

CERTIFICATE COURSE IN INTERIOR DESIGNING

(1 Year)



**STATE BOARD OF TECHNICAL EDUCATION AND TRAINING,
SANKETHIKA VIDYA BHAVAN, MASAB TANK, TELANGANA,
HYDERABAD**

**ADVANCED CERTIFICATE COURSE IN
INTERIOR DESIGNING**

Subject code	Name of the subject	Instruction Periods/week		Scheme of Examination			
		Theory	Practical	Duration Hours	Sessional Marks	End exam marks	Total marks
	Theory	-	-				
ID-101	Materials, Constructions & Services	06	-			100	100
ID-102	Specifications and estimations	04	-			100	100
ID-103	Furniture Design and Detailing	04	-			100	100
	Practical						
ID-104	Design basics and Interior Graphics	-	06		40	60	100
ID-105	Interior design studio	-	06		40	60	100
ID-106	History of Interior Design	-	04		40	60	100
ID-107	Computer Aided Designing & Drafting	-	06		40	60	100
ID-108	Portfolio & Industrial Training			1 month			
Totals		14	22		160	540	700

MATERIALS

Time Schedule

S.No.	Major Topic	Periods
MATERIALS		
1.	Introduction	01
2.	Timber and timber products	10
3.	Glass	10
4.	Plastics	10
5.	Thermal and acoustic materials	10
6.	Hardware	10
7.	Surface finishes	10
8.	Adhesives	10
CONSTRUCTIONS		
S.No.	Major Topic	Periods
1.	Masonry	10
2.	Openings	15
3.	Partitions	10
4.	Panelling	10
5.	False ceiling	10
6.	Floors	10
7.	Staircases	15
8.	Arches and lintels	10
9.	Woodwork	10
SERVICES		
S.No.	Major Topic	Periods
1.	Water Supply	12
2.	Drainage	12
3.	Electrification	08
4.	Air-conditioning	08
5.	Elevators and escalators	12
6.	Security systems	08
	CASE STUDIES	20
	Internal test	02
	Internal test	02

Totals

Note: Case studies are to be taken up and seminars should be presented on the same.

Objectives:

- On completion of the subject, a student should be able to
- Attain elementary knowledge of basic building and interior materials.
- Appreciate application of materials in interiors

Course contents:

ID-101- Materials, Constructions & Services

1. Introduction: Importance of material science for an interior designer, case studies as a learning exercise.
2. Timber and timber products: Types of timber, properties, uses , seasoning, common defects in timber, in seasoning, common varieties of timber found in Andhra Pradesh, characteristics of good timber, veneers, plywood, fiber boards, laminates, termite treatment materials.
3. Glass: : Glass it composition, characteristics of glass, types of glass, soda glass, lime glass, bullet proof glass, fiber glass, glass blocks, structural glass, wired glass, textured glass, stained glass, silvering of glass, mirrors etching of glass
4. Plastics: : Definition, composition, characteristics, types, polythenes, polyvinyl chloride, Perspex, thermacole, laminates, linoleum, resin, uses in floor, wall, ceiling and finishing finishes.
5. Thermal and acoustic materials: cork, thermal coal, springs, jute, cotton, foam, rubber, leather, their properties and uses
6. Hardware: door handles, locks, door hinges, door closing devices, door holders, weather stripes for windows, shutter-operating hardware etc.
7. Surface finishes: paints, varnishes and polishes their types and uses
8. Adhesives: properties and uses and types, natural synthetic, thermo plastics and thermo setting plastics, epoxy resins

CONSTRUCTIONS

Objectives:

Upon the completion of the study of the subject, a student shall be able to

- Understand the constructional aspects of design
- Draw the drawings to the scale

Course contents:

1. Masonry: Definitions of technical terms, Brick masonry; bonds, types of bonds, English and Flemish bond- Stone masonry; rubble and ashlar masonry
2. Openings: Definitions of technical terms ,doors, types, windows, types ventilators
3. Partitions: Definitions of technical terms, Framing , types of partitions, timber, plywood, aluminum partitions
4. Panelling: Panelling, types
5. False ceiling: Definitions of technical terms and types of false ceilings
6. Floors: Definitions of technical terms Types of floors, uses and merits and demerits
7. Staircases: Definitions of technical terms, types of staircases
8. Arches and lintels: Types, definitions of technical terms, parts of an arch

9. Woodwork: Definitions of technical terms, types of joints and importance of joinery

Note: A portfolio of construction drawings has to be prepared by each student and submitted for internal marks

SERVICES

Objectives:

Upon the completion of the subject, the student shall be able to

- State the importance of water supplies to the interiors, draw a simple water supply networks
- State the importance of drainage system, draw a simple drainage network,
- Identify the electrical networks; list all the electrical fixtures and the safety mechanisms in electrification
- Draw a simple telephone network system for an office and residential space and list all the equipment
- List the equipment of a computer network and draw a simple network
- State the importance of Air conditioning, list the components of an AC system, and state the human comfort factors.
- State the different types of escalators and elevators uses, their features and spatial requirements.

