

VIMALA COLLEGE (AUTONOMOUS)

(NAAC Re-accredited (3rd Cycle): A Grade, CGPA-3.50)

(Affiliated to University of Calicut)



DIPLOMA IN
INTERIOR ARCHITECTURE AND DESIGN
(CHOICE BASED CREDIT AND SEMESTER SYSTEM)
UNDER THE
FACULTY OF HOMESCIENCE
SYLLABUS

(FOR THE STUDENTS ADMITTED FROM THE ACADEMIC YEAR 2018 – 19 ONWARDS)

REGULATIONS FOR DIPLOMA INTERIOR ARCHITECTURE AND DESIGN

(Community Colleges scheme of the UGC)

1 PROGRAMME OBJECTIVE

The basic objective of the Programme is to open a channel of admission for vocational courses for students, who have done the 10+2 in any stream.

The Diploma courses are designed with the following objectives,

- To provide judicious mix of skills relating to a profession and appropriate content of General Education.
- To integrate NSQF within the undergraduate level of higher education in order to enhance employability of the graduates and meet industry requirements. Such graduates apart from meeting the needs of local and national industry are also expected to be equipped to become part of the global workforce.
- To provide vertical mobility to students coming out of 10+2 with vocational subjects.

2 GENERAL PROGRAMME STRUCTURE

Duration

The duration of the Diploma in Interior Architecture and design Programme shall be 2 semesters in one academic years. The first semesters shall be from June to October and the Semester 2 shall be from November to March. Each semester shall have 90 working days inclusive of all examinations days distributed over a minimum of 18 weeks of 5 working days consisting of six hours. For final semester internship, the total duration is 450 hours.

Attendance:

A candidate shall be permitted to appear for the Semester-End examinations only if she satisfies the following requirements:

- She must secure not less than 75% attendance in the total number of working days in each semester.
- She must earn a progress certificate from the head of the institution stating that she has satisfactorily completed the course of study prescribed in the semester as required by these regulations.

- Her conduct must be satisfactory

It shall be open to the Controller of Examinations to grant condonation of shortage of attendance on the recommendation of the head of the institution in accordance with the following norms.

- The shortage shall not be more than 10%
- Shortage up to 20% shall be condoned once during the entire course provided such shortage is caused by continuous absence on genuine medical grounds.
- Shortage shall not be condoned more than twice during the entire course.
- Candidate who is not eligible for condonation of shortage of attendance shall repeat the semester as per university norms.

If a student registered in first semester of the Diploma in Interior Architecture and Design Programme is continuously absent from the classes for more than 14 working days at the beginning of the semester without informing the authorities the matter shall immediately be brought to the notice of the Principal. The names of such students shall be removed from the rolls.

3 ADMISSION

Eligibility

- The admission to the programme will be as per the rules and regulations of the University for UG admissions.
- Basic eligibility for is 10+2 in any stream (No age limit)
- The eligibility criteria for admission shall be as announced by the University from time to time.
- Separate rank lists shall be drawn up for reserved seats as per the existing rules.
- Grace Marks may be awarded to a student for meritorious achievements in co-curricular activities such as Sports/Arts/ NSS/NCC/ Student Entrepreneurship.
- Preferred subjects and index mark calculations will be decided by the respective Board of Studies.

4 EVALUATION

Mark Distribution and Indirect Grading System

Mark system is followed instead of direct grading for each question. After external and internal evaluations marks are entered in the answer scripts. Indirect Grading System in 7 point scale will be followed. Each course is evaluated by assigning marks with a letter grade (A⁺, A, B, C, D, E or F) to that course by the method of indirect grading.

Seven point Indirect Grading System

% of Marks	Grade	Interpretation	Grade Point Average	Range of Grade points	Class
90 and above	A ⁺	Outstanding	6	5.5- 6	First Class with distinction
80 to below 90	A	Excellent	5	4.5 - 5.49	
70 to below 80	B	Very good	4	3.5 - 4.49	First Class
60 to below 70	C	Good	3	2.5 - 3.49	
50 to below 60	D	Satisfactory	2	1.5 - 2.49	Second Class
40 to below 50	E	Pass/Adequate	1	0.5 - 1.49	Pass
Below 40	F	Fail	0	0 - 0.49	Fail

An aggregate of E grade with 40% marks (after external and internal put together) is required in each course for a pass and also for awarding a degree. Appearance for Internal Assessment (IA) and End Semester Evaluation (ESEexternal)) are compulsory and no grade shall be awarded to a candidate if she/he is absent for IA/ESE or both.

