BSc. Interior Designing

(Course Syllabus)

COURSE STRUCTURE

1ST YEAR

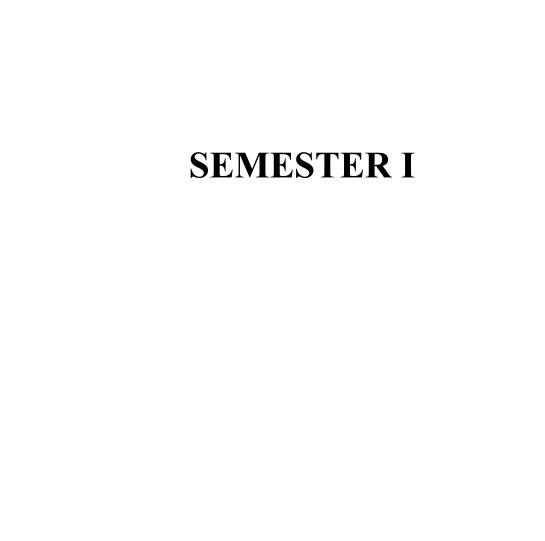
		1 ³¹ YEAR	١				
SL No	CODE	Paper		ntact Perio	ods per	Total Contact	Credits
110			L T		Р	Hours	
		,	ı			'	ı
		SEMESTER Theory	<u> </u>				
		Historical, Contextual & Cultural	2	1		30	3
1	BID101	Studies - Í	_	-			
		Sustainable & Ethical Studies -I	1	1		20	
2	BID102	Issues, Affects & Causes					2
_		Construction Materials,	1	1		20	
3	BID103	Techniques &Technology - I					2
		Practical					
1	BID191	Design & Drawing Fundamentals - I			4	40	4
	BID192	Technical Drafting - I			3	30	3
2							
	T	Sessional	I				1
1	BID181	Surface & Soft Furnishings Design Development Techniques - I			2	20	2
2	BID182	Design Studio – I			4	40	4
		Elements, Principles, Client &					
		Concepts					
	Т	otal Credits					20
		SEMESTER	II				
		Theory					
		Historical, Contextual & Cultural	2	1		30	3
	BID 201	Studies - II					
1							
		Construction Materials,	1	1		20	2
2	BID 202	Techniques & Technology - II					
	BID 203	Colour, Light & Space for	1	1		20	2
3		Interiors					
		Practical					
		Technical Drafting - II			3	30	3
1	BID 291						
		Sessional					
1	BID 281	Model Making - I			4	40	4
		Decima Structura, III			6	60	-
2	BID 282	Design Studio – II			6	60	6
		Residential Interior Design Project					
	т	otal Credits					20
	•		l				

2ND YEAR

SL CODE No		DDE Paper		Contact Periods per week		Total Contact	Credits
			L	Т	Р	Hours	
		SEMESTER III					
		Theory					
1	BID301	Sustainable & Ethical Studies - II Materials, Technologies & Innovations	1	1		20	2
2	BID302	Ergonomics in Design Contexts	1	1		20	2
		Practical					
		Computer Aided Design Studies - I			4	40	4
1	BID391	Introduction to AUTOCAD (2D)				40	7
2	BID392	Furniture Design & Technology			2	20	2
•		Sessional				'	1
1	BID381	Model Making - II			4	40	4
2	BID382	Design Studio – III Innovative Green Building Project			6	60	6
		Total Credits					20
		SEMESTER IV	,				
		Theory					
1	BID401	Estimation and Costing	1	1		20	2
2	BID402	Introduction to Vastu & Feng Shui	1	1		20	2
		Practical					I.
1	BID491	Architectural Landscape Design			3	30	3
2	BID492	Computer Aided Design Studies - II Introduction to AUTOCAD (3D)			4	40	4
1_		Sessional		1	1		
1	BID481	Computer Graphics			3	30	3
2	BID482	(Adobe InDesign) Design Studio - IV Commercial Interior Design Project			6	60	6
		Total Credits					20

