

# *Scheme*

**Interior Design**

## Raja Mansingh Tomar Music & Arts University, Gwalior (M.P)

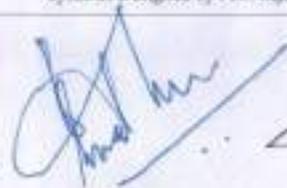
B.Des. Annual Program (Bachelor of Design - Interior) Regular

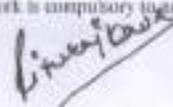
B.Des. First Year (Interior)

(B.Des.) Teaching Time (Class Duration) -36 Week = 216 days Total Credits – 36 X 24 = 864

S.N	Section – A Subject Nature Core Courses (Main Subject) THEORY CORE – 1	Subject Code	Credit	Class Room Teaching Weekly Duration / Hours	Total Teaching Duration / Hours	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
	History of Interior Design- I	C1 – INT – 101	2	2	72	15+05	80	100	33
	Material (Furnishing & Finishing – I)	C1 – INT – 102	2	2	72	15+05	80	100	33
	<b>PRACTICAL CORE – 2</b>								
	Interior Design	C2 – INT – 103	3	6	216	15+05	80	100	33
	Material & Construction Techniques	C2 – INT – 104	3	6	216	15+05	80	100	33
	Drawing Techniques	C2 – INT – 105	3	6	216	15+05	80	100	33
	Work Shop – I	C2 – INT – 106	3	6	216	15+05	80	100	33
	<b>Section – B Elective Open Subject only Practical / Theory</b>								
	Visual Arts / Basic Designs	EO – BVA – 101	2	2	72	15+05	80	100	31
	<b>Section – C Foundation Course</b>								
	Hindi Language / English Language – II	F – HM – 101 F – EI – 102	2	2	72	15+05	80	100	33
	Entrepreneurship – III	F – EPD – 103	2	2	72	15+05	80	100	33
<b>Total Credit &amp; Teaching Duration</b>			22	34	1224				
Syllabus Designed by : Dr. Sajan Kurien Mathew									<b>L.O.D</b>

• Skill Development – N.S.S / N.C.C / Yoga / Field Work is compulsory to participate in any one year (Four year curriculum)




## Raja Mansingh Tomar Music & Arts University, Gwalior

B. Design First Year Interior Design

### History of Interior Design- I (Paper – I)

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
CI – INT – 303	2	15+05	80	100	33

Objective: This course focuses on the developmental aspects of interior designing over the time period in different periods of history.

#### UNIT (I) - TRENDS OF DEVELOPMENT

Trends of development in interior design along the course of Architectural forms.

#### UNIT (II) – MUGHAL PERIOD

Developments in Mughal period with respect to buildings and Interiors.

#### UNIT (III) – INDUSTRIAL REVOLUTION

Changes in building forms and Interior designing at the time of Industrial Revolution in major selected countries of world as examples to learn.

#### UNIT (IV) – EARLY 19<sup>TH</sup> CENTURY

Industrial Revolution, Period – Early 19<sup>th</sup> century

#### UNIT (V) – MID 19<sup>TH</sup> CENTURY

Victorian taste with change, Period – Mid 19<sup>th</sup> Century

#### Text & References:

##### Text:

- The History of Arch. in India, Christophe Tadjell
- Interior design & space planning, Dechira Pabero Zelnik
- Interior design illustrated, Frands D.K. Ching

##### References:

- Islamic Architecture in Interior, Satish Grover
- The Best Interior India, Anuradha Mahindra
- Indian Interior, Angelika Taschen

**Raja Mansingh Tomar Music & Arts University, Gwalior**

**B. Design First Year Interior Design**

**Material (Furnishing & Finishing - I) (Paper - II)**

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C1 - INT - 102	2	15+05	80	100	33

**Objective:** To familiarize the students with construction properties and cases of traditional building materials used in construction. To understand the use of these traditional building materials in simple building works.

**UNIT (I) - MARKET SURVEY & CASE STUDY**

Execute a market survey of different materials in terms of furnishes and finishes.  
Formulate a case study of an existing building to study its interiors along with furnishes and finishes used in it.

**UNIT (II) - BUILDING MATERIAL**

Kinds of building material such as clay product, brick, sand, stone, and cement, white cement, wood, timber, glass, M.S, S.S etc.

**UNIT (III) UPHOLSTERY & CONSTRUCTION**

Material used as upholstery - cotton, synthetic (Rexins, foam, leather), Different type of frames use for upholstery like wooden, metal, composite frame

**UNIT (IV) - PARTITION AND PANELING, FLOORING (MATERIALS)**

Construction of paneling material use for paneling ply, glass, gypsum, P.O.P, introduction of flooring, types of flooring, material, natural stone, vitrified flooring tiles, cement paving blocks, synthetic flooring tiles, laminated flooring tiles.

**UNIT (V) - METALS**

Ferrous and non ferrous metals & Alloys, Pig iron, cast iron, wrought iron, mild steel, high carbon steel, copper, aluminum, brass, bronze metal.