After the successful completion of a semester, Semester Grade Point Average (SGPA) of a student in that semester is calculated using the formula given below. For the successful completion of a semester, a student should pass all courses. However, a student is permitted to move to the next semester irrespective of SGPA obtained.

The Semester Grade Point Average can be calculated as

$$SGPA = \frac{\text{Sum of the credit points of all courses in a semester}}{\text{Total credits in that semester}}$$

ie., $SGPA = \frac{C1 * G1 + C2 * G2 + C3 * G3 + \dots}{n}$

where G1, G2, ... are grade points of different courses; C1, C2, ... are credits of different courses of the same semester and n is the total credits in that semester.

The Cumulative Grade Point Average (CGPA) of the student is calculated at the end of a programme. The CGPA of a student determines the overall academic level of the student in a programme and is the criterion for ranking the students. CGPA can be calculated by the following formula

The Cumulative Grade Point Average (CGPA) can be calculated as

$$CGPA = \frac{\text{Total credit points obtained in all semesters}}{\text{Total credits}}$$

A) Theory: Every Semester

100 marks for each paper.

QUESTION PAPER PATTERN

For a paper total marks is $80+20=100$.

External : 80marks , Internal : 20 mark

Project work $80+20= 100$

Internship $80+20= 100$

Distribution of marks and type questions.

Internal marks distribution

Sl.No	Criteria	Marks
1	Attendance	4
2	Assignments	4
3	Seminar	4
4	Test papers-2-	8
Total		20

External marks distribution

Category	Total Questions	To be answered	Marks for each question	Total
Section A – One sentence	10	10	1	10
Section B- Paragraph	12	10	2	20
Section C- Short essay	8	5	6	30
Section D-Essay	4	2	10	20
Total				80

B) PRACTICAL

Practical internal marks distribution

Sl.No	Criteria	Marks
1	Attendance	4
2	Performance	4
3	Record	4
4	Class test (2)	8
Total		20

Practical -External marks distribution

Sl.No	Criteria	Marks
1	Neatness & Perfection	10
2	Scale	20
3	Dimension	10
4	Rendering & Hatching	10
5	Creativity	10
6	Record	20
Total		80

PROJECT

Project evaluation (Internal Marks)

Sl.No	Criteria	Marks
1	Performance and project work	10
2	Project Presentation	4
3	Viva	6
Total		20

Project evaluation (External Marks)

Sl.No	Criteria	Marks
1	Choice of the topic/problem	10
2	Project record	20
3	Alternative solution ideas	15
4	Analytical thinking	15
5	Viva& presentation	20

NSQF LEVEL

NSQF Level	Skill Component Credits	General Education credits	Total Credits for award	Normal Duration	Exit Points/ Awards	Job Role
4	20	12	30	One Sem	Certificate	1) Lead Interior Designer
5	20	12	60	Two Sem	Diploma	1) Supervisor Interior Designer 2) Design Supervisor-modular Furniture

DIPLOMA IN INTERIOR ARCHITECTURE AND DESIGN

(Community Colleges scheme of the UGC)

CORE COURSE STRUCTURE

SEM	COURSE TITLE	HRS/ WEEK	TOTAL HRS	CREDIT	INT MKS	EXT MKS	TOTAL
I	DIA1B01 Basic Design	3	45	2	20	80	100
	DIA1B02 Engineering Drawings	4	60	4	20	80	100
	DIA1B03 Construction Techniques	4	60	3	20	80	100
	DIA1B04 Services I	3	45	3	20	80	100
	DIA1B05 Fine Arts- Practical I	4	60	4	20	80	100
	DIA1B06 Engineering Drawings- Practical II	4	60	4	20	80	100
	DIA1B07 Computer Aided Design- Practical III	4	60	6	20	80	100
	DIA1B08 Project	4	60	4	20	80	100
	TOTAL	30		30			800
II	DIA2B09 Furniture Fixtures And Equipment	3	45	3	20	80	100
	DIA2B10 Interior Design Management	3	45	3	20	80	100
	DIA2B11 History Of Interior Architecture Design	3	45	3	20	80	100
	DIA2B12 Services-II	3	45	3	20	80	100
	DIA2B13 Furniture Designing- Practical IV	4	60	4	20	80	100
	DIA2B14 Interior Design Management- Practical V	4	60	4	20	80	100
	DIA2B15 Interior Design Graphics- Practical VI	6	90	6	20	80	100
	DIA2B16 Internship	4	60	4	20	80	100
	TOTAL	30		30			800

SEMESTER I

DIA1B01 BASIC DESIGN

Hrs/wk:3

Credit: 2

Objectives:

- ✓ To get the basic theoretical ideas of rendering with pencils and paints.
- ✓ To develop the formation with proper principles of design.

