

BENGALURU CITY UNIVERSITY

CHOICE BASED CREDIT SYSTEM
(Semester Scheme with Multiple Entry and Exit Options for Under Graduate Course)

Syllabus for B.Sc.IDD (V & VI Semester)

2023-24

		TEACHING		MARKS			
CODE	SUBJECTS	PAPER	HRS/WEEK	IA	EXAM	TOTAL	CREDITS
ID-T 5.1	Professional Practice	Theory	4	40	60	100	4
ID-P 5.2	Estimation & Costing	Practical	4	25	25	50	2
ID-T 5.3	Building Services - Plumbing & Sanitation	Theory	4	40	60	100	4
ID-P 5.4 Internship		Practical		25	25 Report & Viva voce	50	2
ID-P 5.5	Interior Design-Retail	Practical	8	50	50	100	4
ID-E1 5.6	 a. Vernacular Architecture and Interiors b. Business Communication for Design Firm c. Intelligent Buildings 	Theory	3	40	60	100	3
ID-V1 5.7	a. AI for Interior Designb. Design for Special Needsc. Working Drawing & Manufacturing Process	Theory + Practical	1+4	50	50	100	3
SEC-4		Theory+ Practical	2+2	40	60	100	3
					700		25

		TEACHING	MARKS				
CODE	SUBJECTS	PAPER	HRS/WEEK	IA	EXAM	TOTAL	CREDITS
ID-T 6.1	Project Management	Theory	4	40	60	100	4
ID-P 6.2	Interior Landscaping	Practical	4	25	25	50	2
ID-T 6.3	Textiles and Accessories in Interior Design	Theory	4	40	60	100	4
ID-P 6.4	Textiles and Accessories in Interior Design	Practical	4	25	25	50	2
ID-P 6.5	Project	Practical		50	50 Report & Viva voce	100	4
	a. Interior Business Startup						
ID-E2 6.6	b. Vaastu Shastra	Theory	3	40	60	100	3
	c. Biomimicry in Design						
ID-V2 6.7	a. UI/UX for Interior Designb. Graphic Communication & Signagec. Portfolio Development	Theory + Practical	1+4	50	50	100	3
ID-P 6.8	Interior Journalism	Practical	4	25	25	50	2
					650		24

V SEMESTER

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-T 5.1	Course Credits	4
Course Name	Professional Practice (Theory)	Contact hours	60 hrs.

Course Content

Objectives:

- To enable the students to understand the professional practice
- To enable the students to learn the rules and regulations of professional practice in interior design

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Understand that Interior Design contributes to the betterment of the human condition from the individual to the global community, and able to justify and defend design solutions as it relates to natural, social, and economic issues
- CO2: Understand the meaning and impact of design as it relates to human interaction, technology, theoretical frameworks, and interdisciplinary efforts.
- CO3: Evaluate, select, synthesize and apply information and research findings to design solutions.
- CO4: Interpret, evaluate and represent abstract concepts during all phases of the design process to indicate conditions, relationships, and requirements within the interior environment.

UNIT-1: Profession & Management of Firm

15 Hours

Chapter-1

Role of Interior Designer in society: Interior Design Profession as compared to other professions. Difference between profession and business. IIID and other organizations related to interior design Profession. Interior Designers approach to works, ways of getting works: types of works, works partly executed by other Interior Designers: various precautions to be taken before taking up the work, conditions of engagement between interior Designer and client: commencement of work.

Chapter-2

Interior Designer's duties: drawings to be prepared, Interior Designer's relation with other parties connected with works such as client, contractor, sub-contractors, consultants and authorities. IIID Code of professional conduct: scale of charges. Inspection of work, certificate of payment to contractor. Preliminary knowledge of Consumer protection Act and other related acts on Interior

Designers.

UNIT-2: Tender & Code of Professional Conduct

15 Hours

Chapter3

Issues of professional practice: Professional behavior, Ethics, Types of clients, Career opportunities, styles of interior design practice, relationship between client and professional, type of fees, process of fees negotiations, billing methods, tax liabilities – Service Tax, Professional tax, GST, duties.

Chapter 4:

Introduction to tender, types of tenders, procedures, tendering for a project, awarding of the tender, the work order arbitration, professional bodies and arbitration, Tender: Tender document and its content. Types of tenders, advantages and disadvantages of each type; suitability to various projects. Tender notices, opening, scrutiny, process of selection and award. Interior Designer role in tender process. Earnest Money Deposit, Security Deposit, Retention Amount, Mobilization Amount and Bonus & Penalty Clauses. Issues arising out of tendering process and the role of an architect.

UNIT-3: Contracts & Contract Administration

15 Hours

Chapter 5:

Code of professional conduct of interior designs, membership, payment of subscription, members and their responsibility, trade members, associate and fellow members.

Contract: General Principles, types of contracts; Contract document. Contract Management: Work contracts – types of contracts – item rate, labor, lump sum, cost plus percentage etc. Clerk of work and his duties, bill of quantities, schedule of rates, tenders, public, limited and negotiated tender documents and allied formalities.

Chapter 6:

Owning an office, problems in starting up an office, rules and regulations to follow in owning an office, registration to local authorities, Administration of firms; basic accounting procedures, Types and extent of services offered by Interior Designers, scale of fees, Stages of payment, and contract between client and Interior Designer. Idea of profession; differences between profession, trade and business. Types of offices for Interior Design practice: staff structure, filing of records, correspondence and drawings, maintenance of accounts, presentations in meetings, recording minutes of meeting.

UNIT-4: Contract 15 Hours

Chapter-7

Issues arising in Contract: i) Termination of contract, ii) Certificates of value and quality, iii) Virtual completion and final completion, iv) Defects liability period, v) Latent and patent defects, vi) Liquidated and un-liquidated damages, vii) Extension of time, delays and penalty, viii) Non tendered items, extras, extra work, additional works, variations, rate analysis and architect's role in certification of variations, Prime cost, provisional sum.

Chapter-8

Supervision and Contract Administration: Site visits, site meeting, co-ordination with various agencies, site book, site instructions, clerk of works and site office. Bill checking, quality auditing, handover procedures and final certification. Types of disputes in Interior project contracts and Architect's/Designer's role in various methods adopted in dispute resolution processes along with case studies.

Ref	erences
1	Christine. M. Piotrowski, "Professional Practice for Interior Designers" 3rd edition, John
1	Willey & Sons, 2001, ISBN: 978 0 47121 028 3
2	Cindy Coleman, Interior Design Handbook practice, Mc Graw Hill professional, 1st edition,2001
3	Namavati. H. Roshan. Professional Practice. 8th edition, Lakshmi Book Depot, Bombay,
3	2001.
4	Robert K. Hale, "Starting Your Career as an Interior Designer", Allworth Press, 2009.
5	Robert L. Alderman, "How to Prosper as an Interior Designer: A Business and Legal Guide",
3	John Wiley & Sons, 1997
6	Ronald Veitch, Professional practice for Interior Designers, Penguins Publishers, Limited,
O	1987
7	Sandeep Mantri, "Practical Building Construction and Its Management", Satyaprakashan
,	Publications, New Delhi, 2011

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-P 5.2	Course Credits	2
Course Name	Estimation & Costing (Practical)	Contact hours	60 hrs.

Objectives:

- To enable the students to understand the concept of estimation and costing for interiors
- To analyze various components based on specification.

Course Outcomes: On completion of the course, the student will be able to:

- CO 1: Understand the preparation of an Abstract Estimate and Detailed Estimate of building and Interiors.
- CO 2: Draft detailed specifications and work out Rate Analysis for all works related to Interior Projects.
- CO3: Prepare rate analysis of civil and interior works.
- CO4: Evaluate the valuation of building for different specifications and create new technologies to develop concrete estimating methods.

UNIT-1: Specifications

15 Hours

Introduction to Specification. Preparation and Planning of Specifications for all Civil works, Interior Works, including Customized works

UNIT-2: Rate Analysis

15 Hours

Rate analysis of various items of work: preparation of various items of work in the interior works Estimating interior items manually and through spreadsheet programs

UNIT-3: Estimation & Costing for Civil Works

15 Hours

Detailed estimation and Bill of Quantities (BOQ) for an 2BHK for all civil works, plumbing works, electrical works. Etc.

UNIT-4: Estimation & Costing for interior works

15 Hours

Detailed estimation and Bill of Quantities (BOQ) for a 2BHK for interior works. Wood work, False Ceiling, Wall cladding, Fabrication, Furnishings etc.

