

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY
(Formerly West Bengal University of Technology)
SYLLABUS: B.SC IN INTERIOR DESIGNING
(Effective from 2023-24 Academic Sessions)

Course Name: **Vernacular Architecture**

Sub Code: **BID601**

Total Contacts Hours / Week: **5(3L+2P)**

Aim of the Course

The course aims to provide Interior Designing students with a deep understanding of Vernacular Architecture as a foundational framework for designing culturally relevant, climate-responsive, and sustainable interior spaces. By emphasizing traditional design philosophies, material use, and spatial planning rooted in regional identities—particularly in West Bengal—the course enables students to reinterpret indigenous knowledge systems using appropriate modern techniques. The goal is to foster design approaches that are both innovative and sensitive to ecological, social, and cultural contexts.

Course Objectives

- To introduce students to the core principles and relevance of vernacular architecture within the context of interior design.
- To explore how local climate, lifestyle, materials, and culture influence spatial organization and interior aesthetics.
- To investigate traditional materials, surface treatments, furniture styles, and decorative arts in vernacular interiors.
- To study the vernacular interior design traditions across India, with special focus on those of West Bengal.
- To examine how modern techniques and technologies can be integrated with vernacular interior design principles.
- To enable students to reinterpret vernacular strategies in their design projects with an emphasis on sustainability and cultural continuity.

Sl.No.	Course Outcomes	Mapped Modules
CO1	Conceptual Understanding: Students will be able to demonstrate foundational knowledge of vernacular architecture and its significance in sustainable and culturally rooted interior design.	M1
CO2	Climatic and Cultural Context Analysis: Students will learn to analyze how environmental, geographical, and cultural factors shape interior spatial arrangements and vernacular typologies.	M2& M3
CO3	Material and Elemental Exploration: Students will identify and apply traditional construction techniques, interior materials, surface finishes, and local craftsmanship in design exercises.	M3, M4 & M5
CO4	Cultural Sensitivity and Reflective Practice: Demonstrate sensitivity to cultural identity, community practices, and ecological balance in design thinking and documentation.	M1, M2 & M5
CO5	Critical Case Evaluation: Students will be able evaluate contemporary design projects that integrate vernacular architectural principles in innovative and meaningful ways	M6

Learning Outcome/Skills

- Understanding Vernacular Design Principles: Identify and describe key elements and features of vernacular interior design traditions.
- Contextual Analysis of Space and Culture: Analyze the relationship between regional climate, culture, and interior spatial arrangements.

- **Appreciation of Traditional Materials and Craftsmanship:** Recognize the value of traditional materials, furniture, and finishes in interior design.
- **Critical Evaluation of Contemporary Vernacular Adaptations:** Evaluate contemporary interior spaces that successfully integrate vernacular principles with modern design solutions.
- **Application of Vernacular Concepts in Design Proposals:** Develop interior design proposals that incorporate vernacular concepts, local materials, and sustainable practices.
- **Culturally Sensitive and Context-Responsive Design Thinking:** Apply context-sensitive and culturally aware design thinking in studio projects.

Module Number	Content	Total Hours	% of Questions	Bloom Level(Applicable)	Remarks, if any
THEORY					
M1	Introduction to Vernacular Architecture / Interior Design	5	15	1, 2, 3	NA
M2	Environmental and Cultural Contexts	5	20	1, 2, 3	NA
M3	Materials, Textures, and Techniques	10	20	1, 2, 3	NA
M4	Regional Vernacular Architecture (Interiors) in India	10	20	1, 2, 3	NA
M5	Furniture and Decorative Arts	10	15	1, 2, 3	NA
M6	Vernacular to Contemporary Architecture (Interiors)	5	10	1, 2, 3	NA
TOTAL (THEORY)		45			
PRACTICAL					
M7	Practical Project Work	30			
TOTAL (PRACTICAL)		30			
TOTAL		75			

DETAILED SYLLABUS

PAPER CODE: BID 601			CREDIT: 5	TOTAL HOURS: 75
SL. NO.	MODULE NO	MODULE TITLE	DETAILS	TOTAL HOURS
1	Module-1	Introduction to Vernacular Architecture / Interior Design	<ul style="list-style-type: none"> • What is vernacular architecture? • Importance in interiors and sustainability • Vernacular vs. modern interiors 	05
2	Module-2	Environmental and Cultural Contexts	<ul style="list-style-type: none"> • Climate's role in space planning • Ritual and lifestyle impact 	05