Module I

- **Elements of Design**- line, texture, colour, form, pattern
- **Formation** : Developing a form from a point to volume.
- **Color theory** : Color wheel, color terminologies, color perception phenomena, Warm and cool colors, colour schemes, color psychology, application of colors.
- **Shapes and Texture:** Distinguishing one form to another, Natural shapes, Non-objective shapes, geometrical shapes. Explaining texture or surface finish, Visual and tactile textures.
- **Basic Lights and Shadows:** Illuminate the form and space of an interior environment and perform tasks with appropriate speed, accuracy and comfort. Ambient or general lighting, Task lighting, Accent lighting.
- **Principles of Interior Design**
- Back ground for applied decoration- color, texture, plane and fixtures, emphasizing space through change of levels and structural forms.
- **Views**- One point, two point perspectives of interiors
- Building elements in interiors.
- Project: Preparation of interior views.
- Project: detailed case study of specific room in residences/hotels/offices etc. (preparation of interior view)

Module II-

- **Design Principles**-Proportion, Rhythm, Harmony, Balance (Symmetrical, radial, Asymmetrical), Unity and variety, Emphasis (Linear and centered)
- Spatial Organization (Centralized, Linear, Radial, Clustered and Grid)

References

1. Time Saver Standard for Interior Design & Space Planning, Joseph De Chaira, Jullius Panero & Martin Zelnik
2. Interior Design Illustrated By Francis D K Ching Interior Design By John Pile
3. Interior Design By Ahmed Kasu

DIA1B02 ENGINEERING DRAWING

Hrs/wk:4

Credit: 4

Objectives:

- ✓ To be familiar with different types of engineering equipments
- ✓ To draw the theory based technical drawings
- ✓ To develop the sanction drawings

**Module I-
Technical Drawings**

Drawing equipments: Drawing boards, T square, Set squares, Set of scales, French curves or flexi curves, Pencil and ink compass, Technical fountain pens (0.2,0.3,0.5 pen nibs), Drawing papers, Drawing pencils, Pencil sharpener, Paper fastener, Eraser, Templates, Drawing pins, Sand paper block, Duster

Lettering: Techniques of lettering, Shapes and proportions of individual characters, order and direction of strokes, Rules for combining letters into words and words into sentences, Writing methods, Block Letters, Small Letters, Numbers

Scales: Full scale drawing, Reduced scale drawing, Enlarged scale drawing

Geometrical constructions: Point and lines, Line conventions (Object line, Hidden line, Centre line, Dimension line, Extension line, Hatching line, Section plane line, Short break line, Long Break line.

Dimensioning : Notation of Dimensioning, Dimension lines, Projection or Extension lines, Construction lines, Arrow heads, Leader or pointer lines, Units of dimensions, Systems of dimensioning, Arrangement of dimensions, Rules of dimensions.

Module II

Legal building compliance- sanction drawings, contract documents and legal issues

References

1. Building Planning and Construction companion
2. Practical House Building Manual
3. Construction drawings and Design Standards

DIA1B03 CONSTRUCTION TECHNIQUES

Hrs/wk:4

Credit: 3

Objectives:

- ✓ To get the awareness of different building materials.
- ✓ To select proper materials on demand

Module I

Building Materials

Stones: Types of stones, Dressing of stones, Aggregates for stones, Properties of stones, Classification of stone masonry (Rubble masonry, Ashlar masonry, Polygonal walling, Flint walling), Stone finishes.

Clay products: *Bricks* - Types of Bricks, Classes of Bricks, Sizes of Bricks, Brick terminologies (Stretcher, Header, Arrises, Bed, Bed joint, Perpend, Lap, Closer, Queen Closer, King closer, Bevelled closer, Mitred closer, Bat, Bullnose, Splays, Frog or kick), Brock Bonds (Stretcher bond, Header bond, English bond, Flemish bond)

Tiles - Types of tiles (Floor tiles, Roof tiles), Shapes of tiles, Sizes of tiles.

Earthenware – Use of earthenwares, manufacturing of earthenwares, Types earthenwares (Terracotta, Stoneware, Porcelain)

Cement: Types of cements- (Natural cements, Rapid hardening cements, Quick setting cements, White cement, Colored cements).

Mortars: Mixing proportion Lime mortar, Cement mortar, Gauged mortar, Surkhi mortar

Concrete: Mixing proportion, Admixtures, Lime concrete, Surkhi concrete, Reinforced Cement Concrete (RCC).

