

# CURRICULUM FOR DIPLOMA IN INTERIOR DESIGNING AND DECORATION (ID)

(State Government Approved Short Term Diploma Course)

DURATION	Two Years
SCHEME	I
PATTERN	Full Time - Yearly

(To be implemented from the Academic Year 2017 – 2018)



**MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION, MUMBAI**  
(AUTONOMOUS)

*ISO 9001-2013 Certified*

49, Kherwadi, Bandra (East), Mumbai – 400 051

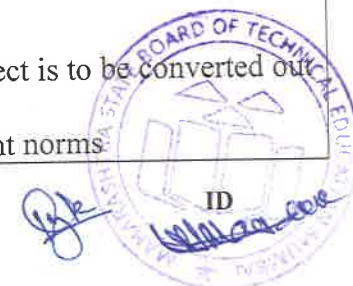


MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION, MUMBAI																			
TEACHING AND EXAMINATION SCHEME																			
COURSE NAME : DIPLOMA IN INTERIOR DESIGNING AND DECORATION																			
COURSE CODE : ID																			
DURATION OF COURSE : TWO YEARS											WITH EFFECT FROM 2017-18								
YEAR : FIRST											DURATION : 32 WEEKS								
PATTERN : FULL TIME - YEARLY											SCHEME : I								
SR. NO.	SUBJECT TITLE	SUB CODE	Abbreviation	TEACHING SCHEME			EXAMINATION SCHEME												
				TH	TU	PR	PAPER HRS.	TH		PR		OR		TW		TOTAL	SW (23100)		
								MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN				
1	Basic Design	23023	BAD	1	--	2	--	--	--	--	--	50#	20	50@	20	100			
2	Interior Design	23136	IND	1	--	3	6	100	40	--	--	50#	20	50@	20	200			
3	Construction Techniques - I	23052	COT	1	--	2	--	--	--	--	--	--	--	50@	20	50			
4	Construction Techniques - II	23138	CNT	1	--	3	4	100	40	--	--	--	--	25@	10	125			
5	Materials, Products & Market Survey	23139	MPM	3	--	1	3	100	40	--	--	--	--	50@	20	150		100	
6	Primary Services	23140	PRS	1	1	--	2	50	20	--	--	--	--	--	--	50			
7	Communication & Personality Skills	23024	CPS	1	--	2	--	--	--	--	--	25#	10	25@	10	50			
8	Paraline & Perspective Projections	23025	PPP	1	--	3	--	--	--	--	--	--	--	100@	40	100			
9	2D CADD & 3D Modelling	23026	CAM	1	--	2	--	--	--	--	--	--	--	25@	10	25			
<b>TOTAL</b>				<b>11</b>	<b>1</b>	<b>18</b>	<b>--</b>	<b>350</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>125</b>	<b>--</b>	<b>375</b>	<b>--</b>	<b>850</b>	<b>100</b>		

**Student Contact Hours Per Week: 30 Hrs.**  
**THEORY AND PRACTICAL PERIODS OF 60 MINUTES EACH.**  
**Total Marks : 950**  
**Note – Internship during Summer vacation for minimum Six Weeks at the end of First Year.**  
 @ Internal Assessment, # External Assessment, Ø Common to All Conventional Diploma, #\* Online Examination,            No Theory Examination.  
 Abbreviations: TH-Theory, TU- Tutorial, PR-Practical, OR-Oral, TW- Term work, SW- Sessional Work

➤ Conduct two class tests each of 25 marks for theory subject having theory exam. Sum of the total test marks of all subject is to be converted out of 100 marks as sessional work.

➤ Progressive evaluation is to be done by subject teacher as per the prevailing curriculum implementation and assessment norms.



**MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION, MUMBAI**  
**TEACHING AND EXAMINATION SCHEME**

**COURSE NAME : DIPLOMA IN INTERIOR DESIGNING AND DECORATION**

**COURSE CODE : ID**

**DURATION OF COURSE : TWO YEARS**

**YEAR : SECOND**

**WITH EFFECT FROM 2017-18**

**PATTERN : FULL TIME - YEARLY**

**DURATION : 32 WEEKS**

**SCHEME : I**

SR. NO.	SUBJECT TITLE	SUB CODE	Abbreviation	TEACHING SCHEME				PAPER HRS.	EXAMINATION SCHEME								TOTAL	SW (23200)
				TH	TU	PR	TH		PR		OR		TW					
							MAX		MIN	MAX	MIN	MAX	MIN	MAX	MIN			
1	Internship*	23044	INT	--	--	--	--	--	--	--	--	25#	10	25@	10	50	100	
2	Advance Interior Design	23214	AID	1	--	5	8	150	60	--	--	25#	10	50@	20	225		
3	Speciality Interior Design	23045	SID	1	--	5	--	--	--	--	--	25#	10	100@	40	125		
4	Interior Working Drawing	23215	IWD	2	--	6	4	100	40	--	--	25#	10	50@	20	175		
5	Interior Professional Practice	23216	IPP	1	--	2	2	50	20	--	--	25#	10	50@	20	125		
6	Secondary Services & Market Survey	23217	SSM	1	1	1	2	50	20	--	--	--	--	50@	20	100		
7	Communication Skills	23046	COS	1	--	1	--	--	--	--	--	25#	10	25@	10	50		
8	CADD Presentation	23047	CAP	1	--	1	--	--	--	--	--	--	--	50@	20	50		
<b>TOTAL</b>				<b>08</b>	<b>1</b>	<b>21</b>	<b>--</b>	<b>350</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>150</b>	<b>--</b>	<b>400</b>	<b>--</b>	<b>900</b>	<b>100</b>	

Student Contact Hours Per Week: 30 Hrs.

**THEORY AND PRACTICAL PERIODS OF 60 MINUTES EACH.**

Total Marks : 1000

\*Internship during Summer vacation for minimum Six Weeks at the end of First Year.

@ Internal Assessment, # External Assessment, Ø Common to All Conventional Diploma, #\* Online Examination,

□ No Theory Examination.

Abbreviations: TH-Theory, TU- Tutorial, PR-Practical, OR-Oral, TW- Term work, SW- Sessional Work

➤ Conduct two class tests each of 25 marks for theory subject having exam sum of the total test marks of all subject is to be converted out of 100 marks as sessional work.

➤ Progressive evaluation is to be done by subject teacher as per the prevailing curriculum implementation and assessment norms

**Important Instructions for Examiners**

1. External examiner to conduct the orals giving 80% to designing acumen and 20% to technical skills of the individual student who is to be assessed on all design practical assignment portfolio.
2. Assessment of the term work is to be carried out continually by the subject teacher giving weightage of 50% towards designing acumen and 50% towards technical skills gained by the individual student.
3. Guest lectures, Seminars, Industry Visits, Workshops, Market Survey related to subject are to be conducted by subject faculty and it's record is to be maintained.
4. Internship shall be completed by the students for a duration of minimum six weeks at the end of First Year during the vacation. The student must submit the Log book, Certificate from the Organization and the training report. The same shall be assessed by the Internal Examiner for term work & external examiner for oral, at the beginning of the Second Year and the marks shall be submitted to MSBTE at the end of Second Year.
5. Internship shall be arranged in Industry / Company / Offices of Interior Designer and Architect (Builder's firms, Corporate firms and 3D Visualisation firms, etc.) where interior design work is in progress. The following are the sectors where the internship shall be conducted.
  - Furniture Designing / Product Designing Firms
  - Kitchen Design Firms
  - Colour Manufacturing Companies
  - Firms Likè Modular Furniture Making, Modular False Ceiling, Drywall Systems etc.