**Text & References:**

**Text:**

- A Visual Dictionary of Architecture, Francis D.K. Ching
- Interior design illustrated, Francis D.K. Ching
- House Book (The Complete Guide to Home Design), Terence Conran
- Masonry (Concrete, Brick, Stone), Christine Beall
- Metric Handbook (Planning & Design Data) 2<sup>nd</sup> Ed. Edited By, David Adler

**References:**

- Window Fashion, Charles T. Randall

Handwritten signatures in blue ink, including names like 'Anshu', 'Rajendra Kumar', and 'Anshu Kumar'.

- Illustration + Perspectives (In Pantone Colors), Eiji Mitooka
- Elements of Architecture – Mies Pieere Van
- Architecture: Form, Space and Order – Francis D.K. Ching
- The Construction of Building Vol- 1 to 5, R. Barry
- Building Construction, N.L. Arora & B.R. Gupta
- Interior Detail – 1 (Residence), Jeong, Kwang Young
- Interior Spaces Vol – 6 (A Pictorial Review), Image Publishing Group

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**Raja Mansingh Tomar Music & Arts University, Gwalior (M.P)**  
**B. Design First Year (Interior Design) Practical's**

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2-INT-103	3	15+05	80	100	33

**Interior Design - I**

Practical - Medium (Pencil & Pencil Color)  
 Size - Drawing Sheet A3 Sheet - 20 Sheets minimum

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2-INT-104	3	15+05	80	100	33

**Material & Construction Techniques**

Practical - Medium (Pencil)  
 Drafting - (Brick, Masonary, Joinery details, lintels, Arches, Stair cases, flooring (Single, Double, Triple)  
 Size - A3 Sheet - 40 Sheets minimum Total

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2-INT-105	3	15+05	80	100	33

**Drawing Techniques**

Practical - Medium (Pencil)  
 File Size - A3 Sheet - 25 Sheets minimum Total

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2-INT-106	3	15+05	80	100	33

**Workshop - I**

Practical - Medium (Clay Product & Ceramic)  
 Work - 10 to 15 product overall

- Work done in the class during the college / University hours shall be accepted for submission.
- Student shall have to submit one sessionals of each subject to the university / college.

*Handwritten signatures and notes:*  
 - A large signature in blue ink.  
 - A signature in blue ink with the name "Linsajkaur" written above it.  
 - Another signature in blue ink with the name "A.K. Choubhary" written above it.

## Practical Details Year – I (Interior Design – I)

### Course Objective:

The objective of the course is to provide a clear understanding about the design procedures and techniques of interior design of spaces with different activities and uses, using different standards, materials and technologies. It enables the students to understand the visual design in an interior space with color schemes, textures, light, shadow etc. The exercise to be executed in this course enable the students to design the space interiors for a two storey building with the required services, infrastructure, furniture layout, circulation, open-built and exterior-interior relationship in and around the plot boundaries.

### DESIGN PROBLEM

Introduction to design problem with the methodology to proceed with the concept, Case studies and data collection through primary and secondary sources, Formulation of concept with client's requirements.

### DESIGN ASPECTS

Design the interior keeping in view – the basic structural requirements, finishes, furniture layout, basic services (teaching parallel in BID 1207, Building Services and Fixtures -water supply and sanitation)

### DESIGN EXERCISE

Design the interiors for a space with a floor area of appx. 300sqm. – 400 sqm in a two storey structure with open courtyards in or around the built structure for 12 - 15 occupants (living or floating) on a plot size of minimum 500sqm. Design should be presented in 3D drawings (perspectives, axonometric, isometric views) rendered with textures, colors, patterns etc.

*Amal Kumar*  
*A. S. S. S. S.*  
*A. S. S.*  
*Liney Kaur*  
*A. S. S. S. S.*

## Practical Details Year – I (Material & Construction Techniques – I)

### Course Objective:

The objective of this course is to make the students understand of all the available materials, which are used in designing the various different interior spaces. It gives a fair knowledge of different furnishings and finishes used for all the interior surfaces of the space. To familiarize the students with construction properties and cases of traditional building materials used in construction. To understand the use of these traditional building materials in simple building works.

### MARKET SURVEY

Execute a market survey of different materials in terms of furnishes and finishes.

### CASE STUDY

Formulate a case study of an existing building to study its interiors along with furnishes and finishes used in it.

### DESIGN EXERCISE

Using the materials available in the design exercise.

### MATERIALS

Mud and Clay Products: Mud including stabilized earth, Burnt Bricks, Brick Tiles, Brick Ballest and Surkhi, Stone, Lime, Sand, Surkhi, Cement, Mortar, Concrete: Classification, Availability, Preparation, Characteristics, Manufacturing and Uses.

### CONSTRUCTION

Element of building: Terminology, nomenclature of various parts of building from foundation to roof. Brick Works: Brick Terminology, Simple bonds in Brick work. Detail at junctions. Arches, Brick, Stone, elementary principles, Definition and centering, Corbelling Coping string Courses, Decorative Brick Work, Brick Jalis, Special Bond, Garden bond etc.



## Practical Details Year – I (Drawing Techniques)

### Course Objective:

The objective of the course is to get the students familiarized with the drawing tools and accessories used in drafting and lettering techniques to produce any geometrical composition and form. This subject also provides a clear understanding about the scale measurement; plane geometry, solid geometry and projections used as drawing technique.