Course contents:

1. Water Supply: Definitions, importance, sources of water, quantity of water, quality of water, purification, distribution, water supply layout of a residence
2. Drainage: Introduction, importance, sanitary fixtures, classification of waste matter, sanitary arrangement of a residential building
3. Electrification: Importance, electrical fixtures, wiring, and types of wiring, safety measures: Earthing, uses, mini circuit breaker, electrical layouts
4. Air-conditioning: Human comfort factors, classification of AC, components of AC
5. Elevators and escalators: Classification, components, working and layout
6. Security systems: Classification, Importance, types of security systems and uses

ID-102- SPECIFICATIONS AND ESTIMATIONS
Time Schedule

S.No.	Major Topic	Periods
1.	Introduction to Specification	05
2.	General Specification	20
3.	Detailed specification	10
4.	Introduction to estimation	05
5.	Measurement of work	10
6.	Detailed estimation	36
7.	Abstract of Estimate	10
	Internal test	02
	Internal test	02
Totals		100

Objectives:

Upon the completion of the study of the subject a student shall be able to

- Understand the importance of specification
- State the procedure of writing specification
- Write a general specification for an interior scheme
- Write detailed specifications for materials of interiors
- Understand the importance of estimation
- List the items of work for interiors
- List the units of measurement for items of work
- Prepare detailed estimate for interior components
- List the market rates of materials, hardware, fittings and fabric materials
- List the items of work in the abstract
- Prepare abstract of estimate

Course contents:

1. Introduction to Specification: Importance of Specification, and relevance
2. General Specification: Importance of specification, necessity, procedure and types of Specifications
3. Detailed specification: Detailed specification for materials and floor, wall, ceiling finishes, woodwork, upholstery, furniture & fittings
4. Introduction to estimation: Importance of estimation and relevance
5. Measurement of work : Items of work, technical items, MKS and FPS system of measurement
6. Detailed estimation: Prepare detailed estimates for floor, wall, ceiling finishes, wood work, furniture and partition finishes
7. Abstract of Estimate: Introduction, format, market prices of interior materials, and calculation of overall cost of a project

Reference:

Estimation and costing by B.N Dutta

ID-103- Furniture Design and Detailing

Time Schedule

S.No.	Major Topic	Periods
1.	Introduction	05
2.	Theory of Furniture design	
	a) Factors influencing design	10
	b) Materials	10
	c) Anthropometry	10
	d) Joinery	05
	e) Finishes	05
	f) Design of Furniture	
3.	Domestic furniture	80
	Case Studies	20
	Internal test	03
	Internal test	02
Totals		150

Objectives:

Upon the completion of the study of the subject, a student shall be able to

- Understand the importance of furniture design
- Differentiate between the interior design and furniture design
- State the anthropometric data for various furniture pieces
- Design simple furniture pieces

Course Contents:

1. **Introduction:** Role of furniture design in interior design
2. **Factors influencing design:** Principles of design, environmental, social economic factors
3. **Materials:** brief introduction to materials specific to furniture design; timber and timber products, metals, glasses, plastics, fibre glass, textiles
4. **Anthropometry:** Relation of anthropometry to furniture design, anthropometrics of adult male, female and child, clearances related to residential and office furniture.
5. **Joinery and hardware:** Importance of joinery, Brief description of various timber joints, types of hardware, techniques of fixing hardware
6. **Finishes:** Brief description of varnishing, polishing, powder coating, painting, chrome plating, gilding, veneering and other surface finishes
7. **Design of Furniture:** Design of a) Table b) Chair c) Bed d) Counter e) Wardrobe f) Development of shop drawing for a simple woodcarving

Case study: Design should be preceded by case studies of typical furniture pieces in a workshop or a furniture showroom.