**COURSE NAME : DIPLOMA IN INTERIOR DESIGNING AND DECORATION**  
**COURSE CODE : ID / IN**  
**YEAR : FIRST**  
**SUBJECT TITLE : BASIC DESIGN**  
**SUBJECT CODE : 23023**

**TEACHING AND EXAMINATION SCHEME**

TEACHING SCHEME			EXAMINATION SCHEME					
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
01	--	02	--	--	--	50#	50@	100

**RATIONALE**

The subject is the primary core of the total course and forms the spine of interior design profession that intends to equip the students with thorough knowledge about basic concepts of interior design.

The students shall also learn planning processes and develop intellectual and creative skills required for Interior Design & Advance Interior Design.

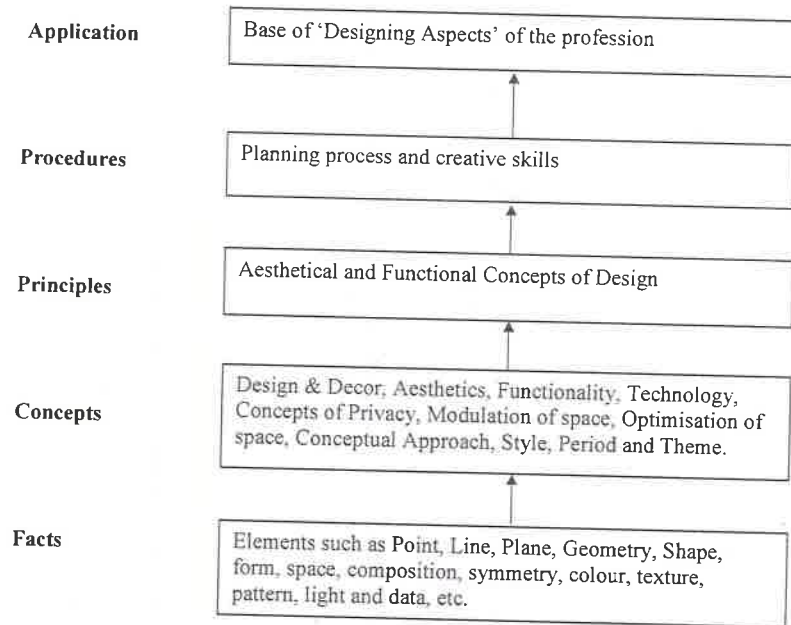
**OBJECTIVES**

The student will be able to:

1. Understand the role and importance of interior designer and differentiate between design and decoration.
2. Use tools of interior design based on Aesthetical and Functional aspects.
3. Identify Concepts with approach; Styles & Historical Periods and Themes.
4. Implement Processes of Design.



## LEARNING STRUCTURE



## DETAILED CONTENTS

CHAPTER	CONTENTS	HOURS
1	<b>Interior Design and Decoration</b> Understanding Interior Design and Decoration, it's Purpose and Role of Interior designer. <b>Aesthetic design considerations:</b> status symbol, emotional, comfort, pleasure, environmental and nostalgic. <b>Functional Design considerations:</b> Circulation, standard sizes of furniture, space utilization and zoning.	02
2	<b>Tools of Interior Design</b> <b>Aesthetical tools</b> Elements of design - Point, Line, Shape, Form, Colour and colour theory, Texture, Pattern, light Principles of Design - Balance, Emphasis, Rhythm, Harmony, Scale repetition & Proportion Aesthetical design consideration: Physical such as touch, smell, hearing; Social such as interactive, status symbol, Psychological such as derivable pleasure from use, emotional comfort; Ideological such as environmental, patriotic, socialistic; and Opinions influenced by associations such as newness, nostalgic, thrill, risk involved, safety, reliability <b>Functional tools</b> Ergonomics- Its study - Postures, Anthropometrics, Biomechanics. Zoning, Grids, Modulation of space within and without, enveloping space within the room and furniture	12
3	<b>Design Notions</b> <b>Concepts</b> Manifestation of realisation through contemplative germination and evolution of thought that gives design approach, although with clear understanding that the concept can be explained but not defined. <b>Period &amp; Styles</b> Historical & Cultural approach with stress on ability to identify Occidental Periods and Oriental styles and with special focus on Contemporary Indian period and styles. Occidental - Classical, Medieval, 19th Century AD, special mention of classical orders, Contemporary, Modern, Post Modern, special mention of school of Bauhaus and work of renowned architects and interior designers of the world viz. Le Corbusier, Ludwig Mies Van der Rohe, Marcel Breuer. Oriental - Japanese, Chinese, and Indian. <b>Themes</b> The common thread that binds the entire design in a story line such as Beach, 'Mela', Dessert, Village.	14
4	<b>Planning Process of Interior Design</b> Design Brief - simple and clear description about what is to be designed Relevant Data collection such as location & condition of site, Client profile & requirements, Materials. Data Analysis - analysing and forming alternative schemes based on personal interpretations of design brief and relevant data using design tools and design concepts. Selection- finalising the best scheme through personal justifications. Presentation- representing the final scheme in graphical manner using Technical Drawings.	04

<b>TOTAL</b>	<b>32</b>
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**SKILLS TO BE DEVELOPED****INTELLECTUAL SKILLS**

Student should identify and select appropriate aesthetic and functional tools.

Student should suggest combination of aesthetic and functional tools as per requirement.

**MOTOR SKILLS**

Student should use the basic instruments of drawing.

**LIST OF PRACTICAL/ASSIGNMENTS**

- Sketch / Draw to scale on A1 size Drawing paper.

SR. NO.	DESCRIPTION	HOURS	NO.OF SHEETS
<b>Prepare in graphical form using any material-media such as pictures, photographs, cuttings, etc. or draw neat and proportionate sketches to explain</b>			
1	Elements of design at conceptual as well as contextual level.	06	01
2	Principles of design at conceptual and at interior design level.	06	02
3	Prepare following on A1 size sheet (manually) colour wheel, intensity and value of colour, warm and cool colour	04	02
4	Application of colour schemes in interior spaces in the form of pictures or blank printout of 3D views of different rooms by rendering them in any colour media (colour pencils, water colours, cutting pasting or combinations)	08	02
<b>Collect, generate and record static (Human dimensions) and dynamic (Activity wise) dimensions related to the following postures:</b>			
5	Standing (cooking, bar tending, working at shop counters, opening doors, using urinals, bathing, using overhead units, using wardrobe for adult and child etc.)	08	02
6	Sitting (working on computer table, study table, office working table, dressing table, dining, relaxing, general sitting, using European water closets, etc.)	08	03
7	Squatting (using Indian pan, squats, using storages below counters, manual sweeping & mopping, etc.)	08	01
8	Sleeping (sleeping, resting, etc.)	08	01
<b>Sketches of elements such as entablatures, cornices, base, capital, relief work, sculptures, furniture of different period and styles - to be carried out in separate sketch book</b>			
9	Occidental periods from Classical to 19 <sup>th</sup> Century	08	20 sketches
	Oriental - Japanese, Chinese styles		
	Contemporary Period, Modern period.		
	Indian styles		
<b>TOTAL</b>		<b>64</b>	<b>14 + sketches</b>

External examiner to conduct the orals giving 80% to designing acumen and 20% to presentation skills of the individual student who is to be assessed on basic design practical assignment portfolio and sketch of elements and furniture's of periods and styles assigned on the sketch book size A3.

