REFERENCES

1. Francis. D. K. Ching, Interior design Illustrated, Van Nostrand Reinhold
2. John. F. Pile, Interior Design, Harry Abrams Inc.
3. Sam. F. Miller, Design process – a primer for Architectural and Interior Design, Van Nostrand Reinhold.
4. Gary Gordon, Interior lighting for designers, John Wiley & Sons Inc.
5. Harold Linton, Colour in Architecture, McGraw Hill
6. Jonathan Poore, Interior Colour By Design, Rock Port Publishers.

PAPER II INTERIOR VASTU SHASTRA

OBJECTIVES

To sensitize students with various ancient concepts on Vaastu and Feng Shui and their present relevance

UNIT I

The 4 youga, 10 incarnations, Vedic tradition, The Vedas .and their up- Vedas, Sthapatya Veda- The science of Construction, Ancient scriptures on Vastu shastra, Scientific theory of Vastu Shastra, Application of Vastu, Vastu Purusha, 5 elements and 10 directions - Basic drawing

skills, locating directions using Vedic, modern and common techniques, using instruments, compass directions, basic mathematical formulae, making drawings and zone plans , study of maps of houses office, factories, and finding missing and extent ions - Astrological aspects of choosing favourable city, colony, location for every individual, remedial measures for wrong selection, environmental effects, finding suitable site, physical characteristics of environment and its effect on various properties - Soil testing, finding impurities of land, ideal site selection, starting construction, soil charging procedure, Astrological formulae for starting construction at an auspicious time.

UNIT II

Placements part – I : Building in plot, boundary wall, underground tank, well, bore well, procedures related to them, septic tank, door placements, trees and plants placements, auspicious and inauspicious plants, Vastu Purusha Mandala - Placements part – II : Constructional aspects, brahamasthana, beams, pillars, building layout, elevation, bed rooms, drawing room, kitchen, bathroom, toilets, parking, pooja room, balcony - Placements part – III : Interior designing aspects, color in various rooms, material to be used, air-conditioners, electrical switches, batteries, invertors, beds, sofa sets, dining table, other furniture, various kitchen designs, flooring - Ideal placements plans for each directions as North, North-East, East, South-East,, South, South-West, West, North-West. Auspicious and inauspicious features in these directions - Aayadi sutras for ideal measurements; One, two, three and four sided winged plots, inclination of plots at various degrees and its effects - Astrological aspects – suitable color and causative direction for each individuals based on their zodiac signs and birth constellation, ideal placements schemes for each of these people - Ideal layout planning and arrangements – part I : houses, flats, shops, factories, school, row-houses, duplexes - Ideal layout planning and arrangements – part II : Commercial complex, hospital, residential complex, hotels, restaurants, colony, housing department societies, etc.

UNIT III 7 Pyramid, concept, evolution, source of energy, geometrical measurement, shape in building, pyramids for Vastu cure, Crystal pyramids, color pyramids, therapy, Modern Vastu concept - Environmental Vastu Environmental conscious designs, planets and their properties, Uses; Useful Herbs, useful trees as per Vastu; Vastu correction using plant, trees and Shrubs - Basic drawing, reading maps, finding compass directions, plotting details in map, plants, Vithu Vinyas, locating Brahmasthan, fixing door and gate positions, complex plots, missing and extensions and effects - Architectural concepts, aesthetics, style, art of construction, influence of climate, social factors, dimensional system, from elemental shapes, site development between Vastu expert and an architect Earthquake resistance principles, application - From, style, basic shops, uses various materials, symmetry, iconography, fabric, board, floor, wall, ceiling, color schemes, paint technology, color mixing, design process, material not allowed as per Vastu.

UNIT IV

Gems and Crystal properties, effect, use, application in Vastu, Vastu remedial measures, Panchratna, Navratna, Crystal material, Crystal Remedy, use in corrections, Energy channeling through cryatals - Energy Vastu Science, Tools and instruments for energy measurements,

uses and applications, advanced concepts, work ideology, controversial rays, Geopathic stress, Ley lines and another advanced modern tools - Temple Vastu – 1, Energy systems of temples, part of development, different energies for different temples, specialties, theme, North Indian and south Indian styles, mandapa, vedic Architecture; Rock cut temples Temples of Mamallpuram ; Elephanta Caves of Ellora; Rajrajeshwar temple, Thanjvur; Sun temple, Konark - Temple Vastu – 2, Jain temple a Ranakpur; Minakshi sundershwara temple, Madurai ; Lingraja temple, Bhubaneswar, deities, consecration process, purification rituals, pillars and columns, sthambha, gopura, types of vigraha, measurement characteristics, worship, pradakshina