3RD YEAR

	0005	J ILAN				T	
SL No	CODE Paper Contact Periods per week		-	Total Contact	Credits		
NO				L T P		Hours	
		SEMESTER		'	<u> </u>		
		SEMESTER	•				
		Theory					
	DIDEOA	Sustainable & Ethical Studies - III	1	1		20	2
1	BID501	Green and Energy Efficient					
		Buildings					
,	BID502	Entrepreneurship Management	1	1		20	2
2							
		Practical					
							1
	BID591	Professional Internship (8 weeks			6	60	6
1	515331	duration)					
	BID592	Computer Aided Design Studies -			4	40	4
2	515552	III (3DMAX)					
		Sessiona	1			1	1
		Design Studio - V			6	60	6
1	BID581	Professional Mentored Design					
		Project					
		TOTAL Credits					20
		CENTECTED	,,				
		SEMESTER \	/1				
		Theory					
						1	1
1	BID601	Restoration and Renovation of	2	1		30	3
1	BID601	Building Interiors		1			3
1	BID601 BID602	Building Interiors Sustainable & Ethical Studies - IV	2	1		30	3
		Building Interiors	2	1		30	3
		Building Interiors Sustainable & Ethical Studies - IV Dissertation (3,000 words) Professional Practice	2				
1	BID602	Building Interiors Sustainable & Ethical Studies - IV Dissertation (3,000 words)	2	1		30	3
1	BID602 BID603	Building Interiors Sustainable & Ethical Studies - IV Dissertation (3,000 words) Professional Practice Sessiona	2	1		30 20	3
1	BID602	Building Interiors Sustainable & Ethical Studies - IV Dissertation (3,000 words) Professional Practice Sessional Professional Portfolio	2	1	4	30	3
1	BID602 BID603	Building Interiors Sustainable & Ethical Studies - IV Dissertation (3,000 words) Professional Practice Sessiona	2	1	4	30 20	3
1 1 1	BID602 BID603 BID681	Building Interiors Sustainable & Ethical Studies - IV Dissertation (3,000 words) Professional Practice Sessional Professional Portfolio Development	2	1	4 8	30 20 40	2
1	BID602 BID603	Building Interiors Sustainable & Ethical Studies - IV Dissertation (3,000 words) Professional Practice Sessional Professional Portfolio	2	1		30 20	3



BID101 Full Marks: 100

Historical, Contextual & Cultural Studies – I (Theory)

Objectives

• To equip the students with the necessary knowledge & understanding of the chronological and cultural history associated to the Art, Craft and Design movements and developments through historical periods.

- To give an understanding of key developments in societies, technologies and techniques.
- To develop students research and analytical skills.
- To develop students written, recording and referencing skills with relevance to associated Art, Craft and design developments.

Units	Course Content
1	History of the world's influential civilisations and associated art, craft & design movements in chronological order.
2	 Cave painting and Paleolithic sculpture Ancient Near Eastern art and architecture Egyptian art and architecture Greek and Roman art and architecture Arts of the Islamic World Chinese visual culture Early Modern Art European Renaissance and Baroque Art and Design Early Modern Korean and Japanese Art and Design
3	Research and analysis of key/major art, craft and design movements and styles throughout the varied civilizations and societies in world history.
4	Research and identify key Art, Craft and Design developments and styles within India and South East Asia.
	References

Books

- The Story of Art: E.H. Gombrich: 9780714832470
- Gardner's Art Through the Ages 10th Reiss Edition by Richard Tansev (Author), Fred S. Kleiner (Author), Horst De LA Croix (Author) ISBN-13: 978-0155011410, ISBN-10: 0155011413
- Art history's history Originally published: 1994 Author: Vernon Hyde Minor ISBN-13: 978-0130851338

Websites

- https://www.historytoday.com/alex-potts/what-history-art
- http://www.visual-arts-cork.com/history-of-art.htm
- http://www.all-art.org/

Full Marks: 100

BID191

Design & Drawing Fundamentals - I (Practical)

Objectives

To enable the students to:

- Understand the formal elements and principles used to create art, craft and design.
- Develop their basic practical drawing and rendering skills.
- Develop accurate observational drawing skills for sketches and detailed drawings.
- Develop an understanding of the application of art principles in design composition of traditional and contemporary art, architecture and textiles in interior design.
- Develop skill in creating designs and making art objects.
- Develop skills in dimensioning & writing style for technical drawings and plans.