### BASIC TECHNICAL DRAWING

Introduction and setting to the drawing equipment, Introduction to metric scales, Concept of line, its types, quality, grade, divisions and angles, Concept of polygons, circles, geometrical curves, helix etc.

### CONCEPT OF DIMENSIONING

Concept of Dimensioning, Different -Types of Dimensioning, Styles of Dimensioning

### LETTERING

Free hand and mechanical lettering

### ORTHOGRAPHIC PROJECTIONS (TWO – DIMENSIONAL) AND DIMENSIONING

Definition, meaning and concept, Planes of projections with dimensions, Projection of regular rectilinear and circular solids (prisms, pyramids, cones, cylinders, spheres etc.) in different positions, Sections of regular rectilinear and circular solids in varying conditions of sectional plane, Development of surfaces

### THREE – DIMENSIONAL VIEWS

Isometric, Axonometric and Oblique view.

### PERSPECTIVE

Perspective view – one point and two point, Perspective of interiors

### SHADES AND SHADOWS

Shades and shadows / Coloring of Perspective with Rendering, Different material and mediums Rendering technical is different medium

### FREE HAND PERSPECTIVES

Free hand perspectives.

### FREE HAND SKILL

Exercise to develop free hand skill – i.e. drawing lines, joining points, curves etc.

Handwritten signatures and initials in blue ink, including 'Rishank' and 'Rishank'.

OBJECT SKETCHING

Object sketching – Still and live.

SHADING AND RENDERING

Shading and rendering with different materials

COLORING

Coloring with different mediums.



Handwritten signatures in blue ink on a grid background. The signatures are: 'Anand', 'Sonia', 'Anu', 'Anaykous', and 'Anubhava'.

### Practical Details Year – I (Work Shop – I)

**Course Objective:**

The objective of the course is to introduce the tools and techniques used for making models out of paper, boards, wood, bamboo, thermo coal, fabrics, clothes, glass, plastic sheets, wire, P.O.P., Clay etc. This course enables students for the construction of 3-Dimensional models with different materials.

**CONCEPT OF MODEL MAKING**

Making of models with different materials and color them also.

**MODEL MATERIALS**

Model should be made of paper, wood, cardboard etc. The models should be made in model making workshop.

Handwritten signatures in blue ink on a grid background. The signatures include 'Anand', 'A.S. Singh', 'Aye', 'Bismita', and 'Chandhas'.

## Raja Mansingh Tomar Music & Arts University, Gwalior (M.P)

B.Des. Annual Program (Bachelor of Design - Interior) Regular

B.Des. Second Year (Interior)

(B.Des.) Teaching Time (Class Duration) -36 Week = 216 days Total Credits = 36 X 24 = 864

S.N	Section – A Subject Nature Core Courses (Main Subject) THEORY CORE – 1	Subject Code	Credit	Class Room Teaching Weekly Duration / Hours	Total Teaching Duration / Hours	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
	History of Interior Design- II	C1 – INT – 207	2	2	72	15+05	80	100	33
	Material (Furnishing & Finishing - II)	C1 – INT – 208	2	2	72	15+05	80	100	33
	<b>PRACTICAL CORE – 2</b>								
	Interior Design – II	C2 – INT – 209	3	6	216	15+05	80	100	33
	Building Construction	C2 – INT – 210	3	6	216	15+05	80	100	33
	Furniture Design – I	C2 – INT – 211	3	6	216	15+05	80	100	33
	Computer Application – I	C2 – INT – 212	3	6	216	15+05	80	100	33
	<b>Section – B Elective Open Subject only Practical / Theory</b>								
	Architecture & Interior Design / Environmental Study	EO – BVA – 201	2	2	72	15+05	80	100	33
	<b>Section – C Foundation Course</b>								
	Hindi Language / English Language – II	F – HM – 201 F – EI – 202	2	2	72	15+05	80	100	33
	Entrepreneurship – III	F – EPD – 203	2	2	72	15+05	80	100	33
<b>Total Credit &amp; Teaching Duration</b>			22	34	1224				
Syllabus Designed by : Dr. Sajan Kumar Mathew									<b>I.O.D</b>

- Skill Development – N.S.S./N.C.C/ Yoga / Field Work is compulsory to participate in any one year (Four year curriculum)



## Raja Mansingh Tomar Music & Arts University, Gwalior

B. Design Second Year Interior Design

### History of Interior Design- II (Paper – I)

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C1 – INT – 207	2	15+05	80	100	33

**Objective:** The objective of the course is to introduce the students with the changes occurred in the past with the time. Familiarize with the different culture, society and their style of living, which affects the internal part of their buildings over different periods.