3	Module-3	Materials, Textures, and Techniques	<ul style="list-style-type: none"> Local materials and treatments -Local woods like Neem, Teak, Sal, bamboo, cane, rope, and natural dyes, lime plaster, mud, cow dung floors, clay paints, natural binders Materials and detailing Traditional Flooring Techniques(Red oxide floors (Kerala, Goa), Terracotta tiles, Shabad stone (Gujarat), mud floors Wall Finishes in Vernacular Interiors(Lepai, limewash, mud plaster with husk, mural painting, mosaic mirrors (Kutch)) Ceiling and Roof Detailing- Bamboo rafters, exposed wooden beams, Madras terrace roof, cane matting Doors and Window Detailing(Carved wood doors, pivoted windows, Jharokhas, Jaali work for airflow and light) Built-In Furniture and Interior Niches(Wall niches)Almari, Baithak, loft storage, earthen shelves Decorative Hardware and Artisanal Detailing(Brass locks, wooden brackets (Chhajja), hand-forged nails, ornamental hinges) 	10
4	Module-4	Regional Vernacular Architecture (Interiors) in India	<ul style="list-style-type: none"> Vernacular styles across India Interior layouts in Vernacular Architecture Spatial Planning in Traditional Indian Homes: A Regional Study-Eg: Nalukettu in Kerala, Haveli in Rajasthan, Pol Houses in Gujarat, Zawlbuk in Mizoram Hierarchy of Spaces in Vernacular Interiors-Public vs private zones, gender-based zones (e.g. Zenana, Andar Mahal) Central Courtyard as an Interior Organizer-Functions of Angan, Totti, Verandah and their relationship with other spaces Multi-Functional Spaces in Traditional Interiors-Use of collapsible furniture and 	10

			flexible room use (sleeping, cooking, praying) <ul style="list-style-type: none"> Interior Circulation and Light in Vernacular Layouts-Passive ventilation, light wells, transitional spaces like Opla, corridors Kitchen and Utility Zones in Vernacular Indian Architecture-Built-in storage, mud platforms, open hearths, separate areas for grain, water Community, Rituals, and Interior Layout-Role of puja ghar, baithak, chowk, and festival-based spatial arrangements Interior Layouts as Expressions of Social Structure-Brahmin agraharams, tribal longhouses, caste-based spatial organization 	
	Module-5	Furniture and Decorative Arts	<ul style="list-style-type: none"> Built-in furniture, crafts, textiles, etc. (Wall niches (Almirahs), Baithak platforms, integrated storage/seating) Traditional Furniture Forms in Vernacular Indian Homes (Charpai, Chowki, Manai, Patla, Bajot, Sandook, Khaat, Jhoola, etc) Wood Carving, Folk Motifs and Symbolism, Painted Furniture and Wall Murals like Madhubani (Bihar), Pattachitra (Odisha), Warli (Maharashtra), Pithora (Gujarat/MP), Lacquer Work and Inlay Techniques 	10
6	Module-6	Vernacular to Contemporary Architecture / Interiors	<ul style="list-style-type: none"> Village or crafts-based interior study Case studies: Laurie Baker, homestays Presentation of a vernacular-modern blend 	05
PRACTICAL				
7	Module-7	Studio Case Study & Report Writing – Vernacular Architecture	<ul style="list-style-type: none"> Project integrating vernacular concepts into a small-scale interior (e.g., homestay, rural café, or cultural center). Final review and presentation. 	30

References:

1. Oliver, P. (Ed.). (1997). *Encyclopedia of vernacular architecture of the world* (Vols. 1–3). Cambridge University Press. Global Vernacular Foundation
2. Rapoport, A. (1969). *House form and culture*. Prentice-Hall. Theoretical Foundation (Culture & Form)
3. Prammar, V. S. (1989). *Haveli: Wooden houses and mansions of Gujarat*. Mapin Publishing Pvt. Ltd. Indian Regional Case Study (Gujarat)
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8. Grover, S. (1987). *The traditional architecture of India*. Roli Books. Indian Architecture (General)
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2. Laurie Baker's Writings (COSTFORD)
 - Centre of Science and Technology for Rural Development (COSTFORD). (n.d.). *Laurie Baker's writings and philosophy*. Retrieved from <http://www.costford.org>
3. YouTube Lecture Series
 - NPTEL-IIT Kharagpur/Roorkee. (n.d.). *"Vernacular Architecture of India"*. (Lecture series). YouTube.
4. Films Division India
 - Films Division of India. (n.d.). *Documentaries on tribal and rural housing*.

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SYLLABUS: B.SC IN INTERIOR DESIGNING
(Effective from 2023-24 Academic Sessions)

Course Name: **Restoration**

Sub Code: **BID602**

Credits: **5(4L+1T)**

Aim of the Course

To understand, analyse, and propose sustainable restoration solutions for historic and modern interiors through research, documentation and design integration.

Course Objectives

- To understand the principles, ethics, and techniques of restoration.
- To study historic buildings and traditional materials.
- To develop skills in condition assessment, documentation, and conservation interventions.
- To promote sensitivity towards cultural and architectural heritage.