Re	References		
	Carol A. Sampson Techniques for Estimating Materials, Costs, and Time for Interior Designers.		
1	Watson-Guptill. May, 2001. ISBN. 9780823016297		
2	Diana Allison Estimating and Costing for Interior Designer. Bloomsbury Publisher April 2021 ISBN		

	9781501361111
3	Dutta, B.N., "Estimating and Costing in Civil Engineering", UBS Publishers Distributors Pvt. Ltd.,
	New Delhi, 2014
	Patil, B.S. "Civil Engineering Contracts and Estimates", Orient Longman Publishers,2015, ISBN:978
4	8 1737 155 94

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-T 5.3	Course Credits	4
Course Name	Building Services- Plumbing & Sanitation (Theory)	Contact hours	60 hrs.

Objectives:

- To understand the basic principles of drainage and water supply in buildings.
- To learn calculations and connections for water supply and sanitation.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Make technology choice to deal with water quality issues,
- CO2: Operate and maintain working treatment systems and do troubleshooting the Firm of the problems in these systems.
- CO3: Apply the knowledge gained from the subject in Designing Spaces
- CO4: Coordinate allied services for sanitary pipeline, including gas pipe waste pipe line horizontally & vertically.

UNIT-1: Water Supply

15 Hours

Chapter-1

Introduction to water supply, types of water supply systems, calculation of water supply requirements and storage of water. Water supply in multi store building - application, advantages and its benefits

Chapter-2

Introduction to Quantity of hot water - sizing of vessels for storage - Types of hot water - sizing of vessels for storage - Types of heaters - pressure & Pressure types, Tank-less water heaters, Geysers - central hot water system - hot water piping layout, Principles of design, Return Circulation System, Solar thermal energy, Hot water supply layout.

UNIT-2: Sanitary Fittings

15 Hours

Chapter3

Introduction to sanitation, types of sanitation, Introduction to drainage system, types of drainage system, traps - different types used. Septic tank, two types of plumbing systems - ventilation systems, inspection chambers/manholes

Chapter 4:

Introduction to sanitary fitting and classification. Different types of hand wash basins, water closets and urinals, showers/diverters/panels, mixers/cisterns and bath tubs/Jacuzzi, towel rails/rods, mirrors, storages, materials application, and its benefits, toilet plans tiling plan, drainage sanitary piping plan

UNIT-3: Ventilation Systems

15 Hours

Chapter 5:

Mechanical ventilation - ventilation with fans, ventilation with ducts, recommended fresh air supply. Calculation of openings for natural ventilation and its benefits

Chapter-6:

Natural ventilation for the building: Introduction to ventilation. Guidelines for natural ventilation, its types and its application.

UNIT-4: Air Conditioning & Fire Protection

15 Hours

Chapter-7

Introduction to air-conditioning and duct table system along with its types and application, need and atmospheric conditions for human comfort, process of air conditioning, Types of air conditioning system and window units, packaged air conditioner, vertical air-cooled packaged unit, horizontal package unit, central plant systems, ducts grills and diffusers.

Chapter- 8

Introduction to fire protection causes of fire and preventive measures. Fire resistant construction, responsibility of designer towards fire resistance specification and requirements, application and usage, introduction to fire protection by laws and its applications as per government's statutory law

Ref	References		
1	Ch'ing, Francis D.K., Binggeli, Cork, "Interior Design Illustrated", Willey Publications, New		
	Jersey, 2004		
2	Hall, Fred, Greeno, Roger, "Building Services Handbook", Butterworth Heinemann, UK, 2001		
	Purnima, B.C., 'Environmental Engineering-I-Water Supply Engineering", Laxmi		
3	Publications (P) Ltd, New Delhi, 2005		
	Singh, Gurcharan, "Water Supply and Sanitation Engineering (Environmental Engineering)",		
4	Standard Publishers Distributors, 2007		

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-P 5.4	Course Credits	2
Course Name	Internship (Practical)	Contact hours	

Objectives:

- To gain knowledge on the working of interior design firm
- To gain practical knowledge of managing an interior design firm.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Acquire the ability to function and grow in a professional working environment
- CO2: Integrate theory and practice. Explore career alternatives prior to graduation.
- CO3: Summarize work experience via a written log, reflection essay, oral presentation and submission of a portfolio of completed work.
- CO4: Develop work habits and attitudes necessary for job success. Acquire employment contacts leading directly to a full-time job following graduation from college.

Students are required to undergo compulsory internship training in the office of a competent practicing architect or Interior Designer firm registered with the Indian Institute of Interior Designers, or Council of Architecture or in the architectural wing/ Department of a governmental, private or non-governmental voluntary organization for a minimum period of 30 working days. A work done portfolio and report to be submitted for evaluation.

Students are expected to gather from observation on site, activities involved in different stages of construction of a building project. They are required to record the methods used, sequence of activities, construction details, time involved at different stages etc, as observed from the site.

The Internship report must contain the following chapters:

- Introduction to the company, aim and objectives of the internship, organization structure of the company.
- Role of interior designers, layout of the organization, types of softwareused for designing, methods used for costing and estimation, summary & conclusion.
- Portfolio of internship assignments, minimum five site visits- photographs recording
 GPS, case study of one of the completed project designed by the firm.

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-P 5.5	Course Credits	4
Course Name	Interior Design-Retail (Practical)	Contact hours	120 hrs.

Objectives:

- To equip students with the skills and knowledge required to design various aspects of retail spaces.
- To focus on spaces that incorporate communication content such as branding, visual merchandising, and set design for retail spaces.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Prepare layout of large scale commercial spaces with an emphasis on planning.
- CO2: Develop design skills with an art of marketing and visual communication.
- CO3: Focus on lighting and displays in commercial environments such as Malls, Boutiques, Shopping arcades, Exhibitions etc.
- CO4: Integrate services such as plumbing, sanitation, HVAC and Firefighting into the project

UNIT-1: Case study & Literature Study

20 Hours

Case studies and Literature studies for a Retail Interiors and studying various aspects like Requirements, Planning, Circulation, Aesthetics, Furniture design- Modular units, display units, Types of Shop layouts, Material adopted, Services analysis etc.

UNIT-2: Data Collection, Requirement & Area Analysis

15 Hours

Making of Client Profile, Requirements, Area Analysis, Bubble Diagram, Block Diagram, stack diagram, Adjacency Matrix, Criteria Matrix and Site Analysis of a given Retail Project

UNIT-3: Design Development and Drawings

25 Hours

Development of a Concept Board, Mood Board, Furniture Layout, Flooring Layout.

Zoning, Converting conceptual design into final drawings suitable for execution with anthropometrics. Development of Plans, Elevations, Sections. Working Drawings

UNIT-4: Services – Electrical and Lighting Layout & Detail

20 Hours

Preparation of Electrical Layout, Lighting (colour scheme – natural & artificial light), fixtures for retails.

Market analysis for Fixtures.

UNIT-5: Services – Plumbing, HVAC & Fire Fighting in Retail

20 Hours

Preparation of schematic HVAC layout with suitable system,

Preparation of schematic Firefighting Layout with Equipment for a Project.

Preparation of schematic Plumbing (Water supply and Sanitation) layout plan for a chosen retail project. Design, selection and specifications of Sanitary fittings.

UNIT-6: Presentation Drawings and 3D Views

20 Hours

Rendered Floor plans, sectional views, furniture layout and 3d views for the given project.

Ref	References		
	Ernst and Peter Neufert "Neufert Architect's Data", Wiley Blackwell Publication, United Kingdom,		
1	2012 ISBN:9781 4051 9253 8		
2	Hall, Fred, Greeno, Roger, "Building Services Handbook", Butterworth Heinemann, UK, 2001		
	Joseph De Chiara, Julius Perero and Martin Zelnik, "Time Saver Standards for Interior design and		
3	Space Planning", McGraw Hill, London, 2011, ISBN:978 0 07170 465 6		
	Lasc, Anca I., Patricia Lara-Betancourt, and Margaret Maile Petty, Ed. Architectures of display:		
4	department stores and modern retail. Routledge, 2017. ISBN 9781472468451		
_	Mesher, Lynne. Basics Interior Design 01: Retail Design. Ava Publishing, 2010. ISBN		
5	9781474289252		
6	Wood, Alessandra. Designed to Sell: The Evolution of Modern Merchandising and Display.		
	Routledge, 2020. ISBN 9781138344723		

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-E1 5.6	Course Credits	3
Course Name	a. Vernacular Architecture and Interiors(Theory)	Contact hours	45 hrs.

Objectives:

• The objective is to instill sensitivity towards the less explored field that is concerned with Architectural building traditions/practices that are cost effective, ecologically sensible and culturally relevant.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Acquire a working vocabulary that can help them describe vernacular architecture in meaningful ways.
- CO2: Understand grass root principles of indigenous architecture that has evolved over time in response to environment, climate, culture, economy and basic human needs.
- CO3: Exercise variations in built forms and their environmental performance across different climatic and geographical regions of India.
- CO4: Deliver cases studies of adaptations of vernacular architecture in contemporary buildings.