UNIT V Industrial Vastu Part – 1, Industrial Vastu design, concept s, ideal arrangement for various industries, Aqua, Automobiles , Alcohol, Brick, Bakery, Cables, Cement, Carpet, Ceramics, Cotton, Dairy, Diamond, Bulbs, Fertilizers, Flour mill, Glass, Garment, Holiday Resorts, Jute, Incense Sticks, Paper, Plywood, Veneer, Poultry farm, Pharmaceuticals, Soft drink, Stone Crushers, oil mill - Industrial Vastu Part – 2, Wind mill, libraries, Book shops, Hospitals, Museum, Crematorium, Swimming Pools, Government Administrative and Public Transportation Buildings-Railway Station, Airports, Petrol Pumps, Secretariat, Fire ambulance building.

REFERENCES 1. "GOLDEN PRINCIPLES OF VASTU SHASTRA Vastukarta". www.vastukarta.com. Retrieved 2016-05-08. 2. Acharya P.K. (1946), An Encyclopedia of Hindu Architecture, Oxford University Press 3. Vibhuti Sachdev, Giles Tillotson (2004). Building Jaipur: The Making of an Indian City. p. 147. ISBN 978-1861891372. 4. Vasudev (2001), Vastu, Motilal Banarsidas, ISBN 81-208-1605-6, pp 74-92 5. Sherri Silverman (2007), Vastu: Transcendental Home Design in Harmony with Nature, Gibbs Smith, Utah, ISBN 978-1423601326 6. Gautum, Jagdish (2006). Latest Vastu Shastra (Some Secrets). Abhinav Publications. p. 17. ISBN 978-81-7017-449-3. 7. BB Dutt (1925), Town planning in Ancient India at Google Books, ISBN 978-81-8205-487-5; See critical review by LD Barnett, Bulletin of the School of Oriental and African Studies, Vol 4, Issue 2, June 1926, pp 391 8. Vibhuti Chakrabarti (2013). Indian Architectural Theory and Practice: Contemporary Uses of Vastu Vidya. Routledge. pp. 1–2. ISBN 978-1-136-77882-7 9. Dunning, Brian. "Feng Shui Today". Skeptoid.com. Retrieved 30 October 2016. 10. Cheng Jian Jun and Adriana Fernandes-Gonçalves. Chinese Feng Shui Compass: Step by Step Guide. 1998:

PRACTICAL I

INTERIOR DESIGN GRAPHICS

OBJECTIVES

1.To help students to learn & understand the techniques of various methods of drawing.
2.To make them understand the use of colours & their effects in drawing.
3. To train the students in the field of interior perspective drawing and sociography.
Presentation skills, Techniques for Construction as a tool towards effective visualization and presentation.

UNIT – I INTRODUCTION TO FREE HAND DRAWING

Basic exercises, Still life, Basic forms, effect of lines to represent textures - Understanding of different types of perspective views using vanishing points, Shading exercises .

UNIT – II SKETCHING

Outdoor sketching including Lawns, bushes, Water Bodies, Plants & trees in different media.
Indoor sketching – furniture's, lights, corridor, lobby, class room.

UNIT – III MEASURED DRAWING

Lettering - types, Scale, Measured drawing of furniture, Wall panelling, flooring pattern, ceiling pattern, doors and windows - Measured Drawing of Simple objects like Cupboards. and building components like Columns, Cornices, Doors, Windows

UNIT – III GEOMETRICAL DRAWING

Orthographic projections - Projection of lines, planes and solids, section of primary solids such as pyramids, cones, cylinder, prism, sphere, cuboid.

UNIT – IV ISOMETRIC DRAWING

Isometric projection of all platonic solids such as cube, cuboid, hexagonal prism, pyramids, cone and sphere – isometric projection of singly and doubly curve surfaces - Isometric View: like Tables, Chairs, Cylindrical & Spherical elements etc.
Axonometric View: like Interior views for living room, Toilet, Dining Room etc.

UNIT –V PERSPECTIVE & SCIOGRAPHY

Perspective View: Principles and Visual Effect of three dimensional objects, Study of Picture plane, Station Point, Vanishing Point, Eye level etc. One point perspective for interiors Two point perspective for interiors.
Sciography : Principles of Shade and Shadow- Shade and Shadows of Architectural Elements in Interiors. Shadows of Circular/Cylindrical/Spherical elements.