**SUGGESTED LEARNING RESOURCES**

SR. NO.	TITLE	AUTHOR	PUBLICATION
1	Time Saver Standard for Interior Design & Space Planning	Joseph De Chaira Jullius Panero Martin Zelnik	Mcgraw Hill New York
2	Interior Design	John Pile	Harry N. Adry Publishers
3	Interior Design	Ahmed Kasu	TWAIN Pub. Bombay
4	Human Dimensions and Interior Spaces	Jullius Panero Martin Zelnik	Whitney Library New York
5	Beginning of Interior Environment	Phillis Sleen Allen	New York
6	Basic Design of Anthropometry	Shirish Bapat	Bela books Publishers
7	Living Area (Interior Space)	Shirish Bapat	Bela books Publishers
8	Interior Design Illustrated	Francis D K Ching	Van Norstrund, New Delhi
9	Design Fundamental in 1 <sup>st</sup> architecture	V. S. Parmar	Somaiya Pub. Pvt. Ltd.
10	Interior Design Principles & Practices	M. Prataprao	Standard Publisher & Distributor, New Delhi
11	Sanskriti - A Manual of Interior Design Vol-1	Sudhir Diwan	Interior Affairs, Mumbai

**SUGGESTED E-LEARNING RESOURCES**

1. [freshome.com/2007/07/12/7-most-important-interior-design-principles](http://freshome.com/2007/07/12/7-most-important-interior-design-principles)
2. [www.dummies.com](http://www.dummies.com)
3. [www.rentaldecorating.com](http://www.rentaldecorating.com)
4. [www.apartmenttherapy.com](http://www.apartmenttherapy.com)



**COURSE NAME : DIPLOMA IN INTERIOR DESIGNING AND DECORATION**  
**COURSE CODE : ID / IN**  
**YEAR : FIRST**  
**SUBJECT TITLE : INTERIOR DESIGN**  
**SUBJECT CODE : 23136**

**TEACHING AND EXAMINATION SCHEME**

TEACHING SCHEME				EXAMINATION SCHEME				
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
01	--	03	06	100	--	50#	50@	200

**NOTE**

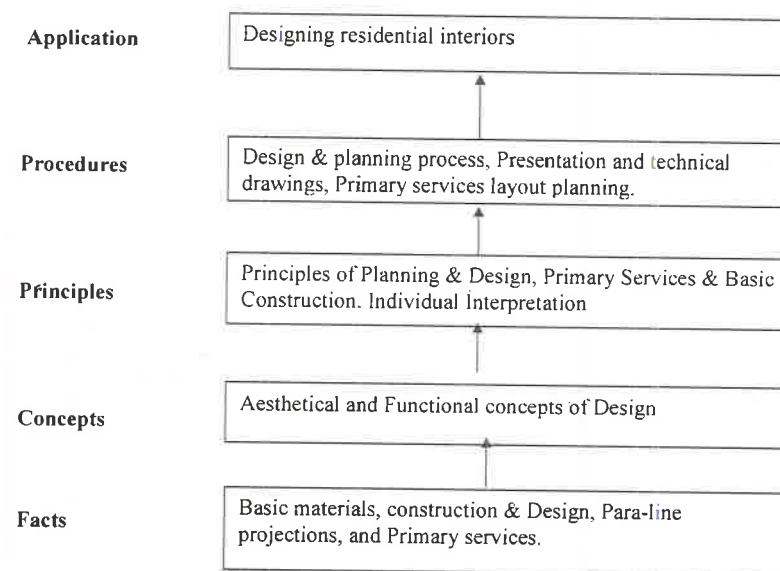
- Two tests each of 25 marks to be conducted as per the schedule given by MSBTE.
- Total of tests marks for all theory subjects are to be converted out of 100 and to be entered in mark sheet under the head Sessional Work. (SW)

**RATIONALE**

The subject intends to apply basic design acumen and also enhance the skills in planning of residential interior spaces with appropriate usage of basic materials, construction and services required for design project. The students shall also learn to represent intellectual and creative skills.

**OBJECTIVES**

The student will be able to design residential interiors ranging from simple activity based such as Individual Rooms i.e. Living, Dining, Living Cum Dining, Kitchen, Bed Room, Children Bed Room to complex activity based large-scale residence of about 300 Sq. M. (1-room unit to independent bungalow).

**LEARNING STRUCTURE**

## DETAILED CONTENTS

CHAPTER	CONTENTS	HOURS	MARKS
I	<b>Residential Interior Design and Drawing</b>	32	100
	Instructions regarding <b>Design brief</b> ; Relevant aspects of Materials, Construction, Design and Services; Special Guidance towards <b>Case studies, Observations, Analysis</b> ; and towards achieving individual interpretations manifested through <b>Client Profile and requirement framing</b> .		
<b>TOTAL</b>		<b>32</b>	<b>100</b>

## NOTE

Theory examination to be strictly based on a compulsorily design project of simple activity based small-scale residential space of about 30 Sq. M. to 45 Sq. M., consisting of preparing Plan, Two Sectional elevations to suitable scale; and a 1-Point Perspective to suitable size, and assessed at 50%, 30%, and 20% weightage respectively.