#### UNIT (I) – LATE 19<sup>TH</sup> CENTURY

The search for a new style, Period – Late 19<sup>th</sup> Century, Reference to European and American style

#### UNIT (II) – EARLY 20<sup>TH</sup> CENTURY & MID 20<sup>TH</sup> CENTURY

The Modern Movement, Period – Early 20<sup>th</sup> Century, Art Deco and the Modern, Period – Mid 20<sup>th</sup> Century

#### UNIT (III) WESTERN AND EASTERN

The emergence of interior decoration as a profession

#### UNIT (IV) – MID 20<sup>TH</sup> CENTURY

Post- war Modernism, Period – Mid 20<sup>th</sup> century

#### UNIT (V) – LATE 20<sup>TH</sup> CENTURY

The Post – Modern/ contemporary era, Period – Late 20<sup>th</sup> century, Present universal Trends emerged all over world

#### Text:

- The History of Arch. in India, Christophes Taddell
- Interior design & space planning, Dechiara Pabero Zelnik
- Interior design illustrated, Francis D.K. Ching

#### References:

- Islamic Architecture in interior, Satish Grover
- The Best Interior India, Anuradha Mahindra
- Indian Interior, Angelika Taschen

## Raja Mansingh Tomar Music & Arts University, Gwalior

B. Design Second Year Interior Design

### Material (Furnishing & Finishing - II (Paper - II))

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C1 - INT - 208	2	15+05	80	100	33

**Objective:** This subject will provide an advanced understanding of the art and technique of Construction,

#### UNIT (I) - ADVANCED MATERIALS

A.C.P. & H.P.L. Etc. its construction, used as interior material, used for exterior with details.

#### UNIT (II) - POLYCARBONATE SHEET

For Parking, courtyard or open to sky covering. Hardware, Fittings and fixtures, Electrical layout, symbol etc

#### UNIT (III) ACOUSTICAL MATERIAL

Doors, window, wall treatment, any other advanced technology, used in interiors is recommended to introduce and give detailed study of it.

#### UNIT (IV) - ADVANCE PARTITION, CEILING

Advance Partition - Composite, Glass, modular, acoustical etc., Ceiling - Composite with services, acoustical etc

#### UNIT (V) - STUDIO WORK

Actual site experiences and implementation of above Mentioned topics in design, Market surveys based on above mentioned different materials

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## Raja Mansingh Tomar Music & Arts University, Gwalior (M.P)

### B. Design Second Year (Interior Design) Practical's

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2 - INT - 209	3	15+05	80	100	33

#### Interior Design - II

- Practical - Medium (Pencil & Pencil Color)  
 Drafting - (Layouts, sectional elevations, side elevations, furniture designing & Presentation)  
 Size - Drawing Sheet & Tracing sheet A3 Sheet - 20 Sheets minimum

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2 - INT - 210	3	15+05	80	100	33

#### Building Construction

- Practical - Medium (Pencil & Rotating Pen)  
 Drafting - (wooden Partitions, Glaze Partition, Modular Kitchen, Panel Doors, False ceiling)  
 Material & Size - Drawing sheet (A3 Sheet) - 60 Sheets minimum

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2 - INT - 211	3	15+05	80	100	33

#### Furniture Design - I

- Practical - Medium (Pencil)  
 Drafting - (Layouts, sectional elevations, side elevations, furniture designing & Presentation)  
 File Size - Drawing Sheet & Tracing sheet A3 Sheet - 60 Sheets minimum

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2 - INT - 212	3	15+05	80	100	33

#### Computer Application - I

- Practical - Medium (Computer - Basic Computer Knowledge - Ms Office)  
 Work - PPT presentation 20 to 25 presentation minimum

- Work done in the class during the college / University hours shall be accepted for submission.
- Student shall have to submit one sessionals of each subject to the university / college.



## Practical Details Year – II (Interior Design – II)

### INTERIOR DESIGN

Interior Design for Play school / Kindergarten /Nursery school (institutional / training & development building) for a maximum number of students up to 150 for a built up space up to 500 sqm. with all the required facilities in terms of infrastructure and services.

### INTERIOR IN INSTITUTIONAL BUILDING

Space organization in interiors, Surface treatments in interiors e.g. walls, floors, ceilings etc. Interior details in terms of lighting, services, interior landscape etc., Different types of materials that are available and their uses in interiors.

### INTERIOR IN INSTITUTIONAL BUILDING

Layout and Constructional details of furniture units, Application of color, texture, pattern and their psychological effects in interiors, drawing of interiors in 2D and 3D views to understand the space design.

### INTERIOR MODEL

Interior Model of the space with all furniture, interior details in place and interior finishes with different colors, Textures.



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## Practical Details Year – II (Construction – II) {Building}

### Course Objective:

To familiarize the students with construction properties and cases of traditional building materials used in construction. To understand the use of these traditional building materials in simple building works.

### MATERIALS

Brick Work: Brick work with different materials i.e. mud, clay, glass, concrete, wood, timber, flyash Water Proof Materials: Asphalt, Bitumen, and Synthetic

### CONSTRUCTION

Stone work: Elementary Stone Masonry, Types of Joints, Random, Course and Ashlar Stone Work. Foundation: Need, Design criteria, Foundation for load bearing walls of various thicknesses. Introduction to fully glazed windows and ventilator details of joints etc., Fixed glass and timber louvered windows, Elementary carpentry, common joints, details of ledged and Battern Doors.

