

MAULANA ABDUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL
(Formerly West Bengal University of Technology)
Syllabus of B.Sc. (Interior Designing)
(Effective from 2023-24 Academic Sessions)
SEMESTER – VII (HONOURS)

SL. No.	Category	Course Code	Course Title	L	T	P	Credit
1	Major	BID701	Vastu Shastra for Interior Design	4	1	0	5
2	Major	BID702	Furniture Design	3	1	0	4
3	SEC	SEC781	Major Project I	0	0	5	5
4	Minor	MIM701	Consumer Behaviour	4	0	0	4
5	Minor	MIM702	Intellectual Property Rights	4	0	0	4

[Credit Hours: 1 Theory Credit = 15 hours, 1 Practical Credit = 30 hrs]

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Course Name: Vastu Shastra for Interior Design

Mode: Offline

Credits: 5 (4L+1T)

SUB CODE: BID701

Aim of the Course:

To understand, analyze, and apply the principles of Vastu Shastra in residential and commercial interior spaces through directional planning, spatial organization, and energy balancing techniques.

Course Objectives:

- To understand the meaning, origin, and philosophical background of Vastu Shastra.
- To study the relationship between directions, natural elements, and human well-being.
- To develop skills in Vastu-based interior planning and furniture arrangement.
- To understand residential and commercial interior applications according to Vastu principles.
- To promote sustainable, healthy, and harmonious interior environments through Vastu concepts.

Course Outcomes

Sl.No.	Course Outcomes	Mapped Modules
CO1	To develop students' understanding of Vastu principles and their role in interior design.	M1
CO2	To introduce the concepts of directions, Panchabhootas, and Vastu Purusha Mandala.	M1
CO3	To develop planning skills for residential interiors according to Vastu principles.	M2
CO4	To increase awareness of Vastu applications in commercial and workplace interiors.	M3
CO5	To enhance students' ability to analyze spaces and identify Vastu defects and remedies.	M4
CO6	To understand the integration of colours, materials, lighting, and sustainable practices in Vastu-based interiors.	M4
CO7	To strengthen design sensitivity by balancing traditional Vastu principles with modern interior design solutions.	M4

Learning Outcome/Skills:

- Understand Key Vastu Concepts: Define and explain Vastu Shastra, Panchabhootas, directional planning, and energy flow concepts in interior design.
- Analyze Interior Spaces According to Vastu: Identify directional suitability, energy imbalance, and spatial organization in residential and commercial interiors.
- Prepare Vastu-Based Interior Layouts: Develop furniture layouts, zoning plans, and circulation patterns according to Vastu principles.
- Apply Vastu Remedies and Modern Practices: Suggest corrective measures, sustainable solutions, and modern applications of Vastu in contemporary interior spaces.

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Module Structure

Module Number	Content	Total Hours	% of Questions	Bloom Level	Remarks
M1	Introduction to Vastu Shastra	15	25	1,2,3	NA
M2	Fundamental Principles of Vastu	15	25	1,2,3	NA
M3	Vastu for Residential and Commercial Interiors	15	25	1,2,3,4	NA
M4	Modern Applications, Remedies, and Professional Practice	15	25	1,2,3,4	NA
Total Theory		60			
M5	Tutorial	15		1,2,4,5	NA
TOTAL		75	100		

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Detailed Syllabus

Module 1 – Introduction to Vastu Shastra

- Definition and meaning of Vastu Shastra
- History, origin, and philosophical background
- References in Vedas and ancient Indian architecture
- Importance of Vastu in interior design
- Principles of balance, harmony, and energy flow
- Relationship between nature, directions, and human well-being
- Solar energy and magnetic fields
- Brahmasthan and its significance

Total Hours: 15

Module 2 – Fundamental Principles of Vastu

- Five Elements (Panchabhootas): Earth, Water, Fire, Air, and Space
- Balancing elements in interior layouts
- Understanding cardinal directions and 16-direction system
- Vastu Purusha Mandala and grid planning
- Brahmasthan and Marmasthan concepts
- Positive and negative energy concepts
- Importance of sunlight and ventilation