	skins in difficultioning & writing style for technical drawings and plans.
Units	Course Content
	Introduction to the Formal Elements of Art, Craft and Design
	Design definition and types (structural & decorative)
1	• Elements of art & design: point, line, shape, form (O-D, 1-D, 2-D, 3-D), structure, texture & colour
	Light: characteristics & classification
	Drawing and shading techniques
	Observational drawing techniques (by hand/eye) - Proportion and Scale
2	• Shading techniques – hatching, cross hatching, tonal drawing techniques, stippling (pointillism),
2	stumbling etc.
	• Geometric shapes – squares, rectangles, pyramids, hexagons/octagons
	Circles, cylinders and ellipses.
	Colour Theory
	A body of practical guidance to colour mixing and the visual effects of a
	specific colour combination.
	Definitions (or categories) of colours based on the colour wheel: Primary, secondary and tertions colours.
	tertiary coloursThe Colour Wheel
3	How colour is formed.
	Colour schemes & effects.Additive and subtractive
	• Additive and subtractive
	Perspective Drawing & Theory
	PERSPECTIVE DRAWING as a technique used to represent three-dimensional images on a two-
	dimensional picture plane.
	• LINEAR PERSPECTIVE which deals with the organization of shapes in space
4	AERIAL PERSPECTIVE (also called ATMOSPHERIC PERSPECTIVE) which deals with the
'	atmospheric effects on tones and colours. See our separate painting lesson on Aerial Perspective.
	• 1 Point, 2 Point, 3 Point, Multi Point Perspective.
	Low Level Perspective, Human Eye perspective, Aerial Perspective.
	Perspective of a circle and cylinder.
	Perspective of a cylinder
	Principles of Design Composition
	Contrast & Harmony
5	• Figure: ground relationship, grouping of figures, elements by spatial tension in Achromatic.
	Unity in diversity or variety
	Balance
+	Į.

	Movement
	Proportion or scale
	Rhythm
	Dominance or subordination
	Free Hand Drawing
	Free hand drawing of geometrical figures
	Free hand drawing of certain pieces of furniture
6	• Free hand drawing of designs to be incorporated as elements in interior design e.g. Designs of cornice, ornamented pillars, carved chair etc
	• Free hand sketches of front elevation of rooms
	• Free hand sketches of different views of room i.e. one point & Two point
	Free hand reduction & enlargement of drawings
	Measured Drawing
7	• Measuring a bed room with attached bath & furniture layout: drafting it to scale, judgement & analysis of plan, concept of revised plan
	Measuring a complete apartment: drawing it to scale, judgement & analysis of plan, concept of revised plan

Books

- Bhat Pranav & Goenka Shanita, *The Foundation of Art & Design*, Lakani Book Depot, Bombay, 1990.
- Coldstein, H & Goldstein V, Art in Everyday Life, Oxford & IBH Publishing Company, New Delhi, 1967
- 3. Rutt Anna Hong, *Home Furnishing*, Wiley Eastern Pvt. Ltd., 1961
- 4. Bhat Pranav & Goenka Shanita, *The Foundation of Art & Design*, Lakhani Book Depot., Bombay, 1990
- 5. Goldstein H & Goldstein V, Art in Everyday Life, Oxford and IBH Publishing Company, New Delhi, 1967.
- O. Rutt Anna Hong, *Home Furnishing*, Wiley Eastern Pvt. Ltd., 1961
- Scott R G, Design Fundamentals
- **8.** Visual Notes for Architects and Designers (Norman Crowe and Paul Laseau)
- Geometry of Design: Studies in Proportion and Composition (Kimberly Elam)

Websites

- https://www.creativebloq.com/colour/colour-theory-11121290
- http://www.artyfactory.com/perspective_drawing/perspective_index.html
- http://rapidfireart.com/2016/07/19/how-to-shade-the-ultimate-tutorial/
- https://vanseodesign.com/web-design/visual-tension/

Videos

- https://www.youtube.com/watch?v=KHxYwPSOKl0
- https://www.youtube.com/watch?v=24rnfO8s0hU

BID102 Full Marks: 100

Sustainable & Ethical Studies - I Issues Effects & Causes (Theory)

Objectives

To develop students awareness, understanding and knowledge in:

- Global & National Environmental, Sustainable & Ethical issues and agendas facing the world today.
- The causes of environmental impact, local, national and global.
- Issues of ethics within industries and business.
- The role of consumerism and capitalism in national and global environmental and ethical issues.
- The roles and impact designers have on the natural resources and the environment.
- Sustainable, ethical and environmental organizations, agencies and regulatory bodies.