TEXTBOOK

1. Perspective & Sciography BY Shankar Mulik, Allied Publishers

REFERENCE BOOKS

1. Drawing – A creative Process, Francis D.K. Ching, John Wiley Sons, New
2. How to paint & draw, Bodo W.Jaxtheimer, Thames & Hudson, London
Geometrical drawing for art students, 2nd revised edition - I.H.Morris.
3. Architectural drafting and design, 4th edition – Ernest R. Weidhaas, Allyn and
4. Bacon, Boston, 1981.
5. Building drawing, 3rd edition – M G Shah, C M Kale, Tata Mcgraw – Hill

publishing, New Delhi.

COLOUR AND LIGHTING OBJECTIVES: To enable the students to 1. Learn the concepts of colour and lighting. 2. Learn skills in using colour and light in functional context. 3. Impart knowledge in recent trends in colour and lighting. UNIT-I Concept of colour - significance of colour in the interiors and exteriorsDimensions of colour –Hue, value, intensity, Effects of Hue, Value and Intensity. Colour Therapy. UNIT-II Colour systems - Prang, Munsell and Ostwald. Planning colour harmoniesrelated and contrasting. Non-mechanical – readymade and nature based. Factors considered in selecting colour harmonies. UNIT-III Application of colour harmonies in the interiors and exteriors, Effect of light on colour, Illusion of colour, psychology of colour, effect of colour on each other.

UNIT-IV Importance of lighting, Sources – Natural and Artificial lighting, Types – based on material, reflection, architectural elements and uses. Specific factors in lighting – measurements of lighting, location and direction, size and shape, and colour. Economy in lighting, Psychological aspects of light, Glare - its types, causes and prevention.
UNIT-V Lighting accessories – Selection of lamps and lighting fixtures, lighting for various areas and specific activities, modern features in lighting design. Principles of lighting.
REFERENCES:
1. Faulkner, R. and Faulkner,S.(1987), Inside Today‘s Home, Rine Hart Publishing Company, Newyork.
2. Judy,M.,(1994), How to See, How to Paint it, Harpen Colling Publishers,London.
3. Jan Orcharchd (1993), Lighting for a Beautiful Home, Dunestyle Publishing Ltd.,U.S.A.
4. Seetharam, P and Pannu, P.Interior Design and Decoration, CBS Publishers and distributors, New Delhi.
5. Stewart and Sally .W., (1997), The Complete Home Decorator, Annes publishers Ltd.,New york.

INTERIOR MODEL MAKING
OBJECTIVES
Acquisition of hands on experience in model - building.
UNIT – I INTRODUCTION TO MODEL MAKING
Introduction to concepts of model making and various materials used for model
Making
UNIT – II BLOCK MODELLING
Preparation of base for models using wood or boards - Introduction to block models of buildings (or 3D Compositions) involving the
usage of various materials like Thermocol, Soap/Wax, Boards, Clay etc.
UNIT – III DETAILED MODELLING
Making detailed models which includes the representation of various building
elements like Walls, Columns, Steps, Windows/glazing, Sunshades,

Handrails using materials like Mount board, Snow-white board, acrylic sheets.
-Representing various surface finishes like brick/stone representation, stucco finish etc.
-Various site elements – Contour representation, Roads/Pavements, Trees/Shrubs, Lawn, Water bodies, Street furniture, Fencing etc. 5

UNIT – IV INTERIOR MODELS OF INTERIOR SPACES
Making models of the various interior spaces such as
Residences
Offices
Retail Spaces
Recreational Spaces
Scaled models of furniture.
UNIT – V CARPENTRY
Introducing the techniques of planning, chiseling & jointing in timber to learn the use of hand tools.
Exercise involving the design of simple furniture and making a model of the same.

REFERENCES
1. BENN, The book of the House, Ernest Benn Limited, London
2. Jannsen, Constructional Drawings & Architectural models, Karl Kramer Verlag Stuttgart, 1973.
3. Harry W.Smith, The art of making furniture in miniature, E.P.Duttor Inc., New York, 1982.

FURNITURE DESIGN - I
OBJECTIVES
To help the students understand about the various anthropometric aspects, human factors & other design criteria involved in the design of furnitures.
To make the students understand about the various materials & technology involved in the making of furnitures.
UNIT – I HISTORY OF FURNITURE DESIGN
Furniture designs during Egyptian, Greek, Roman, Romanesque, Gothic, Renaissance, Industrial Revolution – Contributions in the beginning of the 20th century by the four pioneer architects in furniture design – Bauhaus, De Stijl & other modern furniture designs.
UNIT – II HUMAN FACTORS
Study of Anthropometry & Design criteria involved in the design of
Sofa, settee, couch, etc.
Cot, bedside lockers, wardrobes
Cupboards, shelves
Bunk beds, study table
Display furniture
Furniture for the physically challenged

UNIT – III PRINCIPLES OF DESIGN & DETAILINGS

Form – Colour - Symbols

Materials & finishes – Wood, Glass, Metal, Plastics and Upholstery - include various finishes.