Total Hours: 15

Module 3 – Vastu for Residential and Commercial Interiors

- Living room planning and furniture arrangement
- Bedroom positioning and sleeping directions
- Kitchen planning and fire-water balance
- Dining area placement and ambiance
- Bathroom and toilet planning
- Pooja room design and placement
- Office planning and workstation arrangement
- Reception and waiting area design
- Retail and showroom interiors
- Restaurant and hospitality interiors

Total Hours: 15

Module 4 – Modern Applications, Remedies, and Professional Practice

- Space planning and furniture layout according to Vastu
- Vastu colour psychology and material selection
- Natural and artificial lighting principles
- Common Vastu defects and remedies
- Use of mirrors, plants, crystals, and symbols
- Sustainable and eco-friendly Vastu concepts
- Smart homes and modern Vastu applications
- Client consultation and preparation of Vastu reports
- Ethical practices in Vastu consultation

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Total Hours: 15

Module 5 –Tutorial

- Site analysis and direction study
- Preparation of Vastu-based interior layouts
- Furniture arrangement exercises
- Residential and commercial case studies
- Direction analysis using compass
- Identification of Vastu defects and remedies
- Presentation of project work

Total Hours: 15

References:

1. Dr. Bhojraj Dwivedi – Vastu Shastra Principles and Practices
2. Stella Kramrisch – The Hindu Temple
3. Mayamata – Ancient Sanskrit Treatise on Architecture
4. Acharya's Manual of Vastu Shastra
5. Vastu Vidya by Dr. Kaushal Kumar

Website:

- [INTACH Heritage Academy](#) – Resources on traditional Indian architecture and heritage conservation.
- [Vastu Shastra Guide – Architecture Ideas](#) – Articles and practical Vastu planning concepts.
- [Rethinking The Future](#) – Contemporary discussions on Vastu and interior design.
- [ArchDaily India](#) – Modern architectural case studies and spatial planning references.

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Course Name: Furniture Design and Product Development

Mode: Offline

Credits: 4 (3L+1T)

SUB CODE: BID702

Aim of the Course:

To introduce students to furniture design principles, product development processes, material applications, ergonomics, technical detailing, and sustainable manufacturing practices through studio-based learning and practical exploration.

Course Objectives:

- To understand furniture design principles and ergonomics.
- To study materials, construction techniques, and manufacturing systems.
- To develop creative thinking and product development skills.
- To learn furniture detailing, joinery systems, and prototyping techniques.
- To understand sustainable and user-centered furniture design approaches.
- To strengthen professional presentation and fabrication skills.

Sl.No.	Course Outcomes	Mapped Modules
CO1	To understand furniture design principles, ergonomics, and human-centered approaches.	M1
CO2	To develop knowledge of materials, joinery systems, and construction techniques.	M2
CO3	To strengthen concept generation, detailing, and product development skills.	M3
CO4	To understand manufacturing systems, prototyping, and digital fabrication methods.	M3
CO5	To integrate sustainable and professional practices within furniture production.	M4
CO6	To prepare professional furniture presentations, portfolios, and fabrication documents.	M4

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Learning Outcome/Skills:

By the end of the course, students will be able to:

- **Understand Furniture Design Concepts**-Develop understanding of furniture types, ergonomics, aesthetics, and functional design principles.
- **Analyze Materials & Construction Techniques**-Identify suitable materials, joinery systems, hardware, finishes, and construction methods.
- **Develop Furniture Products**-Prepare concepts, technical drawings, prototypes, and presentation models.
- **Apply Sustainable & Manufacturing Approaches**-Integrate sustainable materials, digital fabrication, and production methods in furniture design.
- **Present Professional Furniture Solutions**-Deliver furniture projects with proper detailing, costing, branding, and presentation methods.