### SPACE PARTITIONS

Partitions of different types and materials, Fixing of partitions with different details



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B.Des. Annual Program (Bachelor of Design - Interior) Regular

B.Des. Third Year (Interior)

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S.N	Section – A Subject Nature Core Courses (Main Subject) THEORY CORE – 1	Subject Code	Credit	Class Room Teaching Weekly Duration / Hours	Total Teaching Duration / Hours	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
	Building Services – I	C1 – INT – 313	2	2	72	15+05	80	100	33
	Intelligent Interiors / Estimation	C1 – INT – 314	2	2	72	15+05	80	100	33
	<b>PRACTICAL CORE – 2</b>								
	Interior Design – III	C2 – INT – 315	3	6	216	15+05	80	100	33
	Furniture Design II	C2 – INT – 316	3	6	216	15+05	80	100	33
	C.A. – II (Auto Cad, 3Ds Max, Sketch up)	C2 – INT – 317	3	6	216	15+05	80	100	33
	3D Model Making	C2 – INT – 318	3	6	216	15+05	80	100	33
	<b>Section – B Elective Open Subject only Practical / Theory</b>								
	Sustainable Interior / Photography	EO – BVA – 301	2	2	72	15+05	80	100	33
	<b>Section – C Foundation Course</b>								
	Hindi Language / English Language – II	F – HM – 301 F – EI – 302	2	2	72	15+05	80	100	33
	Entrepreneurship – III	F – EPD – 303	2	2	72	15+05	80	100	33
<b>Total Credit &amp; Teaching Duration</b>			22	34	1224				
Syllabus Designed by : Dr. Sujan Kumar Mathew									<b>LCAD</b>

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# Raja Mansingh Tomar Music & Arts University, Gwalior

B. Design Third Year Interior Design

## BUILDING SERVICES – I (Paper – I)

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C1 – INT – 313	2	15+05	80	100	33

**Objective:** The objective of the course is to provide a clear understanding about the Water Supply, Sanitation and waste water disposal system in a building as part of the building services and know the latest market trends and requirements.

### UNIT – I – INTRODUCTION TO BUILDING SERVICES

Introduction to Building Services emphasis on Water Supply, Sanitation and Drainage, Water supply and distribution system at building level taking two-story building as example.

### UNIT – II - SANITATION DISPOSAL

Sanitation disposal at city two industrial level & sanitary layout and fixture setting at building level, Toilet & Kitchen layout of a residential building with sanitary fitting & Fixture, Market survey of all the sanitary products and presentation in form of report

### Unit – III - PIPING SYSTEM

Interior to Piping system / L.C / G.T. and with all its types, Storm water drainage system in a building, Pipes and fittings, materials, size and classification.

### UNIT – IV - WATER STORAGE

Under ground, overhead and internal storage tanks and supply lines.

### UNIT (V) – CLIMATOLOGY & INTRODUCTION TO HVAC

Building Environments - Ventilation - furniture requirements – Heat balance of the body - system of ventilation - Natural ventilator - general rules of ventilation - Artificial ventilation- etc.

### Suggested Reading

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## Raja Mansingh Tomar Music & Arts University, Gwalior

B. Design Third Year Interior Design

### Intelligent Interiors / Estimation (Paper – II)

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C1 – INT – 314	2	15×05	80	100	33

**Objective:** Transportation of interior spaces through natural element of Design

**UNIT – (I) INTRODUCTION, ENERGY EFFICIENCY, LIFE SAFETY SYSTEMS**

Introduction to the electronic aspects of an intelligent building. Intelligent interiors consist of energy use to the minimum with computerized system. Intelligent interior consists of the use of high technology to maximize the performance of fire alarms and security systems while at the same time minimizing costs.

**UNIT – (II) TELECOMMUNICATION SYSTEMS, WORKPLACE AUTOMATION**

Intelligence with respect to telecommunications in an intelligent interior building consists of the offering to tenants of many sophisticated features at a considerably reduced cost due to the fact that the equipment is shared by many users. Intelligence with respect to workplace automation in an intelligent interior consists of the use of high – tech office automation systems to render the operation of a company more efficient. This can be done at a reduced cost to tenants by virtue of the equipment being shared.

**UNIT – (III) INTRODUCTION OF ESTIMATION**

Introduction to estimation, Estimation calculations, types of calculation, special jobs

**UNIT – (IV) SPECIFICATIONS**

Introduction to specifications and writing detailed specification for various building materials, building construction works.

**UNIT – (V) BILL OF QUANTITY (B.O.Q)**

Working out quantities schedule of rates and Bill of Quantities

**Suggested Reading**



**Raja Mansingh Tomar Music & Arts University, Gwalior (M.P)**

**B. Design Third Year (Interior Design) Practical's**

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2 - INT - 215	3	15+05	80	100	33

**Interior Design - III**

- Practical - Medium (Pencil & Rotering Pen)
- Drafting - (Layouts, sectional elevations, side elevations, furniture designing & Presentation)
- Material & Size - Drawing sheet & Trassing sheet (A3 Sheet) – 60 Sheets minimum

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2 - INT - 210	3	15+05	80	100	33

**Furniture Design – II**

- Practical - Medium (Pencil)
- Drafting - (Layouts, sectional elevations, side elevations, furniture designing & Presentation)
- File Size - Drawing sheet & Trassing sheet A3 Sheet – 60 Sheets minimum