Fabrication Techniques involved

Multiple Utility Oriented Approaches to Furniture Design.

UNIT – IV ROOM PLANS AND FURNITURE ARRANGEMENT

Types of furniture – Built in furniture – Movable furniture – Systems furniture – Specially Designed furniture – Readymade furniture – Modular, Knockdown & Economy Furniture. Traffic pattern and furniture layout for residence, commercial and office areas

UNIT – V PROJECTS

Designing & detailing of

Residential Furniture – Seating, Sleeping, Storage & Children's furniture

Commercial furniture – Showcases, Counters, Display units, Restaurant furniture, Bar furniture

Office furniture – Adjustable desks & storage, Mobile & Resilient chairs, Portable chairs, Movable Tables, Lounge seating.

REFERENCES

1. Interior Design, John F. Pile, Harry N.Abrams Inc Publishers, New York
2. Interior Design Course, Mary Gilliat Coyran, Octopus Ltd., London
3. The Encyclopaedia of Funriture, Joseph Aronson, Crwon Publishers, New York
4. Interior Design & Decoration, Sherril Whiton, Prentice Hall
5. Interior Design, Francis D.K. Ching, John Wiley & Sons, New York
6. Office Furniture, Susan S.Szenasy, Facts on file Inc, New York
7. Time Saver Standards for Interior Design, Joseph De Chiara, McGraw Hill, New York.

PRACTICAL II

FURNITURE DESIGN II

OBJECTIVES

During this semester students will focus on the craft of the Furniture -Maker, utilizing state of-the-industry procedures and equipment. Emphasis will be on wood and wooden products as a construction medium

UNIT – I INTRODUCTION TO WOOD

Wood as a building material: Identification, selection, application, types of wood, commercial Classification, nomenclature, structure Anatomy and Ultra structure, Conversion figure and natural defects, availability of wood products, wood based panels such as plywood , MDF, HDF, Particle board , pre laminated boards.

UNIT – II THE BASICS OF FURNITURE CONSTRUCTION & TOOLS

Measurement and measurement systems, Furniture Construction: Drawers, Cadenza, dining chairs, sofa, settee, cots detail. Preparation for finishing, Furniture Materials Specifying timber, finishes.

Detailed construction drawings & explaining construction and material finishes.

UNIT – III PLYWOOD CONSTRUCTION TECHNIQUES

Plywood as a building material, Layout techniques and machining plans. Fabrication techniques - stapling, gluing. Furniture Joinery - screw joinery, nail joinery, Mortise & tenon joints, Dovetail joints, Dowel joints, Edge joints.

UNIT – IV MODULAR KITCHENS

Modular kitchens, components basis of Construction involving, layouts, carcase, hardware selection, fixing details finishes and special types such as tall units, grain trolleys, and carousels fold outs etc. A detailed project involving the design of a small kitchen using modular components.

UNIT – V FURNITURE MODEL MAKING

Preparation of block models of furniture using wood, boards, leather, fabric, thermacol, clay, soap/wax etc.

TEXT BOOKS

1. S. C. Rangwala - Engineering materials - Charotar Publishing, Anand
2. Francis D. K. Ching - Building Construction Illustrated, VNR, 1975,
3. Fevicol Furniture series

REFERENCES

1. W.B.Mckay –Building construction Vol1 –Longmans, UK 1981
2. W.B.Mckay –Building construction Vol 3 –Longmans, UK 1981

TECHNICAL INTERIOR PLAN DRAWING

OBJECTIVES

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

UNIT – I BUILDING COMPONENTS

Working drawing of different types of doors and windows.

UNIT – II BUILDING SURFACES

Working drawing of wall murals, reflected ceiling plans and flooring patterns.

UNIT – III FURNITURE

Working drawing of work station, living room furniture, bedroom furniture and dining tables.

UNIT – IV DETAILING OF SPECIAL AREAS

Working drawing for toilets with plumbing diagram – working drawing of kitchen with detailing of shelves and cupboards

UNIT – V DETAILING OF STORAGE AREAS

Working drawing o wardrobes, TV cabinet and showcase, crockery shelves, cadenza, chest of drawers, dressing table, 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.