Sl. No.	Course Outcomes	Mapped Modules
CO1	To develop students' understanding and knowledge in building restoration and conservation.	M1
CO2	To introduce the principles of conservation of historically and locally significant buildings.	M2
CO3	To develop critical thinking related to the repair, adaptation, and reuse of interiors.	M2
CO4	To increase awareness of sustainable restoration practices and adaptive reuse.	M3
CO5	To enhance research, documentation and analytical skills in conservation projects.	M4
CO6	To understand the integration of modern services, materials and techniques in restoration without compromising heritage value.	M4
CO7	To strengthen design sensitivity by balancing historical character with contemporary interior intervention through creative spatial solutions	M4

Learning Outcome/Skills

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

- Understand Key Restoration Concepts: Define and differentiate between restoration, conservation, preservation, and adaptive reuse and identify the importance and ethical principles of restoring heritage buildings.
- Analyze Historic Structures: Recognize traditional materials, construction techniques, and regional architectural styles and diagnose common deterioration and structural issues in historic buildings.
- Document and Assess Heritage Structures: Produce measured drawings, sketches, and condition maps and conduct visual and technical assessments of building materials and damages.
- Propose Restoration Solutions: Develop basic restoration plans using traditional and compatible modern techniques and recommend appropriate materials and methods for restoration interventions.

Module Number	Content	Total Hours	% of Questions	Bloom Level (Applicable)	Remarks, if any
THEORY					
M1	Introduction to Restoration & Conservation	15	25	1, 2, 3	NA
M2	History of Building Techniques and Materials	15	25	1, 2, 3	NA
M3	Restoration Techniques and Interventions	15	25	1, 2, 3, 4	NA
M4	Legal and Ethical Framework	15	25	1, 2, 3, 4	NA
TOTAL (THEORY)		60			
PRACTICAL					
M5	Tutorial	15			
TOTAL (TUTORIAL)		15			
TOTAL		75			

DETAILED SYLLABUS

PAPER CODE: BID 602		CREDIT: 5		TOTAL HOURS: 30	
SL. NO.	MODULE NO	MODULE TITLE	DETAILS	TOTAL HOURS	
1	Module-1	Introduction to Restoration & Conservation	<ul style="list-style-type: none"> Definitions: Restoration, Conservation, Preservation, Adaptive Reuse Need for restoration in India Charters and guidelines (e.g., Venice Charter, Burra Charter, INTACH) Case studies of successful heritage restorations in India 	15	
2	Module-2	History of Building Techniques and Materials	<ul style="list-style-type: none"> Traditional building materials: lime, mud, stone, wood, bricks, metal Indigenous construction techniques Regional vernacular architecture & craftsmanship Causes of deterioration in traditional materials 	15	
3	Module-3	Restoration Techniques and Interventions	<ul style="list-style-type: none"> Cleaning and consolidation methods Surface restoration (lime plastering, stone repair, repointing) Structural reinforcement methods (wood, steel, FRP) Interior restoration (ceilings, furniture, floor patterns, artworks) Compatibility of old and new materials 	15	
4	Module-4	Legal and Ethical Framework	<ul style="list-style-type: none"> Indian heritage laws (ASI, State Archaeology, Municipal by-laws) Listing and grading of heritage structures Ownership, funding, and stakeholder engagement Ethics of restoration: authenticity, minimal intervention, reversibility 	15	

5	Module-5	Tutorial	<ul style="list-style-type: none"> • Site visit and condition assessment of old or heritage interior spaces. • Documentation of existing layouts, materials, and damage patterns. • Photographic surveys. • Research and analysis of traditional construction techniques and materials. • Presentation of Project 	15
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References

1. Feilden, B. M. (2003). *Conservation of historic buildings* (3rd ed.). Routledge. The Standard International Text (Comprehensive survey of principles, decay, and practice.)
2. INTACH. (n.d.). *INTACH architectural heritage guidelines* (Various publications). Indian National Trust for Art and Cultural Heritage. Indian Heritage Standards (Guidelines on listing, conservation ethics, and documentation specific to the Indian context.)
3. Arsteinsson, G. (n.d.). *Restoration of wood in buildings* (Various publications/chapters). Material Conservation (Specialized techniques for dealing with wood decay and repair.)
4. SPAB. (n.d.). *Technical pamphlets on lime, stone, plaster* (Various titles). Society for the Protection of Ancient Buildings. Traditional Materials (Practical, detailed guides on the use of traditional, breathable materials like lime mortar and plaster, which is critical for old buildings.)
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4. Historic-Design.com:
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SYLLABUS: B.SC IN INTERIOR DESIGNING
(Effective from 2023-24 Academic Sessions)

Course Name: **Estimation & Costing**

Sub Code: **BID 603**

Credits: **4 (3L+1T)**

Aim of the Course

The aim of this subject is to equip interior design students with the knowledge and practical skills required to accurately estimate material, labour, and service costs for interior projects. It prepares them to create realistic budgets, analyze rates, write specifications, and make informed financial decisions during the design and execution process.