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2 - INT - 211	3	15+05	80	100	33

**Computer Application – II (Auto Cad, 3Ds Max & Sketch up)**

- Practical - Medium (Computer Softwares)
- Drafting - (2D & 3D Designs, Models – Furniture, Building, Building Views, Textures, Light & Material, V-ray, Rendering)
- Material & Size - 100mm X 100mm (50 files Minimum)

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2 - INT - 212	3	15+05	80	100	33

**3D Model Making**

- Practical - Medium (Plywood, Acrylic sheets, thermo cols & Natural Material, Etc.)
- Drafting - Furniture Modeling, Building Models
- Work - 10 product each overall

- Work done in the class during the college / University hours shall be accepted for submission.
- Student shall have to submit one sessionals of each subject to the university / college.

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## Practical Details Year – III (Interior Design – III)

### Course Objective:

The objective of the course is to introduce the students with the different types of exhibition and presentation spaces and the interior design requirements related to them. The course should involve different design ideas and schemes to represent the designing of exhibition spaces, as these are the prime area of designing emerging in the modern world.

### EXHIBITION CUM RETAIL DESIGN

Interior Design for specific ideas and select materials appropriate to intended purpose and to understand the visuals, tactile and functional characteristics, Develop an understanding of structures, special awareness, materials and processes, Develop skills in design development using working drawing, visual, scale models and prototypes followed by effective presentations of proposed design solutions of exhibitions.

### SPACE ORGANIZATION

Space organization in exhibition interiors, Surface treatments in interiors e.g. walls, floors, ceilings etc. Interior details in terms of lighting, services, interior landscape etc, Different types of materials that are available and their uses in interiors.

### LAYOUT

Layout and Constructional details of furniture units, Application of color, texture, pattern and their psychological effects in interiors, drawing of interiors in 2D and 3D views to understand the space design. Interior Model of the space with all furniture, interior details in place and interior finishes with different colors, Textures.

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## Practical Details Year – III (Furniture Design – II)

### Course Objective:

The objective of the course is to provide knowledge about analysis of existing piece of furniture in its functional aspect, technical aspects and skill required materials and properties, biomechanical factors and ergonomically consideration, aesthetic consideration and back acing and economical factors consideration.

### ANALYZING FURNITURE

Analyzing furniture forms and designing furniture forms scientifically based on ergonomics, material design and working parameters and visual perception of furniture as a single form and as a system in a given interior space.

### MEASUREMENT DRAWING

Measurement drawing of a piece of a furniture-plan, elevation and detail drawings on proper scale. Design of a simple object having some moving components – folding stool. History of furniture from early days to industrial revolution.

### MODULAR ASPECT

Modular aspect and approach towards all types of furniture, cost criteria of design furniture for lower income sector society.

### FURNITURE STYLE

Design and understand Post Independence furniture style.

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## Practical Details Year – III (Computer Application – II)

### Course Objective:

To develop an understanding of software i.e. Auto Cad, Coral Draw and Adobe and Photoshop. To develop an understanding of software assisting in 3-Dimensional design. Introduction to the use and application of Internet. To develop an understanding of software assisting in 3-Dimensional design. Introduction to the use and application of Internet.

### UNDERSTANDING AUTOCAD

Learn various 2D commands with their function and application

### UNDERSTANDING COORDINATE SYSTEMS

Working on Layers and Colors, Drawing plans, elevations and sections using Auto Cad.

### DIMENSIONING

Dimensioning of drawings, various file format and their usefulness

### UNDERSTANDING AUTOCAD

3 - Dimensional drawings, learning to place elements in 3-D views of a redesigned space.

### SURFACE AND SOLIDS

Creating of 2D and 3D surface and solids.

### VIEWPORTS

Introduction to UCS viewports, 3-D views and 3-D orbit.

### WEB/ INTERNET

Internet compatibility

### UNDERSTANDING AUTOCAD – 3D

3 - Dimensional drawings, learning to place elements in 3-D views of a redesigned space, Creating of 2D

### 3D SURFACES AND SOLIDS

3-D surface and solids. Developments of surfaces and solids, Use of these in various designing activities.

### 3D VIEWPORTS AND VIEWS

Introduction to UCS viewports, 3-D views and 3-D orbit, Internet compatibility

*Binay Kumar*  
*Alka*  
*Aradhana*  
*Aradhana*

**USING 3-D MAX**

3-D MAX and other related software for developing exterior and interior surfaces and spaces and creating, walkthroughs using camera, light and assigning materials

**ANIMATION**

Introduction to animation, Animation of still life

**MODELING AND MAPPING**

Introduction to modeling, Introduction to materials and mapping in respect of: Assigning materials, Creating Transparencies, Introduction to lighting, lighting effects, Shadow maps, Rendering using active shades and depth of field.

**SKETCHUP MODELING**

Introduction to sketch-up, tools, modeling, rendering.

**VARIOUS SOFTWARES**

Photoshop, coral draw, other drawing software's.

**PRESENTATION**

Photoshop, Coral Draw, tools, presentations.