ID-104- Design basics and Interior Graphics

Time Schedule

S.No.	Major Topic	Periods
1.	Introduction	01

Interior graphics:

2.	Instruments and materials	05
3.	Principles of graphics	18
4.	Design symbols	10
5.	Geometrical drawing	20
6.	Pictorial projection	20
7.	Colour theory	15
8.	Rendering	10

Design basics:

9.	Design and Human perception	05
10.	Elements of design	20
11.	Principles of design	10
12.	Anthropometry	10
	Internal test	03
	Internal test	03

Totals	150
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Note: Each student has to maintain a sketchbook and a portfolio of drawings. These are to be submitted the same at the end of the year.

Objectives:

Upon the completion of the study of the subject, a student shall be able to

- Understand the use of scale
- Understand the importance of drawing as a tool for design and communication of ideas
- Understand the principles and elements of interior design
- Develop an appreciation for form, proportion, colour, texture

Course contents:

1. Introduction: Importance of drawing for a designer, importance of principles of design

Interior graphics:

2. Instruments and materials: Drafting equipment, media and reproduction techniques
3. Principles of graphics: Scales, use of scales, selection of scales, lines, types, line weights, lettering, types, stenciling, dimensioning, sequence of drafting
4. Design symbols: Architectural symbols in plan and elevations, furniture symbols, fixtures and appliances, material symbols, electrical and plumbing symbols
5. Geometrical drawing: Basic geometrical constructions, conics, geometrical planes, geometric solids, orthographic projection, sections
6. Pictorial projection: Isometric drawing, perspective drawing
7. Colour theory: Colour, colour wheel, colour harmonies, primary, secondary and tertiary colours, complementary and harmonious colour and their effects
8. Rendering: Purpose and techniques of rendering, pencil, pen, colour pencil, water colours and ink renderings, dot, line, stroke rendering exercises

Design basics:

9. Design and Human perception: Visual perception and impression
10. Elements of design: Points, lines, plane, solids and their types, size, shape, colour, texture, Structural elements; walls, doors, windows, columns, floors, ceilings, steps, stairways- furniture; movable and fixed furniture, colour, lighting, accessories, artwork and signage
11. Principles of design: Light and shadow, composition, balance, scale, proportion, rhythm, repetition, emphasis
12. Anthropometry: Application of human dimensions to design of furniture

ID-105- INTERIOR DESIGN STUDIO

Time Schedule

S.No.	Major Topic	Periods
1.	Introduction	01
2.	Residential Interiors	50
3.	Commercial	50
4.	Office Interiors	50
5.	Hospitality spaces	50
	CASE STUDIES	25
	Internal test	02

Totals 228

Note: Each student should prepare a portfolio of drawings. A minimum of four different design problems have to be taken up for design. Portfolios are to submitted for internal evaluation

Objectives:

On completion of the subject, the student shall be able to

- Know the standards of various spaces
- Develop ideas about circulation and orientation
- Design interior spaces of some complexity
- Suggest colour scheme and furniture layouts

Course Contents:

1. **Introduction:** Introduction to interior design, development of a concept, theme based interiors, concept of sectional plan, sectional elevations, reflected ceiling plans, furniture layouts, concept sheets, detailing
2. **Residential Interiors:** Design problems on living room, dining room, bedroom, kitchen, toilet, study room
3. **Commercial:** Showroom, supermarket, mall, jewellery showroom, exhibition stalls
4. **Office Interiors:** Office reception spaces, Managing director's room, open office, conference room
5. **Hospitality spaces:** Restaurant, café, ice cream parlor, hotel room or suite, hotel reception and waiting space,

Note: Minimum, one portfolio should be drawn using AutoCAD and the portfolio has to be submitted to the department on a CD

CASE STUDIES:

Case studies have to be integrated into the design and the findings are to be presented as a seminar.

ID-106 HISTORY OF INTERIOR DESIGN

<u>Time Schedule</u>		
S.No.	Major Topic	Periods
1.	Ancient World:	10
2.	The Middle Ages:	10
3.	Renaissance	10
4.	Industrial revolution	06
5.	Modern Age	10
6.	Indian Interiors	10
7.	Interior Designers	40
	Internal test	02
	Internal test	02
Totals		100

Note: Each student has to maintain a sketchbook and submit the same at the end of the year.