## SKILLS TO BE DEVELOPED

## INTELLECTUAL SKILLS

Application of knowledge of all the subjects

Analysis skill

## MOTOR SKILLS

Instrument Setting skill, Handling skill, Maintenance skill

## LIST OF PRACTICAL/ASSIGNMENTS

To be drawn to suitable scale on A1 size drawing paper

SR. NO.	DESCRIPTION	HOURS
<b>Prepare and present -scaled plan, sectional elevations and proportionate 3-D visuals all drawn and colour rendered manually that depict Case-studies, manifestations, concepts, schematics, presentation and technical drawings</b>		
I	3 BHK Residence with Technical representation of Furniture layout, Flooring layout, Reflected Ceiling layout, Electrical layout of the total area, with colour rendering and presentation. Also detail layouts, dimensional layout, all the four sectional elevations, views, for individual rooms on the enlarged scale.	96
<b>TOTAL</b>		<b>96</b>

## SUGGESTED LEARNING RESOURCES

SR. NO.	TITLE	AUTHOR	PUBLICATION
1	Living large in small spaces	Thames & Hudson	Thames & Hudson
2	New small homes	Aurora Cuito	Loft Publications.S.L.
3	The Ultimate Interior designer	Ruth Pretty	Ward Lock
4	Making the most of small spaces	Stephen Crafti	Images Pub. Group, Pvt. Ltd
5	Studio Apartments	J Grayson Trulove	James Grayson Trulove
6	Design 02 Residential Space I	--	Juzhu Kongjan
7	Design 09 Residential Space III	--	Juzhu Kongjan
8	RS 03 Residential Space III	Shenzen Nanhair Art Design Co.	Juzhu Kongjan
9	Time Saver	--	McGraw-Hill, US

## SUGGESTED E-LEARNING RESOURCES

1. <http://designerspeak.com>
2. <http://visual.ly/interior-design>
3. [www.homestylor.com](http://www.homestylor.com)
4. [www.roomsketcher.com](http://www.roomsketcher.com)
5. [www.smartdraw.com](http://www.smartdraw.com)





**COURSE NAME** : DIPLOMA IN INTERIOR DESIGNING AND DECORATION  
**COURSE CODE** : ID / IN  
**YEAR** : FIRST  
**SUBJECT TITLE** : CONSTRUCTION TECHNIQUES - I  
**SUBJECT CODE** : 23052

#### TEACHING AND EXAMINATION SCHEME

TEACHING SCHEME			EXAMINATION SCHEME					
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
01	--	02	--	--	--	--	50@	50

#### RATIONALE

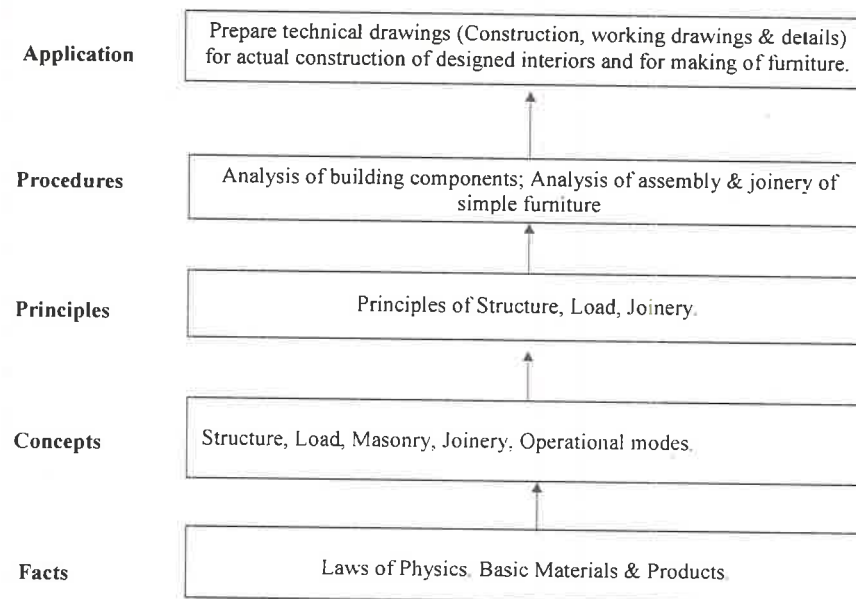
The subject intends to equip the students with knowledge and understanding of construction of structures and components of building such as footing, foundation, super-structure, column, beam, slab, wall, floor, ceiling, steps, stairs, ladders, door, window, openings and projections. It also intends to equip the student with thorough knowledge about methods of assembly and joinery of doors, windows, ventilators focussing on jamb treatments and operational aspects.

#### OBJECTIVES

The student will be able to:

1. Understand and Define - Structures, systems, elements, components; focussing on fundamentals of load transfer; and assembly of doors and windows focussing on the mode of operation.
2. Select or Design and Detail - Doors, windows and openings using appropriate hardware and material focussing on detailing the jambs and mode of operation as per the requirements in interior spaces.

#### LEARNING STRUCTURE



## DETAILED CONTENTS

CHAPTER	CONTENTS	HOURS
1	<p><b>Introduction to structure and building components</b>  <b>Types of Structures</b>            Natural and man-made structural systems in such as load bearing, framed, composite, tensile, shell structures.</p> <p><b>Components &amp; Elements of Built Structure</b>            Introduction to foundations, footings, columns, beams, plinth, slabs, floors, structural and non-structural walls, Dry wall, fenestrations (Doors, windows, ventilators &amp; openings), lintels, arches, steps, stairs, ladders.</p>	04
2	<p><b>Construction techniques of building components</b>  <b>Masonry &amp; Installations</b>            Bricks masonry - Types of Bricks; bonds in ½ brick &amp; 1 brick; header, stretcher English &amp; Flemish bonds.            Stone masonry - Types of masonry; random rubble, polygonal, &amp; dry rubble works.            Non-structural masonry installations constructed on-site such as stone seating, kitchen platform, with focus on design, construction, material to be used for structure, cladding or surfacing wet and dry such as ACP and glass fixing and the provisions to be made for services such as plumbing, drainage, and electrification.</p> <p><b>Opening, Lintels, Projections and Arches</b>            Openings - Doors, windows, ventilators, and other openings focussing on different modes of operation and their affects on the jambs.            Lintels - Types of Lintels in different materials such as wood, metal, &amp; concrete            Projections - Different types of weather sheds &amp; awnings; lofts in rooms;            Arches - Types of arches, classification according to centre, shape. ( No theory questions for the topic Arches)</p>	12
3	<p><b>Joinery</b>            Introduction to concepts of joinery and joints; study of material specific limitations of joinery and study of structural joints focussing on load transfers based on use of different materials including types of joints such as lengthening, widening, bearing, framing in different materials such as wood, glass, metals</p>	04
4	<p><b>Openings</b>  <b>Jambs, Frames &amp; Casings</b>            Formation based on various modes of operation, materials, &amp; techniques</p> <p><b>Doors, Windows &amp; Ventilators</b>            Basis of modes of operation, positioning, placing of hardware; detailed study of modes of operation (Horizontal, vertical &amp; inclined movement) such as swinging (folding-hinged, pivoted), sliding (Between or side of wall), combination (sliding-folding), and others such as collapsible, rolling; and study of types of shutters such as framed, panelled, flush, glazed, and composite focussing on different materials wood, metal, glass, &amp; plastics</p>	12
<b>TOTAL</b>		<b>32</b>

## SKILLS TO BE DEVELOPED

## INTELLECTUAL SKILLS

- To understand and state the functions of components of Structures

## MOTOR SKILLS

- To study and apply joinery, hardware in assembling of doors and windows

## LIST OF PRACTICAL

To be carried out in a journal-form on large size square grid pad or drawn to scale on A1 size drawing.