Timber: Convertible timber, Rough timber, Standing timber, Decay of timber, Seasoning of timber, Preservation of timber, Classifications of timber (Refractory and non-refractory), natural timber (Hardwood and soft wood), Industrial Timber (Veneers, Plywood, Fiber boards, Block Boards, Particle boards, Laminates).

Plastics: Behavior of plastics, Types of plastics (Thermoplastics and thermosetting plastics), Use of plastics.

Glass: Crown glass or soda lime glass, Flint glass, Hard or Bohemian glass, Pyrex glass, Common or bottle glass, Sheet glass, Plate glass, Tinted glass, Heat insulating glass, Glass blocks, Fiber glass, Laminated Safety glass.

Paint: Characteristics of paint, Types of paints (Aluminum paints, Anti-corrosive paint, Bituminous paint, Cement paint, Emulsion paint, Enamel paint, Oil paint, Plastic paint, Distempers).

Ferrous Metals: Cast iron, Wrought iron, steel (Low carbon Steel, Medium carbon Steel, High carbon steel)

Non-ferrous metals: Aluminum, Lead, Copper.

Gypsum: Plaster of Paris (POP), Plaster board (Gypsum lath board, Plaster wall board)

Asbestos: Composition of asbestos, Use of asbestos

Module II-

• Design Elements

Flooring: Selection criteria (Initial cost, maintenance and durability, Damp-resistance, Smoothness and hardness, Comfort criteria, Color and texture), Types of flooring (Brick flooring, Wood flooring, Resilient flooring, Stone flooring, Ceramic flooring , Terrazzo flooring), Floor coverings (introduction of Carpets and rugs), Access flooring.

Walls: Types of walls – load bearing walls and non-load bearing walls, Wall finishes (Wood paneling, Plaster, Gypsum board, Paint, Stone – wall panels)

Ceilings: Importance of ceiling in interiors, Ceiling forms (Gabled ceilings, Pyramidal ceilings, Vaulted ceilings, Free form Ceilings, Domed ceilings, Hipped ceilings),

Arches: Situations to construct arches, Terminologies (Intrados, Soffit, Extrados, Voussoirs, Crown, Key, Spandril, Springing points, Springing line, Abutment, Pier, Arcade, Impost, Bed joints, Span, Skew back, rise, Depth or height), Classification of arches based on Shape, Number of centers, Materials and workmanship.

Lintels: Use of lintels, Classification of lintels (Timber lintel, Stone lintel, Brick lintel, Steel lintel, Reinforced concrete lintel)

Staircases: Terminologies(Baluster, Flight, Going, Handrail, Headroom, Landing, Newel Post, Nosing, Pitch, Rise, Riser, Run, Scotia, Soffit, Step, Tread, Waist, Walking line), Types of staires, Staires of different materials, Stair clearances for furniture passage.

Windows:Terminologies, Parts of windows, Window sizes, Types of windows (Fixed windows, Pivoted windows, Double hung windows, Sliding windows, Sash windows, Louvered windows, Metal windows, Bay windows, Casement windows, Clerestory windows, Corner windows, Dormer windows, Gable windows, Lantern windows, Skylights,Ventilators), Window Treatments (Exterior – Shutters, Awnings, Overhangs, Trellises, Interior – Grills, Shades, Curtains, Blinds, Roller shades, Draperies)

Doors:Parts of Doors, Terminology (Frame, Shutters, Head, Horn, Style, Top rail, Lock rail, Bottom rail, Cross-rails, Panel, Mullion, Transome, Hold fasts, Jamb, Reveal, Rebate), Door sizes, Door frames (Timber door frames, Steel door frames), types of Doors (based on – Types of materials, Arrangement of components, Method of construction, Nature of working operations), Door fixtures and fasteners (Hinges, Bolts, Handles, Locks).

Carpentry: Description of carpentry, Details of joineries, Classification of Joints.

References

1. Engineering Materials Rangwala
2. Construction Materials and Processes By Don A Watson,
3. Building Construction Vol. I By W.B. Mckay, J.M. Mckay

DIA1B04 SERVICES – 1

Hrs/wk:3

Credit: 3

Objectives:

- ✓ To draw electrical layouts
- ✓ To draw plumbing layouts

Module I Plumbing

Water Supply: Collection sources, Systems of water supply (At Municipal level – Continuous system and intermittent system)(At Domestic Level – Direct supply system and indirect supply system)

Drainage: Process of drainage, Types of drainages.

Traps: Gully Traps, Intercepting traps, Grease traps, Silt traps.