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### Practical Details Year – III (3D Model Making)

**Course Objective:**

The objective of the course is to introduce the tools and techniques used for making models out of paper, boards, wood, bamboo, thermo coal, fabrics, clothes, glass, plastic sheets, wire, P.O.P., Clay etc. This course enables students for the construction of 3-Dimensional models with different materials.

**CONCEPT OF MODEL MAKING**

Making of models with different materials and color them also.

**MODEL MATERIALS**

Model should be made of paper, wood, cardboard etc. The models should be made in model making workshop.

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## Raja Mansingh Tomar Music & Arts University, Gwalior (M.P)

B.Des. Annual Program (Bachelor of Design - Interior) Regular

B.Des. Fourth Year (Interior)

(B.Des.) Teaching Time (Class Duration) -36 Week = 216 days Total Credits - 36 X 24 = 864

S.N	Section - A Subject Nature Core Courses (Main Subject) THEORY CORE - 1	Subject Code	Credit	Class Room Teaching Weekly Duration / Hours	Total Teaching Duration / Hours	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
	Services - II	C1 - INT - 419	2	2	72	15+05	80	100	33
	Dissertation	C1 - INT - 420	2	2	72	15+05	80	100	33
	<b>PRACTICAL CORE - 2</b>								
	Thesis / Interior Design - IV	C2 - INT - 421	3	6	216	15+05	80	100	33
	Product Design	C2 - INT - 422	3	6	216	15+05	80	100	33
	Design Execution Drawing (Working Drawing)	C2 - INT - 423	3	6	216	15+05	80	100	33
	<b>Section - B Elective Open Subject only Practical / Theory</b>								
		EO - BVA - 401	2	2	72	15+05	80	100	33
	<b>Section - C Foundation Course</b>								
	Hindi Language / English Language - II	F - HM - 401 F - EI - 402	2	2	72	15+05	80	100	33
	Entrepreneurship - III	F - EPD - 403	2	2	72	15+05	80	100	33
<b>Total Credit &amp; Teaching Duration</b>			<b>19</b>	<b>28</b>	<b>1008</b>				

\* Skill Development - N.S.S / N.C.C / Yoga / Field Work is compulsory to participate in any one year (Four year curriculum)

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### Raja Mansingh Tomar Music & Arts University, Gwalior

#### B. Design Fourth Year Interior Design

#### Services – II (Paper – I)

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
CL – INT – 419	2	15+05	80	100	33

**Objective:** To initiate students into theory and practice of Acoustics, Introduction of HAVC in terms of theory and practical implementation.

#### UNIT (I) – INTRODUCTION AND TERMINOLOGY

Properties of audible sound, intensity and loudness, frequency and pitch, quality

#### UNIT (II) – ACOUSTICS

Common acoustical defects: Echo, Insufficient loudness, external noise, reverberation. Constructional measures for sound insulation of building: Materials, Hollow and composite wall construction, flooring and ceiling. Acoustic design considerations for the following: Auditorium, conference rooms, seminar halls.

#### UNIT (III) – HAVC (HEATING, VENTILATION AND AIR CONDITIONING)

Natural Ventilation, Heating of spaces – local and central heating, Heating Equipment, Comfort conditions, Mechanical ventilation

#### UNIT (IV) – AIR CONDITIONING

Various systems of air conditioning – Window Unit, split, Chilled water system, Duct work and air conditioning layout, fittings and fixtures

#### UNIT (V) – INTRODUCTION TO FIRE, FIRE REGULATIONS, FIRE FIGHTING EQUIPMENT

Fire, causes of fire, spread of fire and related fire prone materials. Fire resistant and fire retardants materials and their application, Fire fighting Equipment, Fire resistant and methods to use, Code of Safety, fire regulations, fire insurance. Wet risers, dry risers, sprinklers, smoke detectors, fire exists, water curtains. Application of the study in designing a space, Case study and analysis of existing building.

#### Suggested Reading

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## Raja Mansingh Tomar Music & Arts University, Gwalior

B. Design Fourth Year Interior Design

### Dissertation (Paper – II)

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
CI – INT – 420	2	15+05	80	100	33

**Objective:** A research study will be undertaken by each student of different topics of immediate relevance to the professional knowledge. The study would include a through literature survey as well as data collection from the field service or by contact with practicing Architects, interior designers and public at large as clients. Each student will prepare an analytical research project based on the above information and submit in the form of a well-compiled document duly illustrated with relevant diagrams, sketches and informatics presentation.

#### UNIT – (I) DESIGN DISSERTATION

Introduction to the Interior design dissertation that shall be a in form of a study report for the project undertaken by the students on a theme and topic.

#### UNIT – (II) ANALYSIS

Research analysis and data collection, Justification to topic selected

#### UNIT – (III) METHODOLOGY

Methodology of research, Data analysis, Data compilation.