UNIT-1: Introduction, Environment and Materials

15 Hours

Chapter-1

Definitions and theories, Categories, Contextual responsiveness: Climatic, Geographical, Anthropological and Cultural influences, Definitions and theories, Categories, Contextual responsiveness: Climatic, Geographical, Anthropological and Cultural influences.

Chapter-2

Tribal Architecture Settlement Pattern, Dwelling Typology, Symbolism, Typical features, Construction materials and techniques. Andhra Pradesh, Madhya Pradesh, Odisha (Kondha and Santals) and Northeast (Naga and Khasi tribes).

UNIT-2: Regional Variations in Built Form

15 Hours

Chapter-3

Kerala – Nalukettu, Houses of Nair & Namboothiri's, Koothambalam, Tarawads, Kerala Muslim houses (Mappilah houses) Tamil Nadu – Toda Huts,

Chapter-4

Chettinad Houses (Chettiars). Karnataka – Gutthu houses (land owning community), Kodava ancestral home (Aynmane), Andhra Pradesh –Rural Kaccha houses Rajasthan- Rural Jat /Bhunga houses and Havelis. Gujarat- Deserts of Kutch, Pol houses of Ahmedabad, Wooden

Havelis. Goa – Traditional Goan houses. (Portuguese influence)

UNIT-3: Southern & Northern Region Variations

15 Hours

Chapter-5

Kashmir – Typical Kutcha houses, Dhoongas (Boathouses), Ladakhi houses, bridges. Himachal Pradesh – Kinnaur houses, Punjab – Rural Houses, Bengal –Rural house form- Aat Chawla houses, Thakur Bari (Mansions), Odisha – Rural houses of coastal areas

Chapter- 6

Sustainable building materials and construction techniques, Works of Laurie Baker, Hasan Fathy, Anil Laul, Gerard Da Cunha, Building Centers- Auroville, Anangpur, Nizamuddin Building Centre.

Ref	References	
1	Brunskill, R. W. Illustrated Handbook of Vernacular Architecture. Castle Rock:Faber & Faber. 1987	
2	Carmen, K. VISTARA – The Architecture of India. The Festival of IndiaPublications. 1986	
3	Cooper and Dawson. Traditional buildings of India. London: Thames & Hudson.1998	
4	Jain, K. and Jain, M. Mud Architecture of the Indian Desert. Ahmadabad: AadiCentre. 1992,	
_	Kenneth, F Towards a Critical Regionalism: Six points for an architecture of Resistance, In the Anti-	
5	Aesthetic: Essays on Postmodern Culture. (Ed.) Hal, F. Seattle: BayPress 1983	
	Muthiah, S., Meyappan, M., Ramaswamy, V. and Muthuraman, V. The ChettiarHeritage. Chennai:	
6	Chettiar Heritage. 2000	
	Oliver, P. Encyclopedia of Vernacular Architecture of the World. Cambridge:Cambridge University	
7	Press.1997	
8	Pramar, V. S. Haveli-Wooden Houses and Mansions of Gujarat, Ahmadabad: MapinPublishing.1989	

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-E1 5.6	Course Credits	3
Course Name	b. Business Communication for Design	Contact hours	45 hrs.
	Firm (Theory)		

Objectives:

- To make students equipped with the managerial skill sets to give solutions to the real-world business problems
- This course provides essentials skills required to do effective business communication.

Course Outcomes: On completion of the course, the student will be able to:

- CO1. Familiarize with the complete course outline/Course Objectives/Learning Outcomes/ Evaluation Pattern & Assignments
- CO2. Participate in an online learning environment successfully by developing the implicationbased understanding of Paraphrasing, deciphering instructions, interpreting guidelines, discussion boards & Referencing Styles.
- CO3. Demonstrate his/her ability to write error free while making an optimum use of correct Business Vocabulary & Grammar.
- CO4. Distinguish among various levels of organizational communication and communication barriers while developing an understanding of Communication as a process in an organization.

UNIT-1: Objective and types of communication

15 Hours

Chapter-1

Communication-Defining communication, Process of communication, Communication Model, Objectives of communication, Principles of communication, Importance of Business communication, Importance of Feedback.

Chapter-2

Channels of communication, Types of communication, Dimensions of communication, Barriers to Communication, socio-psychological barriers, cross cultural barriers methods to overcome the barriers. Verbal, Non-Verbal, Formal, Informal communication, Fundamental of Business writing, Format of Business, Types of Business letter, Inquiry letter, complaint letter, Persuasive letter, Proposal, Report Writing.

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15 Hours

Chapter -3

Employment Messages Writing Resume, Application letter, Writing the opening paragraph, Writing the closing paragraph, summarizing, spoken skills Conducting Presentation for Clients in Interior Designing, Oral presentation, Debates, Speeches, Interview, GroupDiscussion, English Pronunciation, Building Vocabulary, Preparing covering letters and Bill of Quantities (BOQ)

Chapter-4

Barriers to Effective Communication and ways to overcome them, listening: Importance of Listening, Types of Listening, Barriers to Listening and overcoming them, Listening situations,

Developing Listening Skills, Conduct of Meeting, Agenda, Notice, Notes, Minutes, Office Memorandum, Office Orders, PressRelease, Business Letter Writing, Need, functions & Kinds, Layout of letter writing, Types of letter writing, Report writing, Problems, Organization and techniques of writing, preparation of snag lists (during execution & post-execution) for Interior Projects.

UNIT-3: Media & Mode of Communication.

15 Hours

Chapter-5

Media and Modes of communication: Telephone, Mobile phones, Internet, Print media, Electronic communication, Video conferencing, Films, Television, Fax; methods of communication: verbal – oral and written; nonverbal communication, body language, gesture, handshakes, posture, eye contact; graphics; Forms of communication, one to one communication, group communication, types of group communication; problems of group communication.

Chapter- 6

Public relations, objectives of public relations; internal public relations, external public relations; use of mass media in public relations; Interviews, purpose of interviews, types of interviews, Candidate's preparation for the interview, role of the interviewer.

Refe	References	
1	Ashraf Rizvi M, Effective technical communication, TMH, 2005.	
2	Chaturvedi P. D, & Mukesh Chaturvedi, Business communication: concepts, cases and applications –	
_	,2/e, Pearson Education,2011	
3	Krizan, Merrier, Jones Business communication, 8/e, Cengage Learning, 2012.	
4	Lesikar, Flatley, Business communication, Rentz & Pande, 11/e, TMH, 2010	
5	Penrose, Rasberry, Myers, Advanced Business Communication, 5/e, Cengage Learning, 2004.	
6	Raj Kumar, Basic business communication, Excel BOOKS, 2010	

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-E1 5.6	Course Credits	3
Course Name	c. Intelligent Buildings (Theory)	Contact hours	45 hrs.

Objectives:

- The basic aim of home automation is to control or monitor signals from differentiappliances, or basic services.
- A smart phone or web browser can be used to control or monitor the home automation system

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Decide and guide for home automation
- CO2: Understand and implement basic facility of home automation
- CO3; Guide resident to positive effect on technology adoption, training
- CO4: Show resident where they could add additional functions to existing application.

UNIT-1: Energy Management in Design & CCTV Systems

15 Hours

Chapter-1

Concept, Definition, intelligent Interiors and structure, evaluation of intelligent buildings, IB assessment criteria – intelligent homes Natural building design consideration - Energy efficient design strategies - Contextual factors - Longevity and process Assessment -Renewable energy sources and design- Advanced building Technologies - Smart buildings, Basic design criteria, concept of green & smart design, energy management systems, MEP design fundamentals.

Chapter-2

Introduction to CCTV Systems, Types of CCTV Systems, Camera Selection and Design Concepts Camera Types, Camera Specifications & Features, Analog & IP Camera, Introduction to Digital Video Recorder, Setting Up a DVR, DVR Structure and Sections, Classification of DVR, Special DVRs, Networking, Local Access Configuration, Remote Access Configuration, Crimping Practice.

UNIT-2: Video Door Phone & Biometric Access Control

15Hours

Chapter-3

Introduction to Intruder Alarm System, Need for Intruder Alarm System, Intrusion Detector Types

Door Magnetic Contact, Vibration Detectors, Motion Detectors, Glass Break Detectors, Panic Switches, Hardware and Software Types Zone, Zone Attributes, Keypad Types, Panel Types, Zone Partitioning, Panel Programming, using Keypad, using Software, Trouble Shooting

Chapter-4

Introduction, Access Control System Topology, Credentials, Pin, Card, Biometric, Card Type, Biometric System, Behavioral, Physical, Reader Types, Locking Devices, Exit Switch & Status Detectors, Panel Communication Protocols, Panel Programming, Trouble Shooting. Introduction, Panel Connection. Lock Interfacing. System Configurations, RFID cards, finger print, report preparation, magnetic locks, Video door phones, lighting controls, solar panels, ups and generators, surge &lightening protection systems, HVACs systems, automatic gates & barriers

UNIT-3: Fire Alarm Systems & Panels

15 Hours

Chapter-5

Selection of camera, cabling and termination, different types of cameras, night vision systems, DVR configuration, remote monitoring through phone and net. Concept of LAN, WAN, Implementing of networks, sharing of files, printers, scanners etc., Network protocols- TCP/IP, Ethernet, Modbus

Chapter-6

Introduction to Fire Alarm System, Need For Fire Alarm System, Types of Fire Detectors Types of Fire Panels, Conventional and Addressable System, Input-Output Modules, Indicators & Annunciators Fire Cables and Classes of Wiring, Fire Alarm Wiring and Configuration, Conventional Addressable Fire Panel Interfacing With access control System, Sensors-heat, smoke, PIR, conventional fire alarm panels, addressable fire alarm panels, cabling, safety standards, alarms, PA systems, recorders.