Waste Water Disposal: Inspection chamber or manhole, Septic tank, Ventilation systems.

Sanitary Fittings: Wash basins, Water closets, Urinals, Shower Tray and Bath Tubs, bidets.

Bathroom Accessories: Towel rails, Toilet paper holders, Soap cases, Toothbrush holders, Miscellaneous accessories, Electronic hand dryer, Mirrors.

Module II Lighting

Lighting factors: Brightness, Contrast, Glare, Diffuse, Color.

Reflection :Specular reflection, Semi-specular reflection, Diffuse reflection.

Transmission: Direct transmission, Semi-diffuse transmission, Diffuse transmission

Light sources :Natural lighting (Sky component, External reflected component, Internal reflected component), Artificial Lighting (Incandescent lamps, Florescent lamps, High density lamps, Mercury lamps, Sodium vapor lamps, Metal halide lamps, Cold cathode lamps, Emergency lights)

Lighting design: Guidelines for lighting design, Types of lighting fixtures, Lighting accessories (Switches, Socket, Fused connection units, Boxes, TV outlets, Lamp – holders, Ceiling roses).

Symbols: lamps, fans, switches, sockets etc.

Electrical layouts: Methods of developing electrical layouts on a floor plan by specifying electrical points and marling with symbols.

References

1. Water Supply and Sanitary Engineering, Birdie, G. S., and Birdie, J. S.,
2. Electrical wiring, Estimating and Costing-L.Uppal

DIA1B05 FINE ARTS- PRACTICAL I

Hrs/wk:4

Credit: 4

Objectives:

- ✓ To develop free hand designs
- ✓ To do paintings

1. **Free Hand Sketching and painting**
2. **Pencil Rendering:** Way to hold the pencil, Varying pressure on the pencil, Varying grades of the pencil, Repetition and overworking – Hatching and cross hatching, Smudging techniques and hatching over a smudged portion.
3. **Pen Rendering:** Grades of pens, Holding the pen, Ink smudging techniques, Hatching and cross – hatching with pen, Repetition and overworking with pen
4. **Sketching :** Sketching with the help of trace paper, Sketching from the photographs, Life – rapid sketching, Life – detailed sketching, Sketching from memory.
5. **Shadows and Reflections:** Types of reflections – Parallel and angular, Depiction of reflections, Intensity of shadows and reflections, Conditions of shadow development, Placement of light sources, Radiating light sources, Multiple shadows.
6. **Perspective drawings**

DIA1B06 ENGINEERING DRAWINGS- PRACTICAL II

Hrs/wk:4

Credit: 4

Objectives:

- ✓ To draw plan, Section , Elevation
- ✓ To calculate the area

1. **Basics of Civil Structure Creation**
2. **Plan:** Development of plan, Rules of drawing a plan of building, Types of plans – Site plan, Floor plans, Furniture plans etc.
3. **Elevation:** Developing vertical elements of a building both in exterior and interior. Techniques for making good elevations from a plan, Styles of elevations – contemporary, colonial etc.
4. **Section:** Types of wall cross – sections, Load bearing wall construction, Non – load bearing wall constructions.
3. **Pictorial Drawings:** Making drawing more understandable, Forms of one plane conventional drawings, Development of Orthographic projections, Axonometric Projections (Isometric, Dimetric, Trimetric), Oblique projections (General oblique,

Cavalier projection, Cabinet projection) Perspective Projection (Picture plane, Eyelevel or horizon level, Eye point, station point, viewing point or spectators point, Ground line, Axis of vision, Centre of vision, Height line, Vanishing point), Classification of perspective (One point perspective , Two pint perspective, Three point perspective).

4. Area calculation: Area calculation methods, Equations to get the areas based on the shapes, Unit conventions, Relationships between units,

DIA1B07 COMPUTER AIDED DESIGNING- PRACTICAL III

Hrs/wk:4

Credit: 6

Objectives:

- ✓ To make page layouts
- ✓ To draw CAD basic drawings

1. Creating a Simple Drawing

- Getting Started with AutoCAD o Starting AutoCAD
AutoCAD's Screen Layout
Working with Commands
Opening an Existing Drawing File o Saving Your Work
AutoCAD's Cartesian Workspace
- Basic Drawing & Editing Commands o Drawing Lines
Erasing Objects
Drawing Lines with Polar Tracking o Drawing Rectangles
Drawing Circles, Viewing your drawing
Undoing and Redoing Actions

2. Making Your Drawings More Precise

- Drawing Precision in AutoCAD o Using Object Snap
Object Snap Overrides, Polar Tracking Settings, Object snap racking
Drawing with SNAP and GRID
- making Changes in Your Drawing o selecting Objects for Editing o Moving Objects,
Copying Objects ,Rotating Objects, Mirroring Objects
Editing Objects with Grips

3. Drawing Organization and Information

- Organizing Your Drawing With layers
Creating New Drawings with Templates o what are Layers?