#### UNIT – (IV) DESIGNING

Concept and designing, User requirements and standards, Climatic conditions, Interior landscape

#### UNIT (V) – PRESENTATION

Preparation of analysis report with suitable drawings for discussion

#### Suggested Reading

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## Raja Mansingh Tomar Music & Arts University, Gwalior (M.P)

### B. Design Fourth Year (Interior Design) Practical's

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C1-INT-421	3	15+05	80	100	33

#### Thesis & Interior Design IV

- Practical - Medium (Pencil & Rotring Pens & Colors)  
 Drafting - (Layouts, sectional elevations, side elevations, furniture designing & Presentation)  
 Material & Size - Drawing sheet & Trassing sheet (A3 Sheet) - 60 Sheets minimum

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C2-INT-422	3	15+05	80	100	33

#### Product Design

- Practical - Medium (Pencil/ Computer software/ 3D models)  
 File Size - Drawing sheet (A3 Sheet) / Computer Work/ Model making material - 1 work minimum

Subject Code	Credit	Mid Term / Internal Valuation & Attendance	End Term Valuation Marks Percentage	Total Marks Percentage	Passing Minimum Marks Percentage
C3-INT-423	3	15+05	80	100	33

#### Design Execution Drawing (Working Drawing)

- Practical - Medium (Pencil, Rotring Pen)  
 Drafting - (Layouts, sectional elevations, side elevations, furniture designing & Presentation)  
 Material & Size - Drawing sheet & Trassing sheet (A3 Sheet) - 60 Sheets minimum

- Work done in the class during the college / University hours shall be accepted for submission.
- Student shall have to submit one sessionals of each subject to the university / college.

## Practical Details Year – IV (Thesis of Interior Design)

### Course Objective:

A thesis project topic will be chosen by the student and approved by the school so that a variety of professional projects are undertaken in each thesis semester every year. The course gives an opportunity to develop a student an independent approach to develop an exercise and professional ability to handle professional projects with complete analysis of based data/ information so as to achieve aesthetically planned interior environment for functional efficiency.

### INTRODUCTION

Introduction to the thesis and approval of Topic and subject.

### DRAWINGS

Thesis would include working operational plans, working drawings and design model.

### BUILDING MATERIALS

Understanding of modern building materials suitable for application to the nature of the project.

The project will be evaluated through a continuous Examination basis in a series of seminars as announced from time to time.



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## Practical Details Year – IV (Dissertation)

### Course Objective:

A research study will be undertaken by each student of different topics of immediate relevance to the professional knowledge. The study would include a through literature survey as well as data collection from the field service or by contact with practicing Architects, Interior designers and public at large as clients. Each student will prepare an analytical research project based on the above information and submit in the form of a well-complied document duly illustrated with relevant diagrams, sketches and informatics presentation.

**Note:** Dissertation can be treated as a preamble as the base of the thesis project if preferred by the student and approved by the student.

### DESIGN DISSERTATION

Introduction to the Interior design dissertation that shall be a in form of a study report for the project undertaken by the students on a theme and topic

### ANALYSIS

Research analysis and data collection, Justification to topic selected

### METHODOLOGY

Methodology of research, Data analysis, Data compilation.

### DESIGNING

Concept and designing, User requirements and standards, Climatic conditions, Interior landscape

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## Practical Details Year – IV (Design Execution Drawing (Working Drawing))

### Objectives of the course:

To impart training in the preparation of working drawings for buildings with specific reference to code of practice and incorporating specifications as complementary to the working drawings. The focus of the course is to impart skills related to the preparation of drawings meant for execution on the site.

### Module – I

Preparation of working drawings – Suitable scales of drawings, methods of giving dimensions and standards on plans, sections, elevations, details etc.

### Module – II

Preparation of plans – Architectural plans, furniture layout floor plans with clearances, different level floor plans, detailed floor plans of each room.

### Module – III

Elevations and Sections – Detailed sectional elevations of all the walls in the interior with all the required dimensions and specifications.

### Module - IV

Details of all services – layouts for flooring, ceiling, electrical, plumbing, lighting, fire fighting etc., toilet details, kitchen details, staircase details, furniture details, interior finishing details, material, color and texture details, fixture and fixing and joinery details.

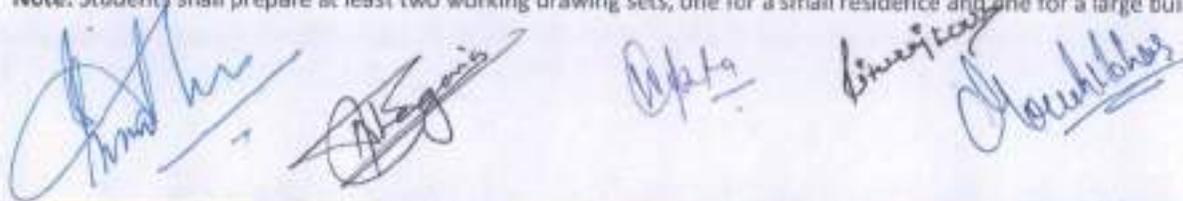
### Module – V

Specifications writing: Writing detailed clause by clause specifications for materials pre and post execution, tests, mode of measurements, manufacturer's details and specifications etc.

### Module – VI

Manufacturer's specifications – Database of manufacturers specifications for the following materials based on surveys – Glass, plywood and laminates, hardware, electrical, wiring, accessories, plumbing fitting and fixtures, flooring, cladding etc.,

**Note:** Students shall prepare at least two working drawing sets, one for a small residence and one for a large building.



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