Units	Course Content
1	 Environmental & Sustainability Issues (Local, National & Global): Climate Change & Global Warming Pollution Resource depletion Capitalism Consumerism and the throwaway society Genetically Modified Species
2	Ethics and Fair Trade Issues (Local, National & Global): • Ethical issues – workers rights, exploitation, sustainable wages, conditions & health & safety.
3	Sustainable & Ethical focused Organizations, bodies and Agencies
4	 Environmental Impact: (Giant Industry Impacts) Oil Mining Timber Fishing Fashion and Textiles
5	Innovations in sustainable thinking for the future UN Sustainable Development Goals The Paris Climate Agreement Ocean Clean-Up Others
6	Resource consumption and depletion:

	• Water
	Renewable Energy Vs. Non-Renewable Energy:
7	 Impact of non-renewable i.e. traditional fossil fuel based energies.
/	Renewable energy systems and technology innovations
	Sustainable energy schemes and initiatives in India.

Introduction to Sustainability Paperback – 2016 by Robert Brinkmann (Author)

Sustainability in Interior Design Book by Sian Moxon

Websites

https://www.theoceancleanup.com/

Videos

https://www.youtube.com/watch?v=AqhpFVFdEM0 - Sustainable Building Materials Segment 2

 $https://www.youtube.com/watch?v=RocreN7_sqs \ - \ Sustainable \ Building \ Materials \ Segment \ 1$

https://www.youtube.com/watch?v=g1yUFUL-_AI - Sustainable materials: with both eyes open

https://www.youtube.com/watch?v=WPRgRBxfbss - Green Building Concepts-3.0

https://www.youtube.com/watch?v=JEUShQ7r tE - Green buildings are more than brick and mortar | Bryn Davidson |

TEDxRenfrewCollingwood

BID192 Full Marks: 100

Technical Drafting - I (Practical)

Objectives

To enable the students to:

- Develop their technical drawing and drafting skills to present professional drawings fit for purpose.
- Develop skills and understanding in drafting, use of scale and measurement, symbols and lines.
- Develop design skills when designing in 2-Dimensional & 3-Dimensional views of furniture & spaces.
- Understand how to use visual drawing and drafting techniques to create space and depth with drawings and representations of rooms and furniture.

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Units	Course Content
	Scale & Lettering
	• What is engineering drawing?
	• Scale: full size, true scale, enlarging scale, reducing scale
1	Border lines, name plate.
	• Lettering: single stroke, double stroke, vertical/inclined, capital letters, and inclined
	letters.
	Dimensioning.
	Geometrical Construction
	Point, line and concept of distance
	Divide a straight line into a given number of equal parts.
2	Construction of angles, planes and solid
1	 Orthographic projection of solids: cube, cylinder, pyramids on a base of a square, rectangle, circle, triangle, pentagon, hexagon, etc.; blocks intersecting at different angles; blocks recessed at different angles; development of surfaces (economical); conversion of pictorial to orthographic views
	Isometric projections of solids
3	• Cube, cylinder, pyramids, on a base of a square, rectangle, circle, triangle, pentagon, hexagon, septagon.

References

- French Thomas E, *EngineeringDrawing& Graphic Technology*, McGraw Hill, New York.
- Millar Max, KnowHow to Draw, B T Batsford Ltd., London
- Shah, Kale & Patki, *Building Drawing*, Tata McGraw Publishing Co., New Delhi
- Pradeep Jain & A.P. Gautam, *Engineering Graphics & Design*, Khanna Book Publishing Co., New Delhi

Websites

• https://www.designingbuildings.co.uk/wiki/Types of drawings for building design

BID103 Full Marks: 100

Construction Materials, Techniques & Technology - I (Theory)

Objectives

To enable the students:

• To become aware of the existing and new trends and availability of construction materials.

- To gain knowledge of traditional and contemporary building materials, techniques & technologies.
- Understand varied structural techniques and the associated terminolgy.
- Gain knowledge & understanding of decision making regards the selection of suitable building materials for various applications and environments.
- To learn to compare the cost of different building materials and make worthy selection