Layer State

Changing an object's Layer

- Advanced Objects Types o Drawing Arcs
Drawing Poly lines o Editing Poly lines o Drawing Polygons o drawing Ellipse
- Getting Information From Your Drawing o Measuring Objects
Working with Properties 4.Creating More Complex Objects
- Advanced editing Commands o Trimming and Extending
Stretching Objects, Creating Fillets and chamfers o Offsetting Objects
Creating Arrays of Objects
- Inserting Block
What are Blocks?
Inserting Blocks from Tools Palettes o Inserting Blocks using insert
Inserting Blocks with Design Center

Module II

Preparing to Print

- Setting Up a Layout
Printing Concepts, Creating Viewports, Setting up Layouts
Guidelines for Layouts
- Printing Your Drawing o Printing Layouts
Printing a Check Plot

Annotating Your Drawing

- Text
Working with Annotations o Adding Text in a Drawing o Modifying Multiline Text
Formatting Multiline Text
- Hatching
- Adding Dimensions
Dimensioning Concepts, Adding Linear Dimensions Adding Radial Angular
DimensionsEditing dimensions Adding Notes to Your Drawing

Beyond the Basics

- Working Effectively With AutoCAD o Setting up the Interface Using the Keyboard
Effectively o Working in Multiple Drawings o Using Grips Effectively
Additional Layer Tools
- Accurate Positioning o Coordinate Entry
Locating Points with Tracking
Construction Lines

Creating and Organizing Blocks

- Creating Blocks
 - Creating Block
 - Editing Blocks
 - Removing Unused Elements
- Blocks in Tools Palettes Adding Blocks to Tool Palettes
 - Modifying Tool Properties in Tool Palettes 9.Drawing Setup and Utilities
- Creating Templates
 - Why Use Templates?
 - Controlling Unit Display, Creating New Layers Adding Standard Layouts to Templates o
 - Saving Templates
- Annotation Styles
 - Creating Text Styles, Creating Dimension Styles Creating Multi-Leader Styles 10.
 - Advanced Layouts and Printing
- Advanced Layout
 - Creating and Using Named Views
 - Creating Additional Viewports o Layer Overrides in Viewports Additional Annotative
 - Scale Features
- DWF Printing And Publishing
 - DWF Plotting and Viewing, Publishing Drawing Set

References

1. Introduction to Computers, 6th By Peter Norton
2. Photoshop for Interior Designers: A Nonverbal Communication by Suining Ding
3. Interior Design Using Hand Sketching,
4. SketchUp and Photoshop by Daniel John Stine, Steven H. McNeil
5. Autocad 2014 for the Interior Designer by Dean Muccio

DIA1B08 PROJECT

Hrs/wk:4

Credit: 4

Objectives:

- ✓ To get involved with interior layouts
- ✓ To do the interior design case study

Any one interior project(residence /commercial) minimum area of 100.00 sq.mt. should be studied and report submitted with the following

1. Drawings
2. Photographs
3. Sketches
4. Analysis – functions, material and style
5. Alternative solutions

SEMESTER II

SEMESTER II

DIA2B09 FURNITURE FIXTURES AND EQUIPMENT

Hrs/wk:3

Credit: 3

Objectives:

- ✓ To design furniture with proper dimensions
- ✓ To select materials for furniture

Module I

- *Furniture*: Role of furniture, evolution of furniture, ergonomics factors of furniture design and materials –its characteristics and application.
- *Types of Furniture*: Tables, Seating, Workstations, Beds, Storage, System Furniture.
Selection Criteria: Functional needs of furniture, Sizes of furniture, Appearance and construction of furniture, Comfort of furniture, durability of furniture.
- *Surface treatments: Elements of furnishing and surface treatment their need and scope-decorative materials for ceiling walls, floors, drapery and upholstery for openings and furniture*

Module II

- *Types of furniture fabrics*: Wool, Cotton, Linen, Silk, Rayon, Acetate, Nylon, Acrylic, Olefin, Polyester.
- *Selection of Furniture fabrics*: Durability, Dimensional stability, Maintenance, Appearance, Scale, Comfort, Touch.

Module III

- *Furniture Dimensions*: Bed/Mattresses types and sizes, Water beds, Sofa, Sofa beds, Television viewing areas, Convertible furniture.