Module Structure

Module Number	Content	Total Hours	% of Questions	Bloom Level	Remarks
M1	Introduction to Furniture Design	10	25	1,2,3	Concept Based
M2	Materials, Ergonomics & Construction	15	25	1,2,3	Technical Study
M3	Product Development Process	10	25	1,2,3,4	Studio Based
M4	Manufacturing, Sustainability & Professional Practice	10	25	1,2,3,4	Practical Based
M5	Tutorial	15	-	1,2,3,4	Workshop Based
TOTAL		60	100		

Detailed Syllabus

Module 1 – Introduction to Furniture Design

- History and evolution of furniture design
- Principles of furniture design
- Residential and commercial furniture types
- Anthropometry and ergonomics
- Human comfort and functional requirements
- Traditional and modern furniture styles

Total Hours: 15

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Module 2 – Materials, Ergonomics & Construction

- Wood science and timber anatomy
- Hardwood, softwood, MDF, plywood, laminates, and composites
- Metal, glass, plastic, and upholstery materials
- Furniture joints, hardware, hinges, and runners
- Surface finishes and treatments
- Furniture construction methods and workshop tools

Total Hours: 15

Module 3 – Product Development Process

- Design thinking and product development methods
- User research and market analysis
- Concept generation and sketch development
- CAD and 3D modeling using AutoCAD and SketchUp
- Prototype making and model development
- Product evaluation, detailing, and modifications
- CNC and digital fabrication methods

Total Hours: 10

Module 4 – Manufacturing, Sustainability & Professional Practice

- Furniture manufacturing systems and production methods
- Sustainable furniture design and eco-friendly materials
- Circular economy and life cycle analysis
- Branding, costing, and product pricing
- Professional practice and client interaction
- Portfolio and presentation preparation
- Independent commercial furniture line project

Total Hours: 10

References

1. Francis D.K. Ching – Furniture Design Illustrated
2. Jim Postell – Furniture Design
3. Neufert – Architects' Data
4. Time-Saver Standards for Interior Design and Space Planning
5. Peter Opsvik – Rethinking Sitting
6. John Pile – Interior Design
7. Materials and Process in Manufacturing – E. Paul DeGarmo

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Website

- Dezeen Furniture Design
- ArchDaily Furniture Projects
- Design Milk
- Core77 Product Design Resources

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Course Name : Major Project I

(Residential Design)

Mode: Offline

Credits: 5 (0L+0T+5P)

SUB CODE: SEC 781 (Sessional)

Aim of the Course: The aim of this course is to introduce students to the complete residential interior design process through studio-based learning. The course covers concept development, drafting, technical drawings, and final project execution.

Course Objectives:

- To understand residential design through real-life project simulation
- To develop skills in concept development and visualization
- To introduce technical drafting and working drawings
- To build knowledge of materials, services, and detailing
- To enable students to execute and present a complete residential project

Sl. No.	Course Outcomes	Mapped Modules
CO1	Understand client requirements and residential spaces	M1
CO2	Develop concept, mood, and design ideas	M2
CO3	Apply zoning and space planning principles	M3
CO4	Prepare detailed layouts and technical drawings	M4, M5
CO5	Understand building services and integration	M6
CO6	Develop furniture design and detailing skills	M7
CO7	Present complete design solutions professionally	M8
CO8	Execute a full residential interior project	M9

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Learning Outcome/Skills:

Students will be able to:

- Analyze client needs and develop design briefs
- Gain hands-on experience in residential interior design, including drafting, services planning, material selection, and project presentation.
- Create concept-driven residential interiors
- Prepare complete set of interior drawings and layouts
- Integrate services like electrical, lighting, and plumbing
- Design and detail basic furniture
- Client Study and Case Study