Course Objectives

The course aims to develop students' understanding of cost estimation, budgeting, and financial planning in interior design projects. It enables them to calculate material, labour, and overhead costs, prepare rate analyses, write detailed specifications, and follow standard measurement methods. This knowledge helps students create accurate project estimates and make informed design and execution decisions.

Sl.No.	Course Outcomes	Mapped Modules
CO1	Introduction to Estimation & Costing in Interiors	M1
CO2	Major Areas of Cost Estimation: Walls: plastering, painting, panelling, wall finishes, flooring: tiles, marble, vinyl, wooden flooring, ceilings: false ceiling types and finishes	M2,M3
CO3	Rules & Methods of Measurement	M3
CO4	Estimation Procedure	M4
CO5	Analysis of Rates	M5
CO6	Specifications: Introduction to general and detailed specifications, writing specifications for civil and interior finishes:cement,RCC,wood,paint,polish,lightingfixtures,understanding technical terms in interior specifications, Importance of clarity and accuracy in specs writing	M4

Learning Outcome/Skills

By the end of the Estimation & Costing (Theory) course, interior design students will be able to prepare accurate cost estimates, analyze material and labour rates, and draft specifications for various interior components. They will gain practical skills in quantity surveying, budgeting, BOQ preparation, and applying measurement rules, enabling them to manage project finances effectively and professionally.

Knowledge and understanding should be demonstrated in the areas of (1)Estimation, (2) Costing, (3) Budgeting, (4) Measurement,(5) Specifications, (6) Materials, (7)Labour, (8) BOQ (Bill of Quantities), (9) Rate-analysis, (10) Documentation

Module Number	Content	Total Hours	% of Questions	Bloom Level(Applicable)	Remarks, if any
THEORY					

M1	Introduction to Estimation & Costing in Interiors	10	25	1, 2	NA
M2	Major Areas of Cost Estimation	15	30	1, 2, 3	NA
M3	Rules & Methods of Measurement	10	20	1, 2	NA
M4	Estimation Procedure & Rate Analysis	10	25	1, 2, 3	NA
TOTAL (THEORY)		45			
PRACTICAL					
M5	Tutorial	15			
TOTAL (TUTORIAL)		15			
TOTAL		60			

DETAILED SYLLABUS

PAPER CODE: BID 603			CREDIT: 4	TOTAL HOURS: 60
SL. NO.	MODULE NO	MODULE TITLE	DETAILS	TOTAL HOURS
1	Module-1	Introduction to Estimation & Costing	<ul style="list-style-type: none"> Understanding the purpose and importance of estimation in interior design planning and execution. Identifying different levels of estimation: item-wise, room-wise, and full project scale. Exploring types of estimates: rough, detailed, and revised for various design stages. Estimating costs for wall finishes including painting, plastering and paneling. Evaluating flooring, ceiling, wood-work and soft furnishing material costs. Assessing service-related costs: plumbing, electrical, HVAC and smart installations 	10
2	Module-2	Major Areas of Cost Estimation	<ul style="list-style-type: none"> Walls: plastering, painting, paneling, wallfinishes Flooring: tiles, marble, vinyl, woodenflooring Ceilings: false ceiling types and finishes Woodwork: furniture, panelling, polishing, laminates, veneers Plumbing & drainage Electrical fittings and lighting layout Soft furnishings: upholstery, curtains, blinds Special installations: HVAC, modular kitchen, smart devices 	15
3	Module-3	Rules & Methods of Measurement	<ul style="list-style-type: none"> Units of measurement: metric and international systems Measuring methods for surface and volume-based works 	10

			<ul style="list-style-type: none"> Recording and organizing measurement data Importance of accuracy in quantity surveys 	
4	Module-4	Estimation Procedure & Rate Analysis	<ul style="list-style-type: none"> Understand the step-by-step process of preparing an estimate from initial assessment to final costing. Breakdown interior project elements item-wise and perform quantity take-offs. Prepare schedules of quantities (SOQ) with proper measurement techniques. Utilize digital tools like MS Excel and AutoCAD for accurate estimation and calculations. Analyse rates by calculating labour, material, overhead costs and using the task/output method. Prepare rate sheets and tender documentation for interior items such as furniture, ceilings, partitions, and smart installations. 	10
		Tutorial	<ul style="list-style-type: none"> Prepare detailed measurement sheets for walls, flooring and ceilings of a master bedroom room. Estimate material quantities for furniture and finishes. Draft item-wise Bills of Quantities (BOQ). Present cost sheets and estimation reports with visual documentation. 	15

References

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