References

1. Furniture & Cabinet Construction , William P. Spence, L. Duane Griffith
2. How To Build Modern Furniture, Mario Dal Fabro William P. Spence

DIA2B10 INTERIOR DESIGN AND MANAGEMENT

Hrs/wk:3

Credit: 3

Objectives:

- ✓ To do proper space planning
- ✓ To develop interior landscape design

Module I

Anthropometrics (Human Dimensions)

- **Human Dimensions:** Structural and functional elements of human, Accessibility, Adoptable dimensions.
- **Characteristics of indoor space:** Effect of enclosure on space perception -size, volume, proportion and shape of enclosures, ideal space proportions, use of scales for space representation, psychological effect of space, modulation of space -design elements, criteria for different situations.

Designing the size form of interior space using user-activity analysis and anthropometrics, fenestration, color and lighting on perception of space, application of scale, proportion to enhance the quality of space.

- Project: design of murals/floral pattern/ceiling patterns for reception areas/lounges for hotels apartments & showrooms etc.)

Module II

Space Planning

Living Room Design: Furniture arrangements, Minimum requirements, Planning considerations, Selection of furniture, color and furnishings, Furniture clearances, Making Anthropometrics data for essentials.

Dining room Design: Minimum space calculation, Selection of furniture and their clearances, Selection of colors and other wall decorations, Making Anthropometrics data for essentials.

Bedroom Design: Maintaining the room purpose, Privacy importance, Analyzing the design, Making an output with proper clearance of furniture and their selection, Making Anthropometrics data for essentials.

Kitchen Design: Kitchen work triangle, 26 foot rule, Modular Kitchen accessories and fittings, Kitchen cupboard development, Selection of color and texture of cabinets and walls, Making Anthropometrics data for essentials.

Bathroom Designing: *Placing the* bathroom fixtures by considering the space plan layout, selection of sanitary wares and fixtures, Making Anthropometrics data for essentials.

Module III

- **Interior Landscaping:** Elements and application of interior landscape. Interior plant materials, growth condition, maintenance, importance of plantscaping- aesthetics, functional
- ***Classification of plants:*** Trees, Shrubs, Climbing plants, Perenials, Water plants, Ferns, Orchids, Succulants, Annuals, Bulbous plants, Bonsai.
- ***Design Guidelines:*** Plant texture, Plant height, Plant spacing.
- ***Selection of plants:*** Plants for dark corners, Plants for sunny rooms, Plants for room with indirect light, Plants for cooler rooms, Plants for humid rooms, Plants for balconies and terraces, Plants that creep, Plants that are trail suitable for hanging baskets.
- Project: Landscaping of private and public interior spaces.

DIA2B11 HISTORY OF INTERIOR ARCHITECTURE AND DESIGN

Hrs/wk:3

Credit: 3

Objectives:

- ✓ To get aware of historical furniture
- ✓ To know about the ancient interior design concept

Module I

- ***History of furniture:***French, Italian, English, American

Module II

- **Vernacular Architecture of Kerala:** Study of factors that shape the architectural character of region, geographic, climatic, social, economic, political and religious aspects of Kerala.

Module III

- ***Furniture Style:***Furniture assemblage, Textile design, Interior colors, Motifs, colors, Floors, Wall coverings, Textiles.

References

1. History of interior design by R Blakemore
2. Art history 2nd edition by Stokstad Publisher: Prentice Hall, 2002

3. Designers guide to furniture styles Publisher: Pearson Prentice Hall, 2004
4. History of interior design by R Blakemore
5. Design In The 20th Century, C and P Publisher: Taschen (Mar 2005)

DIA2B12 SERVICES II

Hrs/wk:3

Credit: 3

Objectives:

- ✓ To select the proper air conditioners for different interiors.
- ✓ To provide safety services to interiors.

Module I

Air conditioning: Temperature control, Humidity control, Ventilation, Air change, Dust control, Refrigeration Cycle, Equipments used to produce cooling, Refrigeration methods, Air-conditioning capacity, Heat load estimation, Types of Air conditioning systems.

Acoustics: Factors involving sound, Terminology (Sound waves, Wavelengths, Frequency, Velocity, Resonance, Strength of sound, Sound levels, Loudness), Sound in interiors, Sound Transmission, Sound Absorption, Types of sound absorptive materials, Sound controlling, Sound insulation,

Module II

Damp Proofing: Causes of damp proofing, Effects of damp proofing, Materials used for damp proofing, Methods of damp prevention, Prevention of dampness, Damp proofing treatments in buildings.