- Present a comprehensive residential interior project

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	Client Study and Case Study	10	10	1, 2, 3	NA
M2	Concept Development	10	10	1, 2, 3, 6	NA
M3	Site Analysis and Zoning	10	15	1, 2, 3, 4	NA
M4	Space Planning and Layouts	10	15	1, 2, 3, 4	NA
M5	Technical Drawings and Sheet Work Drafting	30	15	1, 2, 3, 4, 5	NA
M6	Building Services Integration	20	10	1, 2, 3, 4	NA
M7	Furniture Design and Detailing	20	10	1, 2, 3, 5, 6	NA
M8	Materials, Finishes, and Estimation	20	5	1, 2, 3, 5	NA
M9	Presentation and Final Project	20	10	1, 2, 3, 4, 5, 6	NA
TOTAL		150			

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Detailed Syllabus

Module 1-Client Study and Case Study:

- Client profile (lifestyle, requirements, preferences)
- Understanding design brief
- Case study of similar residential projects
- Analysis of user needs and space requirements

Total Hours: 10

Module 2- Concept Development:

- Mood board preparation
- Theme and concept generation
- Inspiration and design language
- Concept sketches and idea evolution

Total Hours: 10

Module 3- Site Analysis and Zoning:

- Site analysis (location, orientation, climate)
- Site plan preparation
- Zoning and bubble diagrams
- Circulation and spatial relationships

Total Hours: 10

Module 4- Space Planning and Layouts:

- Civil layout (basic wall layout)
- Furniture layout
- Flooring layout
- Functional planning and ergonomics

Total Hours: 10

Module 5- Technical Drawings and Sheet Work Drafting:

- Drafting standards and sheet composition
- Preparation of:
 - Floor plans
 - Elevations
 - Sectional elevations
 - Dimensioning, labeling, and detailing

Total Hours: 30

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Module 6- Building Services Integration:

- Electrical layout and raceways
- Lighting design and layout
- False ceiling plans
- Plumbing layout basics

Total Hours: 20

Module 7- Furniture Design and Detailing:

- Basic furniture design (bed, wardrobe, kitchen units, etc.)
- Detailed furniture drawings
- Joinery basics and detailing
- Introduction to modular furniture

Total Hours: 20

Module 8 -Materials, Finishes, and Estimation:

- Material selection (flooring, wall finishes, furniture materials)
- Material board preparation
- Cost estimation and budgeting basics
- Specification writing

Total Hours: 20

Module 9 -Presentation and Final Project

- 3D views and perspectives (manual/digital)
- Final presentation sheets
- Model making (optional)
- Complete residential project submission including:
 - Client profile
 - Concept & mood board
 - All drawings (layouts, services, details)
 - Material board
 - 3D views
 - Cost estimate

Total Hours: 20

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2. Cedric Crocker, All About Landscaping, Ortho Books.
3. Faulkner R&Faulkner S, Inside Today's Home, New York, Holt Rinehart&Winston Inc., 1960
4. Hooguet Fickle, The Garden, The Netherlands, Rebo Production, Lisse 1977
5. Learner J M, The Complete Home Landscape Designer.
6. Trivedi, P &Chawdhury B, Home Gardening, New Delhi, India, Council of Agricultural Research, 1983
7. The Fundamentals of Landscape Architecture 2nd Edition by Tim Waterman (Author)

Websites:

1. <https://www.curbed.com/2016/5/23/11700166/landscape-garden-design-101>
2. ArchDaily – <https://www.archdaily.com>
3. Dezeen – <https://www.dezeen.com>
4. DesignBoom – <https://www.designboom.com>
5. Houzz – <https://www.houzz.in>
6. Interior Design Magazine – <https://www.interiordesign.net>
7. Architectural Digest India – <https://www.architecturaldigest.in>
8. AutoCAD Tutorials – <https://knowledge.autodesk.com>
9. Pinterest Interior Design References – <https://www.pinterest.com>
10. Behance Portfolio References – <https://www.behance.net>
11. SketchUp Learning Resources – <https://learn.sketchup.com>
12. The Constructor – <https://theconstructor.org>
13. Building Materials and Interior Products – <https://www.architonic.com>