Ref	erences
	Albert Ting-Pat so & Wai Lokchan, "Intelligent Building Systems (The international series
1	on Asian studies in computer and information science), Springer, 1999
	Derek Clements - Croom (ed), "Intelligent Buildings: Design, Maintenance and Operation,
2	Thomas Telford, London, 2004
2	Gerard O'Driscoll, In the Essential Guide to Smart Home Automation Safety & Security.
3	Publisher Createspace Independent Pub. ISBN-13 : . 978-1508701279.2015
4	Gordon Meyer Smart Home Hacks Publisher(s): O'Reilly Media, Inc. ISBN: 9780596007225.2004
5	Nick-Van dome, Smart Homes in easy steps: Master smart technology for your home. Publisher: In
	Easy Steps Limited. 2018

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-V1 5.7	Course Credits	3
Course Name	AI for Interior Design (Theory+Practical)	Contact hours	75 hrs.

Objective:

- AI helps designers and engineers solve complex problems by creating intelligent algorithms
- It can involve using data to predict outcomes.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Personalize spaces based on a person's personality and lifestyle in a very specific manner.
- CO2: Recommend specific colour palettes, furniture pieces, and design elements based on a person's lifestyle and preferences.
- CO3: Integrate Space Planning Project Management With AI.

Theory	
UNIT-1: AI and Design	15 Hours

Chapter-1

Introduction to AI. AI Evolution, AI types and its influence in Design, AI in interior design. Benefits of AI in interior design.

Chapter-2

Introduction to Softwares used in Interior design- Auto CAD LT, Sketch Up Pro, Autodesk Revit, Autodesk 3ds Max, Substance 3D by Adobe.

Chapter-3

Best Interior Design AI tools to check out-Planner 5D, Home-styler, Smart draw, Home by me, Heavenly, Hutch IKEA Place, Rooms GPT, Leaperr, Homestory AR.

Practical	
UNIT-2: Development of Concept Board	15 Hours

Designing of Mood Board, Concept Board, Inspiration Board, Materials, and Furniture options. Analysis of user preferences, style trends, and functional requirements to generate design recommendations.

UNIT-3: Restyling	15 Hours

Restyling of existing interiors of a Living Room, Bedroom. Dining Room, etc by determining new clientele, analyzing user preferences, providing multiple iterations.

UNIT-4: Redesigning

15 Hours

Basic Applications - AI

Analyzing existing Floor plans, furniture layouts, Color schemes, material & finishes of a small-scale residential/commercial space. Ex – Studio Apartment, Café, Showroom etc

Redesigning of existing interiors for optimizing floor plans and efficient use of space

UNIT-5 – Lighting

15 Hours

Designing for the Future- Use of AI to recalculate the Interior lightings in a small scale retail.

Ex- Café, Showroom, gallery etc

I	References	
	Architecture in the Age of Artificial Intelligence: An Introduction to AI for Architects Paperback December 16, 2021 by Neil Leach	
2	Artificial Intelligence Art Design-An Extension of My Brain byMR. Xiaochuan Zhou.	
3	Artificial Intelligence Basics: A Non-Technical Introduction By – Tom Taulli	

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-V1 5.7	Course Credits	3
Course Name	Design for Special Needs (Theory+Practical)	Contact hours	75 hrs.

Objectives:

- To enable the students to understand the basic principles of acoustical insulation to interior spaces
- To learn various methods to manage sound.

Course Outcomes: On completion of the course, the student will be able to:

- CO1. Design, implement and evaluate a variety of strategies including positive behavioral supports and interventions.
- CO2. Understand and control the design consideration of acoustic design in an enclosed space
- CO3. Familiarize technical system and advanced technology used in acoustic design
- CO4. Identify and use appropriate instructional methods curriculum and technologies that support children with disabilities

Theory

Unit 1: Introduction, Significance 15 Hours Chapter-1

Introduction and meaning to special needs, definition of special needs, significance of design, considerations of special needs, purpose of design for special needs in interiors, and guidelines. Housing environments for physically handicapped, old aged people, deaf and dumb mentally retarded.

Chapter 2:

Introduction to people with functional limitations, design for people with functional limitations, approaches to the problems faced by people with special needs, universal design process Universal design principles, designing for flexibility and adaptability, incorporating accessibility features in interior design

Chapter -3

Overview of major disability groups-visual impairment, hearing impairment, physical impairment, cognitive/language impairment, designer needs approach, design guidelines, universal design needs.

Practical		
Unit 2: Case Study & Design Approach for Autism People	15 Hours	
Detail Case Study for Understanding the needs of special populations techniques for designing		
spaces that meet the needs of special populations for Autism People Unit 3: Case Study & Design Approach for Hearing Impaired	15 Hours	
Detail Case Study for Understanding the needs of special populations techniques for designing spaces that meet the needs of special populations for Hearing Impaired		
Unit 4: Case Study & Design Approach for Visually Impaired	15 Hours	
Detail Case Study for Understanding the needs of special populations techniques for	r designing	
spaces that meet the needs of special populations for Visually Impaired People		
Unit 5: Case Study & Design Approach for Physically Handicapped 15 Hours		
Detail Case Study for Understanding the needs of special populations, techniques for designing		
spaces that meet the needs of special populations for Physically Handicapped Peop	ple	

Refe	References		
1	Gandotra, V. Oberoi, K., & Sharma, Essentials of Ergonomics. Dominant Publishers & Distributors.		
1	2005		
2	Nigel King. Designing for Special Needs: An Architect's Guide to Briefing and Designing for People		
2	with Learning Disabilities. RIBA Publications May 2000		
3	Salvendy, G. Handbook of Human Factors and Ergonomics. In Wiley eBooks.2012		
1	Selwyn Goldsmith. Designing for the Disabled: The New Paradigm. Publisher Architectural Press.1997		
4	ISBN-13978-0750634427.		

Program Title	B.Sc. Interior Design and Decoration	Semester	Fifth Semester
Course Code	ID-V1 5.7	Course Credits	3
Course Name	Working Drawing & Manufacturing	Contact hours	75 hrs.
	Process (Theory+Practical)		

Objective:

• To produce a complete set of Furniture Design & working drawings for a mid-rise/high-rise building showing an understanding of complete structural systems and building engineering services including electrical, Plumbing, Lifts and escalators, Fire safety etc., Interior and Exterior finishes, Furniture details etc.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Decipher and communicate information through drawings and specifications
- CO2: Describe working drawings and detailing
- CO3: Acquire skills required to produce drawings in accordance with standard industry practice and to a level suitable for building permit approval applications.
- CO4: Read and interpret plans and specifications and to produce working drawings for buildings.

Theory

UNIT-1: Types of Furniture Manufacturing Process

15 Hours

Chapter-1

Introduction to Furniture Manufacturing processes. Types of furniture and its most frequently adopted design such as blow moulding, Types of blow moulding - Extrusion blow molding, Injection blow molding, and Injection stretch blow molding. Advantages and disadvantages.

Chapter-2

Die casting, Processes of die casting- Clamping and its Procedure, Injection and application, Cooling process, Ejection, Trimming, advantages of die casting.

Chapter-3

Sheet metal, Process of Sheet metaling-curling, and its implementation in Furniture making bending, Ironing and its Application, Laser Cutting and its importance, Hydroforming and its Advantages, Punching and its application

Practical

UNIT-2: Working Drawings of Foundations

15Hours

Making complete set of working drawings for a residence or any other project. The drawings to incorporate all necessary information complete with schedule and all specifications. The Working

Drawings to include. Site plan. Excavation Column Layout, Centerline Drawing, Plinth Beam Details,

UNIT-3 Finishing Drawing of Floor Plans

15 Hours

Making complete set of working drawings for a residence or any other project. The drawings to incorporate all necessary information complete with schedule and all specifications. The Drawings to include Ground floor Plan, First Floor Plan, Terrace Plan Sections, and Elevations.

UNIT-4 Finishing Drawing of details

15 Hours

Making complete set of working drawings for a residence or any other project. The drawings to incorporate all necessary information complete with schedule and all specifications. The Drawings to include Wall cladding details, Flooring details, False ceiling details, Railing details, Partition details.