SR. NO.	DESCRIPTION	HOURS	SHEETS	REPORT & SKETCHES
<b>Prepare in graphical form using any material-media such as pictures, photographs, cuttings, etc. or draw neat and proportionate sketches to explain</b>				
1	Types of structure, components & elements of built structure.	02		1
2	Types of Bricks	06	1	
3	½ brick thick Wall & 1 brick thick Walls	06	1	
4	Stone masonry	02		1
5	Lintels	02		1
6	Arches	02		1
7	Joinery (T.W. and Plywood)	06	2	1
8	T.W. casement window with ventilator, louvered, pivoted and other types of windows, UPVC windows	04		1
9	Aluminium sliding window	06	1	
10	Types of T.W. Panel doors, sliding door, PVC doors, composite doors. Glass swing door.	02		1
11	Details of T.W. Double panel partly glazed and partly panelled door.	06	1	
12	Flush door with self closing and locking arrangements.	06	1	
13	Hardware for interior carpentry.	04		1
14	Seminars, guest lectures & Industry visits	10		6
<b>Total</b>		<b>64</b>	<b>07</b>	<b>14</b>

## SUGGESTED LEARNING RESOURCES

SR. NO.	TITLE	AUTHOR	PUBLICATION
1	Time Saver Standard for Interior Design & Space Planning	Joseph De Chaira Jullius Panero Martin Zelnik	Mcgraw Hill New York
2	Interior Design	John Pile	Harry N. Adry Publishers
3	Interior Design	Ahmed Kasu	TWAIN Pub. Bombay

4	Human Dimensions and Interior Spaces	Jullius Panero Martin Zelnik	Whitney Library New York
5	Beginning of Interior Environment	Phillis Sleen Allen	New York
6	Basic Design of Anthropometry	Shirish Bapat	Bela books Publishers
7	Living Area (Interior Space)	Shirish Bapat	Bela books Publishers
8	Interior Design Illustrated	Francis D K Ching	Van Norstrund, New Delhi
9	Design Fundamental in 1 <sup>st</sup> architecture	V. S. Parmar	Somaiya Pub. Pvt. Ltd.
10	Technology of interior construction-part-1	Vasudeo Channapattan	Mrs. Vidya Channapattan Pune.(vidya.vvc@gmail.com)

**SUGGESTED E-LEARNING RESOURCES**

1. [www.basicconstructionco.com](http://www.basicconstructionco.com)
2. [www.understandconstruction.com](http://www.understandconstruction.com)
3. [www.basiccarpentrytechniques.com](http://www.basiccarpentrytechniques.com)

**COURSE NAME** : DIPLOMA IN INTERIOR DESIGNING AND DECORATION  
**COURSE CODE** : ID / IN  
**YEAR** : FIRST  
**SUBJECT TITLE** : CONSTRUCTION TECHNIQUES -II  
**SUBJECT CODE** : 23138

**TEACHING AND EXAMINATION SCHEME**

TEACHING SCHEME				EXAMINATION SCHEME				
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
01	--	03	04	100	--	--	25@	125

**NOTE**

- Two tests each of 25 marks to be conducted as per the schedule given by MSBTE.
- Total of tests marks for all theory subjects are to be converted out of 100 and to be entered in mark sheet under the head Sessional Work. (SW)

**RATIONALE**

The subject intends to equip the students with knowledge and understanding of construction of ceiling, floors & floorings, steps, stairs, ladders & residential furniture.

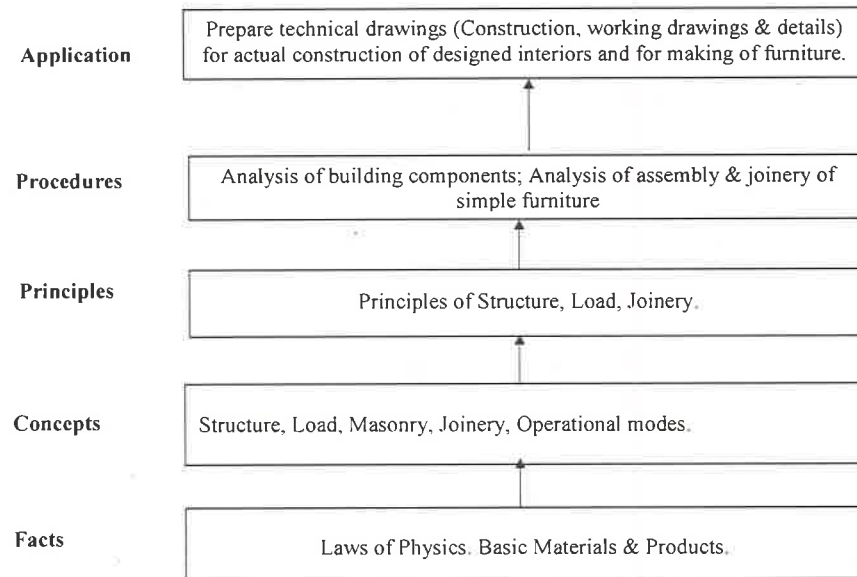
**OBJECTIVES**

The student will be able to:

1. Understand and Define – Construction Of steps, stairs, ladders, Ceilings, floors & floorings in different materials.
2. Select or Design and Detail - Appropriate joinery to be used while designing furniture items; and appropriate joinery, assembly and construction of stable, functional and aesthetic furniture for use in residence interior spaces.



## LEARNING STRUCTURE



## DETAILED CONTENTS

CHAPTER	CONTENTS	HOURS	MARKS
1	<p><b>Construction techniques of building components</b>  <b>Ceilings, Floors &amp; Floorings:</b>            Concept of structural ceiling of buildings such as flat, sloping, sunk &amp; technique of structural framing for Loft, Mezzanine, Floors, Cavity &amp; False Floor, sunk slab, etc.            Provisions, care and process of flooring &amp; laying natural &amp; artificial materials on existing slab and floors; and fixing of tiles - clay, cement, stone, glass, metals; junctions; tile-on-tile; patterns, inlays; etc.</p> <p><b>Steps, Stairs Ladders: (No theory Questions on this topic)</b>            Study of steps, stairs &amp; ladders, their elements such as tread, riser, etc.            Study of typical forms such as straight, dog-legged, half turn, quarter turn, geometric (helical or spiral) with respect to load transfer.            Study of different materials used in construction of stairs.</p>	08	20
2	<p><b>Residential Furniture -I</b>  <b>Focussing on need, requirement, options, form, finish, materials, construction, and hardware; learning to design &amp; prepare construction drawings of: -</b>            Different types of shelves &amp; storages such as wardrobe, overhead, display &amp; showcases, etc. including understanding different options for carcass, shutters, drawers and internal shelves.            Kitchen storages such as trolley type, shelved .Modular kitchen storages.</p>	12	32
3	<p><b>Residential Furniture -II</b>            Different types of seats such as stools (low &amp; high), puffy (For living, dressing, bed-end, etc.), chairs (For living, dining, bed, desk-work, sofas (1, 2 &amp; 3-seater).            Different types of tables such as side &amp; centre tables (For living, dining, bed, terrace, garden), work-tables (Dressing, study. Different types of bed such as 'divan', single-bed, double-bed, bunk-bed, combination-bed, etc; with and without storage.</p>	12	48
<b>TOTAL</b>		<b>32</b>	<b>100</b>

## SKILLS TO BE DEVELOPED

## INTELLECTUAL SKILLS

- To understand and state the functions of components of Structures

## MOTOR SKILLS

- To study and apply joinery, hardware in assembling of doors, windows and simple furniture.