LANDSCAPE AND GARDENING OBJECTIVES: 1. Introduction to the characteristics of Plant materials which are an important part of soft landscape, international nomenclature used for plants and their associations in nature. 2. To promote understanding of the factors that regulate the growth and characteristics of the plant material. 3. The objective of this course is to equip the students in the techniques of detailing and drawing of Landscape design at site scale. UNIT – I: PRINCIPLES OF LANDSCAPE GARDENING Importance and scope of landscape gardening -History of landscape gardening -Art principles -Some important terms of landscape gardening -Garden adornments - Landscape Graphics- Symbols of representation of landscape elements in plan, elevation and section. UNIT – II: DESIGN OF LANDFORMS Contours – representation of landforms and landform design, interpolation of contours, slope analysis, uses and function. Grading – symbols and abbreviations, basic grading exercises, grading alignment of paths/roads, angle of repose and use of retaining walls - Garden Features -Walls -Fencing -Steps -Garden-Garden drives and paths - Hedges -Edges -Arches- Pergola -Lawn - Carpet bedding - Flower beds- Shrubbery- Borders- Rockery- Water gardens- Bonsai- Topiary - Earthwork Formation Earth works – principles of earth work, cut and fill calculations – borrow pit method, average end area method, average spot level method, precautions taken in cut and fill methods in relation to soil conditions, amount of precipitation etc., UNIT – III: GARDENS TYPES AND STYLES Garden types -Indoor garden -Outdoor garden Garden styles -Formal gardens -Informal gardens-Freestyle gardens - Floristic Regions of India Different floristic regions and forest types of India. Dominant, endemic, occasional, prevalent species in select types. - Plant Propagation Nursery establishment and plant propagation. Establishment and maintenance of grass, shrubs and trees with respect to ground preparation, planting and transplanting, protection of plants during and after planting. UNIT IV HORTICULTURAL PRACTICE Plant nutrition and supplements. Fertilizers and Manures- types, methods of applications, advantages and disadvantages. Common plant pests, diseases and their control, insecticides and their application, weed control. Sustainable practices in pest management and weed control. Water budgeting . UNIT V HARD LANDSCAPES Design and detail of hard landscapes – Roads, paving, barriers, edge conditions – functions, types, criteria for selection, design aspects, details. Landscape Maintenance - Maintenance methodology, maintenance economics and maintenance details for all soft landscape. Equipment for landscape maintenance

REFERENCES*:*

1. Strom Steven, Site engineering for landscape Architects, John wiley and sons Inc.,2004.
2. Charles.W.Harris & Nicholas T. Dines, Time saver Standards for Landscape Architecture, Mc. Graw Hill.
3. Jack E. Ingels, Landscaping – Principles & Practices , Pelmer Publishers Inc., 1992

4. Grant W Reid, Landscape Graphics, Watson – Guptill publication, New York, 1987.
5. David Sauter, Landscape Construction, Pelmer Thomson Learning, 2000.
6. Michael Little wood, Landscape Detailing Volume I -IV, Architectural Press, 1993.
7. Naoki Mukoda, Street furniture, Bijutsu shuppan – sha Ltd., 1990.

INTERIOR TECHNICAL WORKSHOP

OBJECTIVES

To understand the basic methods of furniture making with focus on hands on methods regarding workshop practices in wood, metal, plastic, textiles etc.

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UNIT – I WOOD WORKSHOP

The safe and efficient use of the tools of the trade, Hand tools, portable power tools, Stationary power tools, Materials, Hardware. Safe working practices in a workshop. Joineries in wood – lap, butt, dowell, tenon & mortise, dovetail, etc. Exercises in plywood joinery.

UNIT – II METAL WORKSHOP

Cutting, planning, drilling and lathing of steel sections used in furniture. Aluminium sections and their use in doors, windows and partitions, Welding practice.

UNIT – III FABRIC WORKSHOP

Familiarity with different types of fabrics and their properties – methods of cutting and sewing of upholstery fabrics - various types of foam and cushions and their applicability in furniture making.

UNIT – IV PAINT WORKSHOP

Techniques of spray painting of enamel paint on metal and wood surfaces – varnishing and lacquering etc.

REFERENCES

1. Joints used in wood furniture – ISI – IS 3845 – 1966.
2. Pete Silver et al – Fabrication, the designers guide – Architectural press, London 2006.
3. Albert C Smith - Architectural model as machine – Architectural press, oxford 2004.