Units	Course Content
	Materials for Construction:
1	 Cemetious materials: types, qualities, properties desired, place of availability merits demerits, uses, prevention & care of stone, bricks, cement, lime, sand, mortar, concrete and plaster Wood, metal & other materials: wood (natural & artificial): metals (aluminium based, copper based, lead based, nickel based, iron based, steel based), plastics, rubber, glass, tiles, asbestos.
	Construction & Building Elements
	 Unit No. 1: Foundation: Purpose, Shallow & deep foundation, Sketches for spread footing & isolated column footing. Unit No. 2: Plinth: Plinth filling material and their representation & Introduction to load & R.C.C. frame
	structure including beams, column, slab, chaijja, lintel etc. with their general size and placements. Unit No. 3: Carpentry Joints: • Meaning of term, Technical terms, Classification etc. Unit No. 4: Floor: • Purpose, Mezzanine floor, Stilt floor, Basement floor (introduction only) Unit No. 5: Lintels:
2	 Purpose, Types, General size, Terminology Unit No. 6: Arches: Purpose, Types & applications. Unit No. 7: Brick masonry: English bond, Flemish bond Precautions to be taken in bonding, king closer, queen closer, bat and application. Unit No. 8: Stone Masonry: Rubble masonry, Ashlar masonry, Introduction to artificial stone and uses, stone finishes. Unit No. 9: Door and Windows: Types of door & windows with their applications Unit No. 10: Structures in Brick Work: Footing, Piers, etc, Rubble masonry, Ashlar masonry & Introduction to artificial stone and uses, stone finishes.
3	Paints & Varnishes

Fire Resistance Properties of Materials

References

Books

- 1. Arora S P & Bindra S P, Building Construction, DhanpatRai& Sons, New Delhi, 1990.
- 2. Deshpande R S, *Build Your Own Home*, Poona Book Corporation, Pune.1985
- 3. Deshpande R S, *Engineering Materials for Diploma Students*, Poona Book Corporation, Poona, 1985
- 4. Deshpande R. S, *Modern Ideal Homes for India*, Poona Book Corporation, Poona, 1976
- 5. Mehra. P, *Interior Decoration*, Hind Pocket Books Ltd., Delhi, 1981
- 6. S.K. Sharma, Construction Engineering & Materials, Khanna Publishing House

BID181 Full Marks: 100

Surface & Soft Furnishings Design Development Techniques - I (Practical) SESSIONAL

Objectives

- Develop creative thinking and design ideas development for the conceptual interior design of spaces, demonstrating understanding how colour, texture, pattern and material effects visual environment atmosphere.
- Develop practical design skills and understanding of materials and techniques for surface design developments.
- Develop surface designs fit for specified purposes through the investigation of materials, techniques and design processes, and showing understanding of composition and design elements.
- To develop students contextual research skills and ability to analyze and integrate ideas and styles as appropriate to project specifications.
- To develop visual presentation and associated media skills.

Units	Course Content
1	 Textiles and Its Types Introduction to textiles – Indian (kalamkari, mata ni pachedi, ikkat) and international textiles. Special embellishment techniques: Batik, Tie and dye - lehariya, bandhini , shibori, sunray and marbling.
	Research soft furnishings and textiles/fabrics used in the design of:
2	 Table Linens Rugs & Carpets Window dressings (Curtains & Blinds) Towels Bedding & Bedspreads Cushions & Throws Lampshades Wallpaper Tiles Flooring
	Printing and its techniques
3	 Print application through block printing, Lino printing, Wood cut printing, Lithograph printing Print application through screen & block printing (vegetable block and wooden blocks, Appliqué, quilting, Smocking, honey comb, Fabric painting, Stencil- dabbing and spraying). Natural dyeing techniques and explorations
4	 Embroideries and its types: Basic Hand Embroidery, their technique, variations and applications. Basic running stitch, back stitch, stem stitch, chain stitch, lazy daisy stitch, buttonhole stitch, feather stitch, herringbone stitch, knot stitch, satin stitch and cross stitch. Traditional Embroidery- Origin, application & colours. Kantha, Chikan, Kasuti, Zardosi Kutch and Mirror work.

	Exploration of materials, techniques and technologies for the development of surface
5	design:
	• Print – Screen, Block, Mono etc.
	Stenciling
	Fabric Dye (Natural and Azo free)
	Fabric paints
	Fabric and textiles
	Embellishment
	Final surface designs and presentation:
	Develop surface designs for a range of applications.
6	
D. C	

- The Complete Technology Book on Dyes & Dye Intermediates Paperback 1 Jan 2003 by NIIR Board of Consultants & Engineers (Author)
- Biodegradation of Azo Dyes by <u>Hatice Atacag Erkurt</u> (Editor) Publisher: Springer (9 August 2010), ISBN-10: 3642118917
- Second Skin: Choosing and Caring for Textiles and Clothing by India Flint Murdoch Books, 2011 ISBN 978-1-74196-720
- *Indigo:The Color that Changed the World* by Catherine Legrand Thames & Hudson, 2013 ISBN 978-0500516607
- Warp and Weft: Woven Textiles in Fashion, Art and Interiors by Jessica Hemmings Bloomsbury, 2012 – ISBN 978-1-4081-3444-3
- Quilt National 2013: The Best of Contemporary Quilts by The Dairy Barn Cultural Arts Center
- DragonThreads Extraordinary Textile Arts Books, 2013 ISBN 978-0-9818860-4-6
- Surface Design for Fabric: Studio Access Card Printed Access Code February 15, 2015 by <u>Kimberly Irwin</u> **Publisher:** Fairchild Books (February 15, 2015) **ISBN-10:** 1501395033