UNIT-5 Finishing Drawing of Furniture

15 Hours

Making complete set of Working drawings for the different types of furniture, the drawings to incorporate all necessary information complete with schedule and all specifications. The drawings to include Center Table, Corner Table, TV unit, Wardrobe and Kitchen cabinet details,

Ref	erences
1	Bradley Quinn, Mid-Century Modern: Interiors, Furniture, Design Details, Conran Octopus Interiors, 2006.
2	Drew Plunkett. Drawing for Interior Design, Laurence King Publishing Ltd. 2014.
3	Joseph Aronson, The Encyclopedia of Furniture: Third Edition ,1961
4	Keith Style, Andrew Bichard. Working Drawings Hand book Elsevier Ltd.1986. 978-0-85139-712-2
5	Robbie. G. Blakemore, History of Interior Design and Furniture: From Ancient Egypt to Nineteenth-
	Century Europe, Wiley publishers, 2005

VI SEMESTER

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-T 6.1	Course Credits	4
Course Name	Project Management (Theory)	Contact hours	60 hrs.

Course Content

Objectives:

- To enable students to understand about construction management
- To learn about concepts and application of management in interior design.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Manage projects effectively including the management of scope, time, costs, and quality, ensuring satisfying the needs for which the project was undertaken
- CO2: Apply processes required to manage the procurement of a project, including acquiring goods and services from outside the organization
- CO3: Manage project risk, including identifying, analyzing and responding to risk
- CO4: Analyze and manages stakeholder expectations and engagement to ensure a successful project outcome

UNIT-1: Project Planning, Scheduling & Controlling

15 Hours

Chapter-1

Introduction to project management, construction industry, roles, responsibilities of Project Managers, Types of projects – objectives and Project lifecycle, existing construction practices & project management systems, Project Team, organization, roles, responsibilities.

Chapter-2

Concepts of project planning, scheduling & controlling. Project scale and construction technology, Human aspects in managing projects, Project Planning and Scheduling Inputs for project planning, defining activities and their Interdependency, time and resource estimation. Work breakdown structures. Linear Scheduling methods- bar charts, LOB, their limitations. Principles, definitions of network-based scheduling methods: CPM, PERT. Network representation, Network analysis Diagrams – forward and backward.

UNIT-2: Project Monitoring & Resources Management

15 Hours

Chapter-3

Project Monitoring and Control, Site layout and organization, Site investigations. Quality tests for Construction material and processes. Quality control inspections. Project progress tracking. Crashing Project Schedules, its impact on time, cost and quality. Project direct and indirect costs.

Chapter-4

Resources Management, Types of resources – Material Management, Equipment Management, Human resource management. Resources scheduling and leveling. Labour welfare, applicable labour legislations. Construction equipment types, characteristics & applications. Introduction to Value engineering, its advantages and disadvantages.

UNIT-3: Stakeholder Management & Communication Technology

15 Hours

Chapter-5

Definition of stakeholder, Introduction to stakeholder management, Stakeholder register, Documentation and Communication "Road Map" –Enterprise environmental factors, managing stakeholders in virtual world, managing difficult stakeholders.

Chapter-6

Communication Technology –Communication models and methods: General guidelines for effective communication -Conducting high-quality meetings - communication skills, communication management plan to manage stakeholder engagement.

UNIT-4: Cost Management & Safety Management

15 Hours

Chapter-7

Introduction to Cost management, financing of projects (how various projects are financed), capital budgeting, financial risk analysis, financial control of projects, tendering and estimating, activity sequencing, duration and time planning, scheduling and control, labor costing and subcontracting. Introduction to project portfolio management.

Chapter-8

Introduction to safety management. Causes of accidents in construction industry, losses due to accidents – direct loss, indirect loss. Factors contributing to accidents. Preventive measures. Safety through Legislation. Fire protection.

Ref	References		
1	Carol E Farren, Planning and Managing Interior projects, Robert Snow Means Company, 2000		
2	Harold Kerzner, Project Management: A systems approach to planning, scheduling and controlling, 2006		
3	Krishnamurthy and Ravindra Construction and Project Management 2018		
4	Rory Burke. Project Management Planning and Control Techniques, Publisher Wiley India ISBN 9788126521647.2009		
5	Virginia I Smith. Interior Design Project Manager - Challenges, Solutions, and Golden Rules 2020		
6	S.C. Sharma, Construction Equipment and Management, Khanna Book Publishing Co. ISBN. 9789382609056.2016		
7	Tata Ghose, Materials of Construction, McGraw Hill Publication.		

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-T 6.2	Course Credits	2
Course Name	Interior Landscaping (Practical)	Contact hours	60 hrs.

Objectives:

To understand the importance of plants in landscape gardening.

To enable the students to learn the principles of landscape gardening.

Course Outcomes: On completion of the course, the student will be able to:

CO1: Study the concepts of interior landscaping and their application in the design of interior spaces.

CO2: Evaluate a proposed site for an indoor landscape, considering all environmental factors; Along with exposure to various concepts, ideas and techniques to be design landscape in interiors.

CO3: Create and implement a design for an indoor landscape, including selection of appropriate plant materials and cost estimates for installation and maintenance;

CO4: Perform all tasks required in maintaining an indoor landscape, including diagnosis

And correction of problems such as disease or insect infestation.

UNIT-1: Types of Indoor Plants

15 Hours

Introduction to Interior Landscape, Discussing the advantages of greenery in Interiors. Sketching of indoor plants, medicinal plants, with characteristics and benefits.

UNIT-2: Interior Landscaping for a courtyard

15 Hours

Interior Landscaping for a courtyard and a small terrace with all the elements, and designing of vertical gardening unit for a Residence/ Balcony/Entrance Lobby/Showroom with an understanding of Light intensity for different types of plants.

UNIT-3: Table top landscape accessories

15 Hours

Making of a table top landscaping unit individually. A multiple pot holder by a group of student.

UNIT-4: Survey & Report

15 Hours

Site Visit to Nursery for Market survey on types of plants, rates characteristics of plants, report to be submitted.

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-T 6.3	Course Credits	4
Course Name	Textiles and Accessories in Interior Design (Theory)	Contact hours	60 hrs.

Objectives:

- To understand the types of fabrics used in interiors.
- To learn its applications in interiors.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Understand the fundamental aspects of textiles and fabrics in interior design.
- CO2: Learn about the key concepts of textiles & fabrics.
- CO3: Understand what natural fibers and textiles are.
- CO4: Develop the skills required to become an interior designer.

UNIT-1: Fabrics & Upholstery

15 Hours

Chapter-1

Fabrics for Interiors: Introduction, interior fabric element, design, color, types, and application. Importance of fabrics for interior textiles, properties and application. Classification of fabrics for interiors - Introduction, types, materials and applications

Chapter-2

Upholstery: Introduction, types, materials, skills and techniques. Seating - sofas, chairs, chair pads, cushions - fills. Windows - sheer curtains, curtains, curtain drapes, reflecting textiles and blinds.

UNIT-2: Textiles for Rooms

15 Hours

Chapter-3

Interior textiles for rooms: Bed Room - types, materials and applications in sheets. Pillow cases, blankets, mattress covers, dust ruffles. Bathroom - shower curtains, terry towels, robes. Wall coverings, screens and room dividers. Textile in Interior accessories: Introduction, types, materials and applications in lamp shade, paintings. Table textiles - table coverings, table matts, table cloth, napkins, coaster. Doors and windows.

Chapter-4

Carpets and rugs: Introduction, types, materials and applications of carpets, floor mats, floor coverings, interior textiles care and maintenance: Introduction, types, materials, stain removal of upholstery, sofas, cushions, carpets, table linen, bed room and bathroom linen

UNIT-3: Interior Accessories, Art & Craft

15 Hours

Chapter 5:

Introduction to arts and crafts in India. Different art forms: Fine arts, decorative arts and applied arts. Materials and their use in arts – wood, clay, stone, glass, metals and alloys. Processes and methods involved in creation of different arts and crafts. Traditional styles of design & decorations of homes. Artefacts and accessories across the states inIndia including Rajasthan (Meena Kari), Karnataka (channapattana toys), Gujarat, Andhra (Kondapalli toys), Tamil Nadu (brass and copperware), Madhya Pradesh, Loha Shilpi of Chhattisgarh, Bamboo and cane work of Tripura, Black stone and wood carvings of Manipur, Bidriwork, etc. Materials and techniques.

Chapter 6:

Traditional arts and crafts of various states of India – Andhra Pradesh (Kalamkari), Karnataka (Chittarahase) Goa, Rajasthan, Gujarat, Kutch, Uttar Pradesh, West Bengal, Bihar, Jammu and Kashmir, etc. Temple arts of Tamil Nādu (Tanjore paintings), Karnataka (Mysore paintings), Orissa (Pattachitra), Kerala (Murals).materials techniques used and its application in interiors.