Objectives:

On completion of the subject, a student should be able to

- Identify the characteristics of each style of interiors
- Describe the features of furniture pieces of each period
- Sketch the typical motifs and surface treatments

Course Contents:

Convey the importance of study of history, continuity of craft traditions, influence of social factors on design, development of technology and influence of culture and traditions on design

Note: The following chapters are to be taught under categories of

- Characteristics of the period
- Social, cultural and religious influences on interior design
- Typical motifs, Typical furniture, construction materials, and treatment of surfaces
- Typical treatment of walls, ceilings and floors
- Designers of the period

1. Ancient Worlds:

- a) Egyptian b) Greek c) Roman:

2. The Middle Ages:

- a) Early Christian b) Romanesque c) Gothic d) Baroque e) Rococo

3. Renaissance:

Definition of Renaissance, Identification of social changes, Renaissance in Italy, France, England

4. Industrial Revolution:

Influence of industrial revolution on design, New materials and construction techniques,
Effects of mass production on design

5. Modern Age:

Definition of modernity and characteristics of modern interiors

6. Indian Interiors:

Indian interiors as a reflection of Indian culture, Characteristics of Indian interiors,
Typical furniture pieces, Regional styles

7. Designers:

The importance should be given to the Design concepts, personal style and furniture of each designer:

Frank Lloyd Wright, Mies van Der Rohe, Eero Saarinen, Alvar Alto, Mackintosh,
Charles Eames, William Morris, Chippendale, Adam brothers, Hepplewhite, Leonardo
Da Vinci, Raphael, Michelangelo

ID-107- COMPUTER AIDED DESIGNING & DRAFTING

Time Schedule

S. No	MAJOR TOPIC	Periods
1.	Introduction to Computers	05
2.	Wordpad, Notepad & Paint	15
3.	M.S. Word	15
4.	M.S. Excel	15
5.	M.S. Powerpoint	20
6.	CAD	40
7.	Advance CAD	30
8.	Internal Test	10
	Total	150

Objectives: On completion of the subject, the student shall be able to know the standards of various spaces.

Course Contents:

Computer applications in Interior Design (Practical)

1. Introduction to computers
2. WordPad, Notepad & Paint
3. M.S. Word
4. M.S. Excel
5. M.S. Power point
6. CAD
7. Advance CAD

1. **INTRODUCTION TO COMPUTERS:** Types of Operating System, Input, Output Devices & C.P.U. Creating Folders, Renaming & Deleting Folders, Working with Desktop Properties.
2. **WORDPAD, NOTEPAD & PAINT:** Creating Bio data & Formatting Text, Drawing Geometrical Designs & Showing the use of Image Menu in Paint.
3. **M.S.WORD:** Creating Resume, Working with Clipart, Word arts & Paragraph Styles, Macro's for Formatting, Use of Mail Merge.
4. **M.S.EXCEL:** Co-relating student's data using Auto sum, Average etc. options, Inserting charts, Formatting charts, Editing Charts & Deleting Charts.
5. **M.S.POWER POINT:** Creating a Presentation on Topic relating to Interiors using different Slide Layouts, Inserting Clip arts, Inserting Pictures from file, Inserting Word arts, Giving Backgrounds to slides etc. Use of Different Views.

- 6. CAD:** Relevance of computer aided drafting and design CADD software, Introduction to CAD, Draw command, modify commands drawing aids, Editing commands, Controlling, drawing display; creating text, Dimensioning, Plotting, Hatching, Blocks, Isometric drawing, 3D solid modeling Rendering. Development of a concept, theme based interiors, concept of sectional plan, sectional elevations, reflected ceiling plans, furniture layouts, concept sheets, detailing etc. Design problems on living room, dining room, bedroom, kitchen, toilet, study room
- a. Commercial: Showroom, supermarket, mall, jewellery showroom, exhibition stalls
 - b. Office Interiors: Office reception spaces, Managing director's room, open office, conference room
 - c. Hospitality spaces: Restaurant, café, ice cream parlor, hotel room or suite, hotel reception and waiting space
- 7. Advance CAD:** Introduction to advance CAD, Solid modeling, Spline modeling, Poly modeling, Modifiers, Creating 3D Scenes, Materials, Lighting & Rendering

ID-108 PORTFOLIO & INDUSTRIAL TRAINING

PORTFOLIO

One portfolio should be drawn using AutoCAD and the portfolio has to be submitted to the department.

INDUSTRIAL TRAINING

Objective

Upon the completion of the study of the subject, a student shall be able to

- Relate the knowledge acquired in the course to the practice
- Find employment

The students have to undergo practical training with an interior designer for period of four calendar weeks. They have to work as trainees in the design firm and should prepare a portfolio of blue prints of their drawings. The internal marks for this subject shall be based on this portfolio and the remarks of the interior designer. At the end there would be a viva voce as end exam.