Websites

- https://www.houseology.com/masterclass/design-school/chapter-eight-soft-furnishings
- https://www.twosistersecotextiles.com/pages/azo-dyes

BID182 Full Marks: 100

Design Studio I - Elements, Principles, and Concepts (Practical) SESSIONAL

Overview

This module introduces the students to the fundamental elements of creative investigation of form, space, proportion and structure. The project will require the student to explore and investigate creative and innovative design thinking through initial ideas, sketches and explorations of drawing elements including perspective, 3 dimensional thinking and drawing, scale and model making.

Objectives

At the end of this module the student should be able to:

- 1. Conceptualize a creative 3-Dimensional structure which explores and pushes the boundaries of function and normal constraints of function and design.
- 2. Appraise the design of form to help create an aesthetically pleasing & creative design.
- 3. Understand the value of coherently incorporating; drawing, sketching, model making and technical drawing, into an acceptable professional standard of communication, using materials and techniques to coordinate the design process.
- 4. Follow the design process to create a creative and stimulating form/space, using the basic strategic knowledge and tactics of; structure, line, form, space, lighting and shape.
- 5. Document and contextualize research to help inform the design decision making process for the benefit of the end users.
- 6. Further demonstrate and apply basic knowledge of building construction and materials for informing a sustainable design project resolution.

Units	Course Content
1	Design Ideas Generation Generation and development of visual design ideas & sketches showing varied viewpoints for the creation of a 3-Demsional Architectural form.
2	Contextual Research & Analysis Source, collect and present a range of images and information of the work of relevant designers and their work which explore structural form and abstract space.
3	Design Development Through design process develop the visual design idea through the exploration of form, line, structure, space and negative forms, including sketches, perspective drawings, illustrations and diagrams.
4	Exploration and investigation of materials, techniques and technologies for creation of architectural and structural abstract forms, including models, paint, drawing.
5	Application of media and drawing techniques to illustrate different viewpoints of a given abstract form/structure, including; perspective drawings, orthographic drawings of views and sections.

6	Model Making Materials, Techniques & Technologies Production of scale model(s) of proposed design
7	Design Project Presentation Techniques Drawing sheets, sketchbooks, models, and research

Books

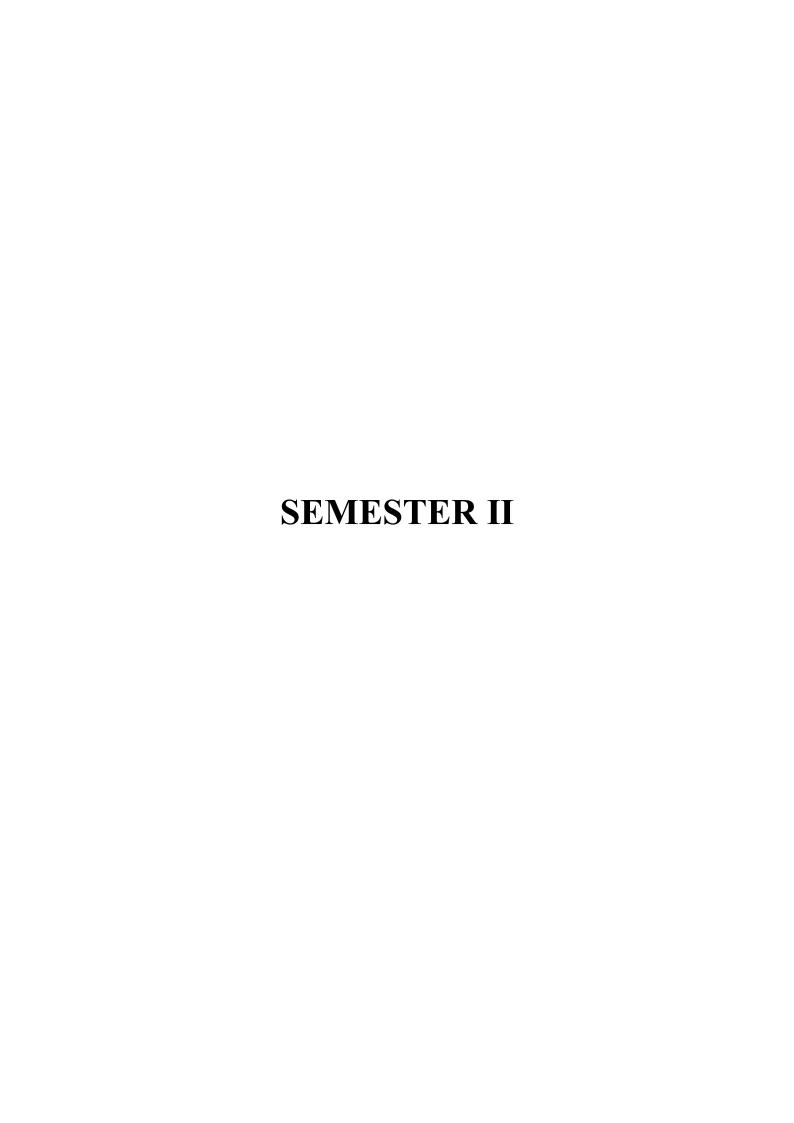
- Kevin Lynch. The Image of the city. The MIT Press, 1960.
- Christopher Alexander. A Pattern language: towns, buildings, construction. Oxford University Press, 1978.
- Kenneth Frampton. Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture. The MIT Press, 1995.