UNIT-4: Sculpture Art, Creative Art

15 Hours

Chapter-7:

Sculpture Art: Introduction, techniques and material used from pre historic times till date. Degradable/non-degradable materials in Interior design: Introduction, types, importance and their application.

Chapter-8

Creative Art Objects: Introduction, materials, types and method, application of wall hangers, ceramics, wall textures, and murals. Textile arts and crafts in interiors, decorative arts, ceramic arts. Degradable/non-degradable materials in interior design: Introduction, types, importance and their application

Ref	erences
1	Caroline Clifton – "Color - Design Sources Book Using Fabrics, Paints and Accessories for
1	Successful Decorating" 2002
	Caroline Clifton, "Color – Design Sources Book Using Fabrics, Paints and Accessories for
2	Successful Decorating" Ryland Peters & Small, 2007, ISBN: 978 1 84597 460 2
3	Diane Patrice – "Curtains, Draperies and Shades" Publisher: Sunset Publishing Corporation 2016
4	Hellen Ruthberg – "The Book of Miniature Furniture & Accessories" Publisher
4	Radnor, Pa.: Chilton Book Co.1977
5	Mary Neal – "Custom Draperies in Interior Design" Publisher: Elsevier Science Ltd 1982
	Richard Mishaan, "Artfully Modern Interiors", the Monacelli Press, 2014, ISBN: 978
6	158093 400 8

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-P 6.4	Course Credits	2
Course Name	Textiles and Accessories in Interior Design (Practical)	Contact hours	60 hrs.

UNIT-1: Development of a fabric catalogue

15 Hours

Development of fabric catalogue with details of type of fabric, cost per meter, Types of draperies, cushions, upholstery materials, carpets, rugs, bed.

Deliverables: Site visit to any showroom, rate analysis and report submission.

UNIT-2: Design and development of a space for an interior product

15 Hours

Develop a design for a living room, Bedroom, dining with fabric sofa, bed coverings, cushions, draperies, blinds and other accessories, and rate analysis for complete space.

Deliverables: Make a four seater dining table linen of your own design, Space and a window blinds, or curtains of size 600x900 of your own design, Create any lamp shade or wall hanging with a fabric.

UNIT-3: Concept Design & Development of an interior product

15 Hours

Design and development of a 1. Thematic lampshade, 2. Wall frame for a living room, 3. Any one traditional Indian art as wall decoration. Any one table top accessories to be submitted.

UNIT-4: Detailed drawing and report of an interior product

15 Hours

Site Visit to any showroom or any handicraft cluster and preparation of a detailed report with supporting photographs and sketches.

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-P 6.5	Course Credits	4
Course Name	Project	Contact hours	8 hours/week

Objective:

- To ensure consolidation and application of the knowledge gained in preceding years of interior design education in the context of an Interior design project of the student's choice.
- To enable identification and addressing of key issues/aspects inherent in a project or to enable development of thought processes in specific issues/aspects/situations leading organically to an interior design project.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Have freedom in choosing the typology of studio design they would work on and also choose their mentor with the expertise of typology chosen individually.
- CO2: Plan design projects that involve considerations of interactions with Interiors, wide range of requirements of different users and scope for visual, formal and structural innovations.
- CO3: Innovate and conceptualize design proposal that reflect the students understanding of the design process
- CO4: Intensify thought process directed at a specific area of focus and convert it to a product

Students should decide a topic of their choice in terms of design potential and/or idea/issue exploration. Care should be taken to choose topics that can lead to sufficient interior design component.

The areas of study/research/design can include any of the broad areas of the discipline - Museum, Transport Hub, Airport Lounge, Styling studio, commercial establishments, Resorts, Health Care center, Multiplexes, Auditorium, Institutions, Art & Design Schools, Co-working spaces, café, Preschools etc.

Each student is expected to submit the project report on the topic chosen under an approved guide before the commencement of the exams.

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-E2 6.6	Course Credits	3
Course Name	a. Interior Business Start-up (Theory)	Contact hours	45 hrs.

Objectives:

To impart knowledge on the basis of business strategies, branding and working on a business
plan that outlines the vision, mission, value proposition, and strategies of the Interior design
startup

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Create and promote a brand for an Interior design business by clearly defining the services.
- CO2: Develop skills or attributes that enable the realization of creative opportunity along with financial stability.
- CO3: Analyze profits by determining revenue and expenses to plan break-even
- CO4: Develop marketing objectives and plan to reach the target clients

UNIT-1: General Awareness & Startup opportunities

15 Hours

Chapter-1

Startup opportunities: The new industrial revolution – The big idea- generating ideas with brainstorming- business startup – Ideation- venture choices. The rise of the startup economy -The six forces of change – The startup equation- Theæntrepreneurial ecosystem -Entrepreneurship in India. Government initiatives.

Chapter-2

General awareness about identification of project financing new enterprises; Promotion of a venture; opportunity analysis project identification and selection; External environmental analysis economic, social, technological a competitive factor; Legal requirements for establishment of a new unit; loans; over run finance; bridge finance; venture capital; approaching financing institutions for loans.

UNIT-2: Financial Issues: Feasibility Analysis

15 Hours

Chapter-3

Introduction to different opportunities in small business; Small business enterprise - Identifying the business opportunity in various sectors - formalities for setting up of a small business enterprise - Institutions supporting small business enterprise - EDII (Entrepreneurship Development Institute of India), SLDO (Small Industries Development Organization NSIC (National small Industries Corporation Ltd. (CNSIC) NIESBUD (National Institute for Entrepreneurship and small Business Development) Sickness in small business enterprise causes and remedies.

Chapter-4

Starting up Financial Issues: Feasibility analysis – The cost and process of raising capital –unique funding issues of a high-tech ventures. Funding with equity – Financing with debt- funding startups with bootstrapping- crowd funding- strategic alliances. Startup survival and growth: stages of growth in a new venture- Growing with the market – growing within the industry. Venture life patterns- reasons for new venture failures- scaling ventures – preparing for change – leadership succession. Support for growth and sustainability of the venture.

UNIT-3: Entrepreneurial Skill Sets

15 Hours

Chapter-5

Introduction to entrepreneurs and different classifications. Entrepreneur and entrepreneurship-definition; traits and features; classification; entrepreneurs; women entrepreneurs; Role of entrepreneurs in India, awareness about EDP. Entrepreneurial development program concept; Need for training; phases of EDP; curriculum & contents of training program; support systems, target groups; Institutions conducting EDPs in India.

Chapter-6

Entrepreneur - Entrepreneurship - Enterprises: Conceptual issue Entrepreneurship vs. Management, Entrepreneurial motivation. Performance & Record, role & function of entrepreneurs in relation to the enterprise & relation to the economy, Source of business ideas, Entrepreneurial opportunities, and the process of setting up a business. Skills required to become an entrepreneur, psychology, driving forces and characteristics of an entrepreneur. Capital structuring, resource mobilization and management from entrepreneurial view point and legal compliances for designers.

Ref	References		
1	Anjan Raichaudhuri, Managing New Ventures Concepts and Cases, Prentice Hall		
1	International, 2010.		
8	Bhowmik, SR and M. Bhowmik, Entrepreneurship, New Age International, 2007.		
2	Cliffton, Davis S. and Fylie, David E., Project Feasibility Analysis, John Wiley, New		
	York, 1977		

3	Desai A. N., Entrepreneur and Environment, Ashish, New Delhi, 1990
4	Donald F Kuratko, Jeffrey S. Hornsby, New Venture Management: The Entrepreneurs Road
	Map, 2e, Routledge, 2017.
5	Drucker, Peter, Innovation and Entrepreneurship, Heinemann, London, 1985
6	Jain Rajiv, Planning a Small Scale Industry: A guide to Entrepreneurs, S. S. Books,
7	Kathleen R Allen, Launching New Ventures, An Entrepreneurial Approach, Cengage
	Learning, 2016.
9	Siegel, Harry, and Olga Gueft. "A guide to business principles and practices for interior designers"
	1968.

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-E2 6.6	Course Credits	3
Course Name	b. Vaastu Shastra (Theory)	Contact hours	45 hrs.

Objectives:

 Helps to understand the importance of five elements in designing interiors & to learn the design strategies based on vaastu & fengshui science

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Understand Indian Vaastu and implement basics of Vaastu in Interior design.
- CO2: Write a variety of design strategies used in different rooms and spaces of living & workspace.
- CO3: Apply fengshui decoratives in residential interiors
- CO4: Apply basic and advanced Vaastu in design subject

UNIT-1: Indian Vaastu

15 Hours

Chapter-1

Meaning of Vaastu Shastra, elements of Vaastu, principles of Vaastu, significance of Vaastu on scientific basis. Relevance of Vaastu, plot geography: - type of soil, water sources, landmark and surroundings, plot location, plot shape, plants & trees in Vaastu.