## LIST OF PRACTICAL

To be carried out in a journal-form on large size square grid pad or drawn to scale on A1 size drawing.

SR. NO.	DESCRIPTION	HOURS	SHEETS	REPORT & SKETCHES
<b>Prepare in graphical form using any material-media such as pictures, photographs, cuttings, etc. or draw neat and proportionate sketches to explain</b>				
1	Steps, Stairs Ladders and designing of comfortable staircase.	06		01
2	Floors with respect to span viz: Single floor, Mezzanine Floor / Double floor & triple floor	09		01
3	Mezzanine floor in timber and structural steel.	09	02	
4	Details of Carcases, Hinging methods of fixing shutters to boxed furniture, drawer fixing details, fixed and adjustable shelves.	12	01	
5	Wardrobe	09	01	
6	Double bed	06	01	
7	Study table / Dressing Table	06	01	
8	T V unit	06	01	
9	Civil details for Kitchen platform and carpentered or modular storage.	09	01	
10	Upholstery details of sofa chair.	06	01	
11	Dining Table with dining chair	09	01	
12	Civil details for Vanity counter with counter sunk / top wash basins and under carriage.	09	01	
<b>Total</b>		<b>96</b>	<b>11</b>	<b>02</b>

## SUGGESTED LEARNING RESOURCES

SR. NO.	TITLE	AUTHOR	PUBLICATION
1	Time Saver Standard for Interior Design & Space Planning	Joseph De Chaira Jullius Panero Martin Zelnik	Mcgraw Hill New York
2	Interior Design	John Pile	Harry N. Adry Publishers
3	Interior Design	Ahmed Kasu	TWAIN Pub. Bombay
4	Human Dimensions and Interior Spaces	Jullius Panero Martin Zelnik	Whitney Library New York
5	Beginning of Interior Environment	Phillis Sleen Allen	New York
6	Basic Design of Anthropometry	Shirish Bapat	Bela books Publishers
7	Living Area (Interior Space)	Shirish Bapat	Bela books Publishers
8	Interior Design Illustrated	Francis D K Ching	Van Norstrand, New Delhi
9	Design Fundamental in 1 <sup>st</sup> architecture	V. S. Parmar	Somaiya Pub. Pvt. Ltd.

SR. NO.	TITLE	AUTHOR	PUBLICATION
10	Technology of interior construction-part-I	Vasudeo Channapattan	Mrs. Vidya Channapattan Pune (vidya.vvc@gmail.com)

## SUGGESTED E-LEARNING RESOURCES

1. [www.basicconstructionco.com](http://www.basicconstructionco.com)
2. [www.understandconstruction.com](http://www.understandconstruction.com)
3. [www.basiccarpentrytechniques.com](http://www.basiccarpentrytechniques.com)



**COURSE NAME : DIPLOMA IN INTERIOR DESIGNING AND DECORATION**  
**COURSE CODE : ID / IN**  
**YEAR : FIRST**  
**SUBJECT TITLE : MATERIALS, PRODUCTS & MARKET SURVEY**  
**SUBJECT CODE : 23139**

**TEACHING AND EXAMINATION SCHEME**

TEACHING SCHEME			EXAMINATION SCHEME					
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
03	--	01	03	100	--	--	50@	150

**NOTE**

- Two tests each of 25 marks to be conducted as per the schedule given by MSBTE.
- Total of tests marks for all theory subjects are to be converted out of 100 and to be entered in mark sheet under the head Sessional Work. (SW)

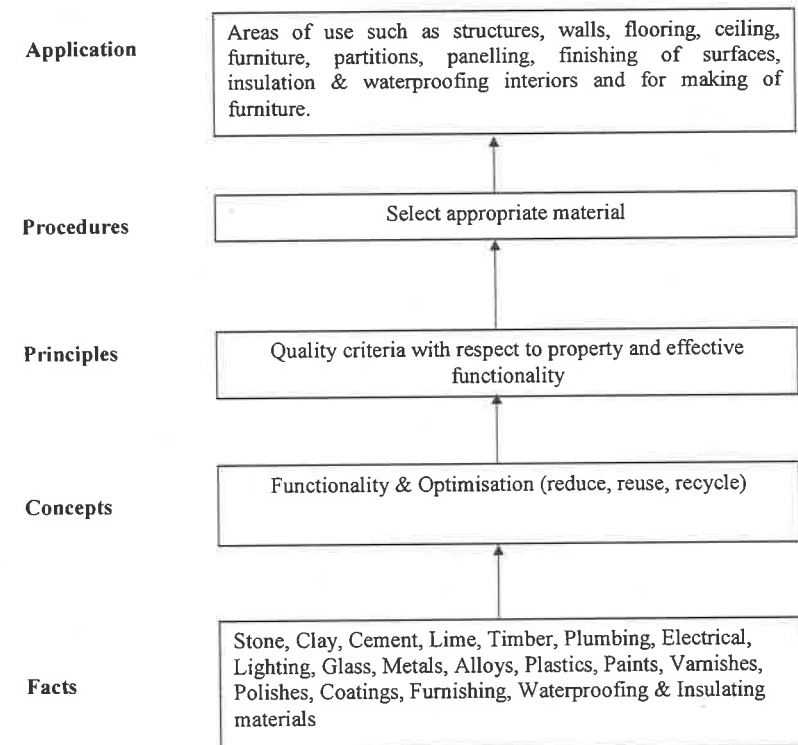
**RATIONALE**

The knowledge of materials and products shall help the learner to enable their use, through methods of construction, for designing Interior spaces. The knowledge of such materials & products along with various construction techniques & knowledge of services enable students to achieve desired design outcome. It also intends the student to understand professional and practical aspects of Interior design through Market surveys & Site visits related to the material study.

**OBJECTIVES**

The student will be able to understand and select:

Common building materials based on their properties; plumbing, electrical and Lighting materials as per requirements; floor coverings as per requirements; glass, finishes & treatments based on the application & use; metals, alloys, polymers, composites, paints, varnishes, polishes, coatings and speciality materials based on their properties & requirements.