Websites

- https://www.designingbuildings.co.uk/wiki/Types_of_drawings_for_building_design
- https://www.dkorinteriors.com/lighting-modern-interior-design/
- https://www.hgtv.com/remodel/mechanical-systems/lighting-tips-for-every-room
- https://study.com/academy/lesson/what-is-residential-interior-design.html

Videos

https://www.youtube.com/watch?v=wjTcUzMDqzY



BID201 FullMarks:100

Historical, Contextual & Cultural Studies – II (Theory)

Objectives

- To develop students research and analytical skills.
- To develop students written, recording and referencing skills with reference to associated Art, Craftand design developments.
- To equip the students with the necessary knowledge & understanding of the chronological and cultural history associated to the developments in construction and Architecture through historical periods.
- To give students knowledge and understanding of modern innovations and key developments in technologies in construction and Architecture.
- To provide students with the understanding of architectural terms and terminology.

Units	Course Content	
	Brief History of Architecture:	
	 Classical Architectural Styles and Developments – Ancient Greece & Rome. 	
	• Early Christianity (Byzantine) and the age of Church Building (Gothic & Romanesque).	
1	Idea of Re-birth and Renaissance in Europe and developments in construction and	
1	architectural techniques and technologies.	
	Neo Classical Architecture and Interiors.	
	• 17 th to 19 th Century styles and developments in Interior Design and Architecture.	
	Modern Architecture.	
	History of Technical Developments and Innovations:	
	• Concrete	
	• The arch	
	• The Dome	
2	• Columns	
	Vaulted Ceilings	
	• Plinths	
	Pillars and Girders	
	Rose windows - Etc.	
3	Basic Terminologies related to:	
3	Architecture / Construction / Interior Design	

References

- 1. Sir Banister Fletcher, A History of Architecture, CBS Publications (Indian Edition), 1999
- 2. Spiro Kostof A History of Architecture Setting and Rituals, Oxford University Press, London, 1985
- 3. Leland M Roth; Understanding Architecture: Its elements, history and meaning; Craftsman House, 1984
- 4. Allen Edward, *How Buildings Work!* Oxford University Press
- 5. De Chiara Joseph & Callender John, *Time Saver Standards for Building Types for Architectural Types, Interior Design*, McGrawHili Book Co.
- 6. Leniham J &Fletchar W W, *The Build Environment*, Environment & Man, Vol. 8
- 7. Blackie Mckay W B, *Building Construction*, Vol 1-4, Orient Longman
- 8. Shah, Kale &Patki, *Building Drawing*, Tata McGraw Hill Pub. Co., New Delhi.
- 9. Technical Teachers Training Institute, Civil Engineering Materials, Tata McGraw Hill
- 10. A.K. Jain, Architecture & Buildings, Khanna Publishing House
- 11. S.K. Sharma, Civil Engineering Construction materials, Khanna Publishing House

Websites

https://architecturaltrust.org/outreach/education/glossary-of-architectural-terms/

BID281 Full Marks: 100

Model Making - I (Practical) SESSIONAL

Overview

This module introduces students to model making for architecture and interiors, specifically 'Block models', and the exploration of built structures and forms. 'Block models' show only the external form of the building, to visualize architectural forms three-dimensionally, showing the contours only and model buildings are mainly blocks with limited detail.