Chapter-2

Use of magnetic compass and google earth for identification of north, four step analysis in Vaastu, significance of color in Vaastu shastra - Introduction, importance, relation to five elements, relation to sixteen directions, application in interiors,

UNIT-2: Indian Vaastu – Design Strategies & Development

15 Hours

Chapter-3

Design strategies for Vaastu compatible residential and commercial establishments-introduction, orientation and placement of building in site, placement of rooms in residential units- villas, flats, apartments- living room, bedrooms, toilets, kitchen, dining room, pooja room, store room, staircase and lift, main entrances, garages, septic tank, sump, overhead tank. Commercial units-factories, industries, showrooms, schools, hospitals/clinic, restaurants/cafe - office rooms, staff rooms, conference/meeting rooms, store rooms, HR room, boss cabin, stock area, factory area, security cabin.

Chapter-4

Vaastu principles, techniques and treatments for renovation projects, remedies in vaastu shastra introduction, types - pyramids crystals, artifacts and accessories - significance, application.

UNIT-3: Fengshui 15 Hours

Chapter-5

Fengshui - Introduction, principles-YINYANG, Qi, natural elements and baguio and their application in interior design. Fengshui as decorative accessories for building, use of green house, open structure, water statues and sculptures, ornaments mirror and glass.

Chapter-6

Design of interiors for residential and commercial establishment showing complete Vaastu principles and considerations.

- A	
Ref	erences
1	Bhojraj Dwivedi, Remedial Vaastushastra, Diamond books,2015, ISBN: 9788171820160
2	Maureen L. Belle, Multicultural Fengshui: Creating harmonious environments, Pentagon
	Press LLP, 2007. ISBN 8186505687
3	Michael Borden, Vastu Architecture: Design Theory and Application for Everyday Life by
	Createspace Independent Pub. 2011
4	Puri BB., Applied Vastu Shastra in Modern Architecture: A Complete Encyclopedia of Vaastu
	Science, Motilal Banarsidass Publishing House 2022.
5	Shashikala A. The Penguin Guide to Vaastu: The Classical Indian Science of Architecture and
	Design, Penguin India 2000
6	Stephen Skinner Fengshui., Parragon, 2000 ISBN 978-0752532370

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-E2 6.6	Course Credits	3
Course Name	c. Bio Mimicry in Design (Theory)	Contact hours	45 hrs.

Course Content

Objectives:

- To understand 'Bio mimicry' and 'Biophilia'
- Reconnect with nature: learning to observe nature by function
- To understand and explore how biology can be integrated with design

Course Outcomes: On completion of the course, the student will be able to:

- CO 1: Appreciate and understand cross disciplinary design practice of Bio mimicry
- CO 2: Understand Bio-mimicry and Biophilia & its relevance in design
- CO 3: Appreciate the importance of 'reconnection' connection' with nature
- CO 4: Understand Life's overarching principles.

Unit 1: Introduction and Importance of Bio mimicry

15 Hours

Chapter-1

Introduction to elements of nature, nature as a model, measure and mentor for design, history of designs with nature as inspiration, building forms inspired from nature, Introduction and importance of bio mimicry, purpose of bio mimicry, components of bio mimicry.

Chapter-2

History of bio mimicry, motivations for bio mimicry, terminologies in bio mimicry - Bionics, bioink and biomimetics, natures unifying patterns, interpretation of bio mimicry in design.

Chapter-3

Introduction to World Biome, Genius of Biomes, theoretical framework of bio mimicry, skills, attitudes and mindset for a bio mimic, bio mimicry process, lattice structure form, curvature structure form: Iterative structure form the golden spiral structure form

Chapter-4

Introduction to Biomimetic process, bio mimicry design sphere - components and elements, bio mimicry taxonomy, wise selection of construction materials, advantages and disadvantages of bio mimicry.

Unit 3: Bio mimicry Design Process

15 Hours

Chapter-5

Design approaches in Bio mimicry as a model - top-down design approach & bottom-up approach, levels of bio mimicry, - organism, behavior and ecosystem levels, influence of biology on design, measure and mentor.

Chapter-6

Principles of Bio mimicry in design, emerging advancements in bio mimicry design - Breathing walls, adaptive building envelopes. Patterns of biophilia, benefits of bio mimicry in design.

Refe	References		
1	Benjamin R. Krueger, "Bio mimicry: Nature as Designer", 2016, CreateSpace Independent		
	Publishing Platform		
2	Dora Lee, "Bio mimicry: Inventions Inspired by Nature", 2011, Kids Can Press, Toronta, Canada.		
3	Michael Pawlyn, "Bio mimicry in Architecture", 2011, RIBA Publishing, London.		
4	Stephen R. Kellert, "Biophilic Design: The Theory, Science and Practice of Bringing Buildings to		
7	Life, 2011, John Wiley & Sons, New Jersey		

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-V2 6.7	Course Credits	3
Course Name	a. UI/UX for Interior Design (Theory	Contact hours	75 hrs.
	+ Practical)		

Content Of Course

Objectives:

- To provide students with the knowledge of user- centered design, user -centered methods in design.
- These tasks are designed to introduce beginner students to key UI/UX principles while addressing specific needs and challenges related to interior design.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Understand iterative user-centered design of graphical user interfaces
- CO2: Gain hands-on, practical learning experience through real-world projects & assignments
- CO3: Practice and implement skills to solve a real-world, industry-focused problem
- CO4: Create high quality professional documents and artifacts related to the design process

Theory

UNIT-1: Introduction and Basic Foundation of UI/UX

15 Hours

Chapter-1

User Interface Design (UI) -The Relationship Between UI and UX, Roles in UI/UX, brief historical Overview of Interface Design, Interface Conventions, Approaches to Screen Based UI, Template vs. Content, Formal Elements of Interface Design, Active Elements of Interface Design, Composing the Elements of Interface Design, UI Design Process, Visual Communication design component in Interface Design.

Chapter-2

UX Basics- Foundation of UX design, Good and poor design, Understanding Users, Designing the Experience Elements of user Experience, Visual Design Principles, Functional Layout, Interaction design, Introduction to the Interface, Navigation Design, User Testing, Developing and Releasing Design.

Chapter-3

User Study- Interviews, writing personas: user and device personas, User Context, Building Low Fidelity Wireframe and High-Fidelity Polished Wireframe using wire framing Tools, Creating the working prototype, using prototyping tools, Sharing and Exporting Design

Practical	
UNIT-2: Designing an Interactive Mood Board	15 Hours

Create an interactive mood board tool that allows users to select and organize various design elements such as colors, textures, furniture, and lighting to create a cohesive visual representation

of their design concept.

(The objective of this task is to develop an intuitive user interface that enables users to easily browse, select, and arrange different elements on the mood board, providing a seamless experience for exploring and visualizing design ideas).

UNIT-3: Creating a Room Layout Planner

15 Hours

Design a room layout planner tool that allows users to drag and drop furniture and other objects onto a grid-based floor plan. Users should be able to experiment with different furniture arrangements and view the room from different angles.

(The objective of this task is to create a user-friendly interface that allows users to easily manipulate furniture items, resize and rotate them, and visualize how different layouts affect the overall look and feel of the room).

UNIT-4: Developing a Material Selection App

15 Hours

Develop a mobile application that helps users explore and select various materials for interior design projects, such as flooring, wall coverings, fabrics, and finishes. The app should provide a curated collection of materials with detailed descriptions and high-quality images.

(The objective of this task is to design an intuitive and visually appealing interface that allows users to search, filter, and compare different materials, view them in various contexts, and make informed decisions based on their preferences and project requirements).

UNIT-5: Designing an Inspiration Gallery

15 Hours

Task Description: Design an online platform where interior design enthusiasts can discover and share inspiring design projects. The platform should allow users to upload images, tag them with relevant information (e.g., style, room type), and browse through the gallery using filters and categories.

(The objective of this task is to create a visually engaging and easy-to-navigate interface that encourages users to explore and discover design inspiration, while also providing options to save and organize their favorite images for future reference).

Refe	rences
1	Jesse James Garrett, The Elements of User Experience: User-Centered Design for the Web and
1	Beyond, Second Edition, Pearson Education. 2011.
2	Rex Hartson and Pardha S. Pyla, The UX Book Process and Guidelines for Ensuring a Quality User
2	Experience, Elsevier, 2012
3	Russ Unger and Carolyn Chandler, A Project Guide to UX Design: For user experience designers in
<i>J</i>	the field or in the making (2nd. ed.) New Riders Publishing, USA, 2012.

Wilbert O. Galitz, The Essential Guide to User Interface Design: An Introduction to GUI Design Principles and Techniques, Third Edition, Wiley Publishing, 2007.