**LEARNING STRUCTURE**

## DETAILED CONTENTS

CHAPTER	CONTENTS	HOURS	MARKS
1	<b>Common Building Materials</b>	48	34
	<b>Stone</b> Geological, Physical and Chemical classification; types, properties and use of Igneous, Sedimentary and Metamorphic stones		
	<b>Clay and products</b> Types, Properties & Applications of clay and Clay products: Earthenware, stoneware, porcelain, ceramic, tiles – Drain, floor and roof. Types, shapes, Properties and uses of Bricks. Types, Properties, advantages, disadvantages and uses of Terracotta.		
	<b>Cement, Lime, Sand And Gypsum</b> Types, Properties and uses of Cement, Lime, sand. Types, Properties & Applications of Concretes, Mortars and Plasters. Properties & Applications of Gypsum & its products.		
	<b>Timber</b> Classification and growth of trees and types of Timber. Properties and uses of Timber, Defects in Timber. Uses of <b>Hardwood</b> and <b>Softwood</b> such as Teak, Rose, Deodar, Sal, Silver, Mahogany, Market forms of Timber, Uses of cane, bamboo.		
	<b>Wood Products</b> Types, properties & Uses of Veneers and Plywood. Types, Quality & Uses of Block Board, Particle Board, Fibre Board, Chip Board, Hard Board, Laminate and its use.		
2	<b>Glass</b> Classification of Glass Special varieties, Properties, sizes, thicknesses and uses of glass. Post processing of glass such as etching, acid washing, toughening, back painting, staining, bending, edge polishing, film application (sun control and decorative)	06	08
3	<b>Metals and Non metals</b> Types, Properties and uses of Ferrous, Non Ferrous Metals and Alloys such as wrought iron, Aluminium, Copper, Zinc, Brass and Stainless steel. Polymers and Allied Composites Classification, Properties of Plastics, Uses of thermo-set and thermo-plastics such as Nylon, Acrylic-solid surfaces, PVC, Poly-butylene and Poly-Urethanes, Uses of composites such as Polycarbonates, Glass reinforced plastic, Fibre reinforced plastic and Metal reinforced plastic. Composite Boards: Types, Qualities And Uses (ACP, WPC and HPL Exterior board-not for exam)	12	20
4	<b>Paints, Varnishes, Polishes and Coatings</b> Constituents –Base, Pigment and Thinner. Classification -	12	14

CHAPTER	CONTENTS	HOURS	MARKS
	Water, Oil and acrylic based, Lime wash, Distemper and its application. Types of paints, Textural quality - Matt, Gloss, Satin and Lustre. Process of painting - preparation of surface, primer coat & application of paint with brush, roller, spray on old, new and different surfaces. Constituents, Types & uses of Varnishes, Polishes & Coatings - French, Melamine, Lacquer, Polyurethane and Powder coating, colour and transparent lamination.		
5	<b>Floor Coverings</b> Rugs, durries and carpets of natural and synthetic fibres, PVC floors, wooden flooring types, natural fibre matting, linoleum, rubber	06	04
6	<b>Speciality Materials</b> <b>Soft Furnishing Materials</b> - Manmade and synthetic fabrics used for furnishing Types, and uses of Curtains, Screens and Blinds, Upholstery materials, Wall paper, leather, Coir, Foam, Rubber. <b>Waterproofing Materials</b> Waterproofing materials such as Bitumen, Mastic asphalt, Asphalt sheets, Waterproofing powder, Gels and Liquids <b>Insulating Materials.</b> Types and properties of Thermal insulation and Sound insulation materials in granular, fibrous, rolled, sheeting and panel forms. Uses of Sound insulating and Thermal insulating materials such as sand, Glass wool, Rock wool, Foam, polyurethane foam, Cork, Quilt, Jute, Coir, Particleboard, Hollow bricks. <b>Eco friendly Materials</b> Definition and Importance	12	20
<b>TOTAL</b>		<b>96</b>	<b>100</b>

## SKILLS TO BE DEVELOPED

## INTELLECTUAL SKILLS

- To know various materials used in Interior Design

## MOTOR SKILLS

- Data collection and Presentation

## LIST OF PRACTICAL/ASSIGNMENTS

To be carried out in neatly typed (Preferably computer typing) by each student in well composed form.

SR. NO.	DESCRIPTION	HOURS	NUMBER OF ASSIGNMENTS
	Prepare individual report on data collection on market surveys, guest lectures, seminars and site visits conducted for types, availability, sizes, colour, rates, etc. of materials		

1	Materials and products (common building materials, glass, metals & alloys, polymers & allied composites, natural & synthetic floor coverings, paints, varnishes, polishes & coatings, thermal & acoustical insulations, waterproofing, general & decorative hardware fittings & fixtures, awnings, weather sheds, terrace furniture, composite boards, solid acrylic surfaces. Market survey and site visit for plumbing, water supply, electrification, seminar & workshops to the related topics are to be carried out) (Procedure of Market survey – Student should visit the shops/ sites/ showrooms of related material / services. Collect the related data like sizes, prices, applications, types and materials. Submit the report along with the photographs.)	32	10
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**SUGGESTED LEARNING RESOURCES**

SR. NO.	TITLE	AUTHOR	PUBLICATION
1	Materials of constructions	D.N.Ghosh	Tata McGraw Hill
2	Building Materials	Gurucharan Singh	Standard Pub. & Dist
3	Engineering Materials	S.C. Rangawala	Charottar Pub. Anand (India).
4	Engineering Materials	K.P Roy Choudhary	Oxford Press, New Delhi
5	Water Supply & Sanitary Engineering	S.C. Rangawala	Charottar Pub. Anand (India).
6	Construction Materials of Interior Design	William Rupp	Whitney Library
7	Building Construction materials	M.V. Naik	Nirali Publication
8	Building Construction	Sushil Kumar	Standard Pub. & Dist
9	Materials of civil and interior constructions	V.N.Channapattan	Vidya V. Channapattan Vidya.vvc@gmail.com

**SUGGESTED E-LEARNING RESOURCES**

1. [www.interiordezine.com/finishes/](http://www.interiordezine.com/finishes/)
2. [www.surfaces.in](http://www.surfaces.in)
3. [www.onlinedesignteacher.com/2016/02/interior-design-materials-finishes](http://www.onlinedesignteacher.com/2016/02/interior-design-materials-finishes)
4. [www.contractdesign.com/products](http://www.contractdesign.com/products)
5. [www.alliedinteriorproducts.com](http://www.alliedinteriorproducts.com)
6. [www.alliedbuilding.com](http://www.alliedbuilding.com)

**COURSE NAME** : DIPLOMA IN INTERIOR DESIGNING AND DECORATION  
**COURSE CODE** : ID / IN  
**YEAR** : FIRST  
**SUBJECT TITLE** : PRIMARY SERVICES  
**SUBJECT CODE** : 23140

**TEACHING AND EXAMINATION SCHEME**

TEACHING SCHEME			EXAMINATION SCHEME					TOTAL
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	
01	01	--	02	50	--	--	--	50

**NOTE**

- > Two tests each of 25 marks to be conducted as per the schedule given by MSBTE.
- > Total of tests marks for all theory subjects are to be converted out of 100 and to be entered in mark sheet under the head Sessional Work. (SW)

**RATIONALE**

The subject intends to equip the students with concept and principles of basic services. It will develop their skills in understanding the function of services and help optimise the resources such as water, electricity, etc. It will also develop the analytical skills in designing appropriate services layout and schemes.