Termite Proofing: Anti-termite treatment – Pre-construction treatment, site preparation, Soil treatment, Post-construction treatment.

Fire and Safety: Fire protection scheme, Fire Alarm System, Fire Suppression, Fire Sprinkler, Fire Tanks, Fire extinguishers, Fire hose, Fire retardant treatments.

References

1. Fundamentals of Acoustics, Kinsler and Frey
2. Acoustics in built environment, Duncan Templantation
3. Refrigeration & Air conditioning-C.P.Arora
4. Refrigeration & Air conditioning-W.F.Stocker

DIA2B13 FURNITURE DESIGNING- PRACTICAL IV

Hrs/wk:4

Credit: 4

Objectives:

- ✓ To design furniture layouts
- ✓ To develop projected views of furniture

1. Furniture design – single items used in residential and commercial
2. Furniture design- group of furniture elements along with the surroundings
3. One design problem of multi activity residential single room design including case study
4. Ergonomic design solutions

DIA2B14 INTERIOR DESIGN AND MANAGEMENT- PRACTICAL V

Hrs/wk:4

Credit: 4

Objectives:

- ✓ To develop space plan
- ✓ To get the complete idea of interior design with a perfect theme.

1. One hall scheme of residential interior having different types of residential activities
2. One commercial interior problem having area from 100- 200 sq. mt.
3. One time problem of interiors- residential/commercial of area 50- 100 sq. mt.

DIA2B15 INTERIOR DESIGN GRAPHICS- PRACTICAL VI (SOFTWARE: 3DS MAX AND ADOBE PHOTOSHOP)

Hrs/wk:6

Credit: 6

Objectives:

- ✓ To develop 3D Models
- ✓ To do complete rendered frame of interior views.

3DS Max Syllabus

Module I

Introduction

Understanding the 3D environment, the 3DS Max user interface, Command Panels, Other UI elements

Getting Starting

Viewport navigation and configuration, Object creation and selection, Scene management
Assembling Project Files

Basic Modeling Techniques

Basic concepts, modeling with primitives, modifiers and transforms, Reference coordinate system and transform centers, Cloning and Grouping, polygon modeling groups.

Modeling

Modeling with 3D geometry, Spline theory, Working with splines, create 3Dmodels form 2D objects, Using shape Modifies, using lofts, Creating multiple model concepts from one idea, polygon theory, Creating and editing 3D polygon objects, Using snaps and align tools for precision.

Module II

Materials and Mapping

The principles of materials and surfaces, Introduction to the material editor, different types of materials, Allying materials, Using 2D Maps, Introduction to UVW mapping, Editing UVW map coordinates, Applying materials and maps.

Lighting

Introduction to direct lighting, Shadows and shadow theory, using skylight and light tracer for external scenes, color light theory, The day light system

Cameras

Physical Camera, Target and free camera parameters, Camera paths.

Rendering

Review of the renders, Review of V-ray and mental ray, Render scene dialogue, Scene status, Batch render.

Animation

General principles, working with key frames, Animating objects, working with track view editor, Animating an object with auto key, working with object hierarchies

Module III

ADOBE PHOTOSHOP SYLLABUS

Introduction

Vector and Raster Images
Exploring Menu bar, Tool bar, Option bar
Customizing Work spaces
Opening and Navigating Images
Saving the file in different file Formats

Selection tools

Selection with marquee Tool
Selecting with lasso Tool
Selection with Magic Wand and other selection methods
Saving selection

Layers

Layers basics
Selecting, grouping and Linking Layers
Masking Layers
Layer Opacity and Styles

Reshaping and transforming the selection

Move, Cop, Hide a selection
Adjust the selection area
Copy and deleting the Selections
Free Transformation of the images
Wrap images

Editing

Edit Tab Options DRAWING AND PAINTING
Drawing and Editing shapes
Painting with the Brush Tool and Pencil Tool
Creating Patterns
Blending Modes
Gradients

Text

CREATING Text Type
Editing Text FIL TERS
Filter basics

Filter Effects

Color management

Managing the Color Schemes

Exporting and printing

Exporting to different Formats and Printing

References :

1. Mastering Autodesk 3ds Max 2013 by Jeffrey Harper
2. Realistic Architectural Visualization with 3ds Max, Roger Cusson, Jamie Cardoso

DIA2B16 INTERNSHIP

Hrs/wk:4

Credit: 4

Objectives:

- ✓ To assist an experienced professional
- ✓ To get practical experience in interior design.

Professional training of at least 120 days at architect firms/interior designers/ civil contractors/ interior contractors.

Report of case study done should be submitted with all drawings.