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-V2 6.7	Course Credits	3
Course Name	b. Graphic Communication and Signage (Theory+Practical)	Contact hours	75 hrs.

Content Of Course

Objectives:

To think critically, reason analytically and solve problems creatively.

To promote, identify, provide information, give directions or to raise safety awareness.

Course Outcomes: On completion of the course, the student will be able to:

CO1: Use and implement Signage into interior spaces

CO2:. Expose to wider application of design in media, advertisement and entertainment industry.

CO3: Understand advertising, signage, brochures, web graphics

CO4: Explain the rules for making visually appealing and aesthetical design

Theory

UNIT-1: Design of Signage- Digital Illustrations

15 Hours

Chapter-1

Introduction to Signage Graphics, Signage in interiors, importance & application of signage. advantages, types of signage, graphic symbols for use in the different public environments. Printing and materials.

Chapter-2

The Graphic system - Typography overview, choosing a typeface, typographic considerations in signage for non-sighted and low sighted people, symbols and arrows, other graphic elements, color, layout, overview of signage graphic process.

Chapter-3

Materials used for signage, sizes of signage based on materials, developing strategies and design goals that translate into usual communication pieces that connect people to places through way finding systems.

Practical

UNIT-2: Case Study of Signage Design

15 Hours

Case studies- Signage design of a mall – Eyelevel, light, fonts, typographical systems and type area, pictograms, arrows, color – contrast, language, systems, tones, coding, privacy and protection, room identification.

UNIT-3: Case Study of Signage Design of Hospital

15 Hours

Case studies- Signage design of a hospital – Eyelevel, light, fonts, typographical systems and

type area, pictograms, arrows, color – contrast, language, systems, tones, coding, privacy and protection, room identification.

UNIT-4: Signage Design for Hospital

15 Hours

Application of Signage design for existing Hospital (any one floor) – Eyelevel, light, fonts, typographical systems and type area, pictograms, arrows, color – contrast, language, systems, tones, coding, privacy and protection, room identification.

UNIT-5: Signage Design for a Mall

15 Hours

Application of Signage design for existing Mall (any one floor) – Eyelevel, light, fonts, typographical systems and type area, pictograms, arrows, color – contrast, language, systems, tones, coding, privacy and protection, room identification.

Ref	References		
1	Cheryl Dangel Cullen Graphic Design That Works: Secrets for Successful Logo, Magazine, Brochure, Promotion, and Identity Design 2006		
2	Chris Calori, David Vanden-Eynden Signage and Wayfinding Design: A Complete Guide to Creating Environmental Graphic Design Systems, ISBN: 978-1-119-08582-9 2015		
3	Michelle Galindo. Signage Design (Architecture in Focus) By. Braun, SBN 3037680911, 9783037680919 .2011		
4	Smith, K. L., Moriarty, S., Kenney, K., & Barbatsis, G. (Eds.). (2004). Handbook of visual communication: Theory, methods, and media. Routledge		

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-V2 6.7	Course Credits	3
Course Name	c. Portfolio Development	Contact hours	75 hrs.
	(Theory+Practical)		

Objectives:

- Designs done in the course to be compiled and prepared for portfolio development.
- Learn how to write and design a professional resume for creative.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Understand and develop the ways of portfolio building.
- CO2: Build a Strong and creative portfolio for their future Internship and Job perspective
- CO3: Understand and develop the ways of portfolio building.

Theory

UNIT-1: Conception & Digital Presentation

15 Hours

Chapter-1

Introduction to portfolio development, importance of portfolio, tools and technique of portfolio making, process of portfolio development, purposes of portfolio development. Types of portfolios.

Chapter-2

Types of design portfolio, student portfolio, internship portfolio, professional portfolio, presentation formats, digital, manual, page layout style, miscellaneous presentation, look book, mailer, design journal.

Chapter-3

Digital presentations & manual portfolio presentation - design thinking, capture with purpose, materials, media, lighting, interior setup, strategies, creating digital images, editing, designing the layout, final thoughts. Research and written communications.

Practical

UNIT-2: Resume-Cover Letter

15 Hours

Digital presentations of resume/cover letter-formulate an effective cover letter and resume for specific industries, development of portfolio, design statement, concept boards, transitions and experiences.

UNIT-3: Brochure Design

15 Hours

Setting up a brochure design of students product or a project, working with multipage documents, master pages, page numbers, creating cover, working with page tool, setting up

margins, write up for the same	
UNIT-4: Project Design	15 Hours
Portfolio as a tool - development of detailed final portfolio of a project with URL. I	Development
of model, materials, techniques and finishing of the model,	
UNIT-5: Furniture Portfolio Development	15 Hours
Using industry standard prepare a personal portfolio with URL, project details, skill	lls, freelance
designing for a company/ organization.	

Ref	References		
	Andreas Luescher, The Architect's Portfolio : Planning, Design, Production, Taylor &		
1	Francis, Inc., 2010 ISBN-13: 9780415779012		
	Diane Bender, Design Portfolios: Moving from Traditional to Digital Edition 1, Fairchild		
2	Publications, ISBN-13: 9781563674839, 2008.		
	Fig Taylor, How to Create a Portfolio and Get Hired, Second Edition: A Guide for Graphic		
3	Designers and Illustrators, Laurence King Publishing, 2010		
	Maureen Mitton, Portfolios for Interior Designers, Wiley Publications, ISBN: 978-0-470-		
4	40816, 2010.		
	Sara Eisenman, Building Design Portfolios: Innovative Concepts for Presenting Your Work		
5	(Design Field Guide). Rockport Publishers; Illustrated edition 2008.		

Program Title	B.Sc. Interior Design and Decoration	Semester	Sixth Semester
Course Code	ID-E2 6.8	Course Credits	2
Course Name	Interior Journalism (Practical)	Contact hours	60 hrs.

Course Content

Objectives:

• To impart knowledge on basic principles of any research task related to the discipline and its application to the profession, and the role of Interior criticism and journalism.

Course Outcomes: On completion of the course, the student will be able to:

- CO1: Create and design emerging media products, including blogs, digital audio, digital video, social media, digital photography and multimedia.
- CO2: Write a variety of mass media content.
- CO3: Make effective design presentations on a variety of topics in public settings and excel as critical reviewers.
- CO4: Apply basic and advanced human communication theories and models to academia and profession.

UNIT-1: Research methodology & Data collection

15 Hours

Introduction to interior journalism, Research methodology, Vocabulary of research techniques: Resources and standards like –MLA, APA, CMS. Various techniques of data collection – interviews, surveys, questionnaire, case study & observation, documents, adhering to ethics of journalism.

Deliverables - Preparing background research by collecting primary data and secondary data for the selected topic.

UNIT-2: Technical Writing

15 Hours

Formal writing: Introduction, the use of visuals, layout and design, the use of primary and secondary references, editing, citation, bibliography, cross reference and plagiarism. Software used for editing, writing, structuring and referencing.

Content writing: Research on various genres and topics relevant in Interior journals, current issues, mass media, public opinion. Writing to upskill and express with clarity.

Deliverables -

- 1. Create an article/report with the collected data, applying citation for publications using suitable software.
- 2. Creating a blog and publishing minimum three posts related to their selected topic.

UNIT-3: Critical Reading

15 Hours

Discursive techniques: Analysis of major critical themes, thematic categories in design and architectural writing. Structure: Interior journals, analytical reports and editing.

Deliverables

- 1. Read historical and contemporary examples of journalistic work by Indian and International writers/critics in relation to their selected topics resulting in preparation of a written review.
- 2. Visit Media house and understand the process of Publishing.

UNIT-4: Preparation & Publishing

15 Hours

Types and Forms: Research Papers, Critical Essays and Journal Writing - Historical & Contemporary Interior journalism, Photo journalism and Digital journalism.

Deliverables -

- 1. Writing assignment related to their topic culminating in term paper/article/report/blog.
- 2. Submit entries for online open calls from publications

References	
	De Jonge, T.M. and Van Der Voordt., "Ways to Study and Research Urban, Architectural and
1	Technical Design" Delft, Netherlands: DUP Science, 2002
2	Harrigan, John E., "Human Factors Research: Methods and Applications for Architects and Interior
	Designers" Amsterdam: Elsevier, 1987.
3	Kliment S. A., Writing for Design Professionals: A Guide to Writing Successful Proposals, Letters,
	Brochures, Portfolios, Reports, Presentations, and Job Applications, W. W. Norton & Company,
	New York, 1998
4	Borden, Iain and Katerina Ruedi., "The Dissertation: An Architecture Student's Handbook" Oxford,
4	Boston: Architectural Press, 2000.
5	Groat, L. and Wang, D., "Architectural Research Methods", JohnWiley & Sons, 2002.
6	Musa, Majd, Al-Asad, Mohammad, "Architectural Criticism and Journalism", Umberto Allemandi &
	Co., 2007.