**OBJECTIVES**

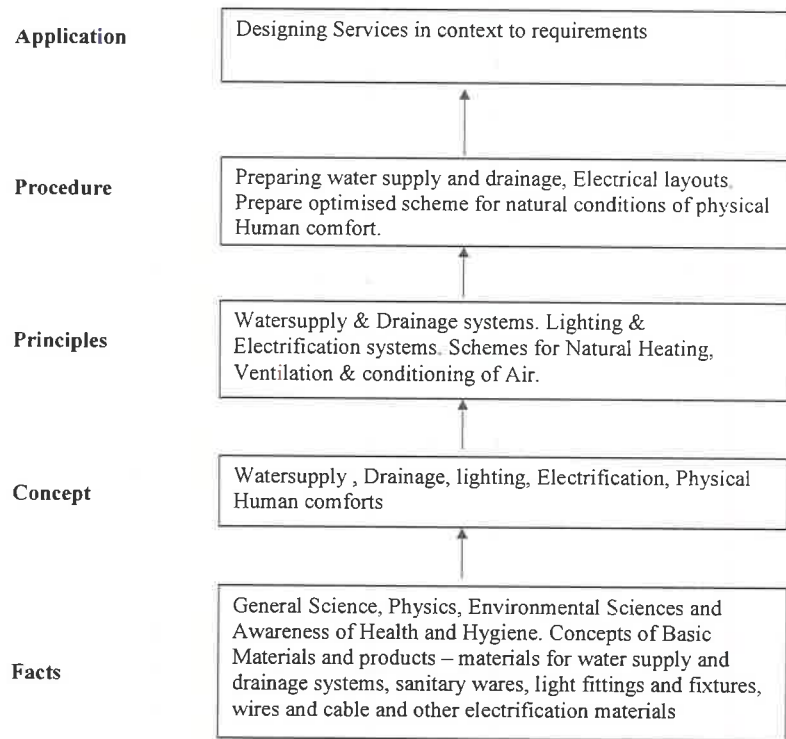
The student will be able to:

1. Apply concepts of primary services
2. Use appropriate resources including optimisation
3. Design layouts for services





**LEARNING STRUCTURE**



**DETAILED CONTENTS**

CHAPTER	CONTENTS	HOURS	MARKS
1	<p><b>Water Supply, Sanitation And Drainage</b> Introduction to principles of Water Supply, Sanitation &amp; Drainage. <b>Types, Sizes &amp; Quality of Pipes used for water supply and drainage systems</b> Types &amp; Sizes of Sanitary wares such as wash hand basins, sinks, Pans, Urinals, Bidets, Water Closets, Flushing Cisterns, Bath tubs, Shower cubicles Types &amp; Sizes of accessories such as roll-holders, soap dishes, towel rods, napkin holders, and other racks, hooks &amp; rings. <b>Cold and Hot water distribution &amp; mixing systems using loft tanks, geysers, boilers, mixers, diverters.</b> Waste and Soil Disposal systems with Focus on trap - principles of Siphoning, Anti-Siphoning, Venting Open and Concealed Distribution &amp; Disposal systems for the following Cooking and Drinking – Focus on Kitchen and Pantry areas Washing – Manual and Machine based Bathing – Modes such as shower, pressure jets and tubs Flushing – Urinal, Water Closet and Toilet areas <b>Miscellaneous - Gardening, Indoor Fountain, Falls, Cascades</b> Understanding Distribution and Disposal layouts in context with appropriate gradients , Sizes, waterproofing, appropriate use of joints &amp; junctions.</p>	10	14
2	<p><b>Electrification</b> Types of wires and Cables – Stranded Wire, Sheathed, Armoured Types of Electrical fixtures such as roses, holders, switches, sockets, switchboards, Safety devices - MCB, ELCB. Types &amp; Sizes of fans, light fittings, Lamp fittings, Chandeliers. Introduction (single and three phase, earthing, neutral, volts, amps and wattage relation), loading requirements Principles of Distribution, and limitations of electrification (leakage, fluctuations, safety, excess loading, interferences. Wiring standards ,specifications, sizes and their types Sheathing, shielding, cross-section area, colour coding, Circuit wiring &amp; installation systems - open and concealed Understanding distribution layouts in context with appropriate loading use, wire sizing, sheathing consideration and appropriate use of joints &amp; junctions.</p>	9	12



CHAPTER	CONTENTS	HOURS	MARKS
3	<p><b>Light and Lighting</b> Introduction to Light - Natural &amp; Non-natural light, Illumination, Lux, Lumens and their calculation for a given space. Maintenance, Utility factors and Glare. Calculating the requirements according to the required levels of illumination.</p> <p>Quality of light - Incandescent, Fluorescent, vapour lamps, halides &amp; halogen, gas-filled - neon, argon, LED, lasers and Fibre optics.</p> <p>Principles of Light - Transmission, reflection, distortion, refraction. Types of lighting - i.e. Direct, Indirect - diffused, reflected.</p> <p>Selection of activity based types of illumination - Ambient, Task, Ascent, Focus, Information lighting - Step, Pathways, Aisles, Signage. Selection of systems of lighting - up, down, cove lighting, track lighting.</p>	8	12
4	<p><b>Natural - Heating, Ventilation and Conditioning of Air</b> Physical Human comforts - Climate based - Quality of Air, Temperature, Humidity</p> <p>Quality of Air - Composition, causes and effects of change in composition, Temperature - Causes and effects of change in Temperature, Humidity - effects of change in Humidity</p> <p>Principles of Ventilation; Natural Ventilation, Transmission of Heat; Control by natural means.</p>	5	12
<b>TOTAL</b>		<b>32</b>	<b>50</b>

**SKILLS TO BE DEVELOPED****INTELLECTUAL SKILLS**

- To understand and apply concepts of primary services

**MOTOR SKILLS**

- To design layouts for services

**LIST OF ASSIGNMENTS**

SR. NO.	DESCRIPTION
<b>Draw Sketches in Journal, Large size Square grid pad or A3 size Drawing Sheet.</b>	
1	Preparing water supply and drainage layout for: Cooking and drinking areas, Washing areas- washing machine, dishwasher. Bathing areas- shower/shower cubical, bath tub, Flushing areas, Ancillary areas - water Fall, Fountain in Balcony, Terrace Garden.
2	Preparing distribution and disposal for given layout with consideration of gradients, pipe sizes, water proofing with use of specials along with legend & nomenclatures, dimensions.
3	Preparing Electrical layout for given interior space with consideration of loading use, specials along with legend & nomenclatures, dimensions.

SR. NO.	DESCRIPTION
4	Calculating required illumination for given activities and room layouts
5	Preparing ambient illumination layout selecting necessary fittings, fixtures & systems.
6	Preparing accent and/or task illumination layout selecting necessary fittings, fixtures & systems.
7	Case Study of Residential Primary services and related material survey.
8	Study of Gadgets - Mixers, juicers, ovens, cooking ranges, geysers, boilers, refrigerators, washing machines, dish washers, audio & video systems, computers, inverter from services point of view.
9	Study of automated sensory device based applications - Wash Basins Taps, Flushes, Lighting Systems, Curtains, HVAC.

**SUGGESTED E-LEARNING RESOURCES**

- www.aquantindia.com
- www.jaquar.com
- www.johnsonbathrooms.in
- www.polycab.com/www.ajitpspl.com