Objectives

To enable the students to:

Develop practical skills in designing in 3 Dimensions, exploring relationships between form and space.

- Develop making skills and understanding of various model making materials, suitable applications and representations for visual interpretations of buildings, interiors and products.
- Develop an understanding of the function of space through 3 dimensional interpretations of structure and form.
- Develop critical design thinking and evaluative processes in relation to desired objectives and design Realization.
- Develop action planning skills for future learning.

Units	Course Content
1	Creative visual design ideas development for block model of architectural form.
2	Materials for model making
3	Exploration of Model Making Techniques
4	Investigation & Exploration of Structure & Form
5	Realization of Design from 2 Dimensional Drawings to 3 Dimensional Form(s)
6	Integration of contextual references through visual design.
7	Evaluation of outcomes against defined design objectives and desired visual design outcomes.
8	Generation of action plan(s) for future learning.

References

Websites

https://www.arch2o.com/architectural-model-complete-guide/

http://www.modelmakers-uk.co.uk/students-advice

http://www.instructables.com/id/How-to-make-an-Architectural-Model-by-hands/

Books

Architectural Model Building: Tools, Techniques, and Materials 1st Edition

by Roark T. Congdon (Author) - ISBN-13: 978-1563677731

Model Making (Architecture Briefs) 1st Edition by Megan Werner (Author) - ISBN-13: 978-1568988702

Architecture & Building, A.K. Jain, Khanna Publishing House

BID202 Full Marks: 100

Construction Materials, Techniques & Technology - II (Theory)

Objectives

To enable the students to:

• Gain understanding of the varied materials, systems and services within the construction and design of buildings and spaces.

• Understand various factors to be kept in mind to ensure sustainability, safety and longevity while designing a building and/or any super structure.

Units	Course Content
1	Structural Systems
2	Load, Support, Span
3	Structural Behavior
4	Compression, Tension
5	Influencing Factors- Seismic, Wind, Time
6	Lifts and Escalators / Travelators
7	Service Systems
8	PHE
9	Electrical /Illumination
10	HVAC
11	IT/ Networking
12	Fire
13	CCTV, Building / Home / Office Management System

References

Books

- Agnew, J.C. 'A House of Fiction: Domestic Interiors and the Commodity Aesthetic', in Bronner, S. (ed.) Consuming Visions: Accumulation and Display of Goods in America 1880-1920. New York: Norton, 1989.
- 2. Ayres, James. Domestic Interiors: The British Tradition, 1500-1850. New Haven and London: Yale University Press, 2003.
- 3. Baker, Malcolm. 'Public Images for Private Spaces? The Place of Sculpture in the Georgian Domestic Interior', Journal of Design History, 20:4 (2007), 309-23.
- 4. Beard, Geoffrey. Craftsmen and Interior Decoration in England, 1660-1820. London: Bloomsbury Books, 1986.
- 5. Bryant, Julius. 'Curating the Georgian Interior: From Period Rooms to Marketplace?' Journal of Design History, 20:4 (2007), 345-50.

Videos

https://www.youtube.com/watch?v=RocreN7 sqs -

BID291 Full Marks: 100

Technical Drafting - II (Practical)

Objectives

To enable the students to:

- Develop professional standardized industry technical drafting skills.
- Understand the concept of designing 2D & 3D views of the furniture & interior spaces.
- Apply correct technical processes and terms to drawings, plans and layouts.

Units	Course Content
Cilits	
	1: Lines: Types standard and application
	2: Orthographic projection
1	3: Isometric View
1	4: Oblique View
	5: One point Perspective View
	1: Material Symbols
	2: Carpentry Joints
	3: Doors
	4: Windows
2	5: Staircases
	6: Partition
	7: False Ceiling
	8: Paneling
	9: Typical Detail of a Kitchen Counter
	10: Furniture layout
	11: Elevation – Living Room (4 walls)
	12: Elevation – Master's Bed Room (4 walls)
	13: Elevation – Kids Bed Room (4 walls)
3	14: Elevation – Kitchen (4 walls)
	15: Elevation – Bathroom (2 walls)
	16: Flooring layout
	17: Reflected False ceiling layout
	18: Electrical layout
	19: Perspective – Varied Spaces

References

Books

- French Thomas E, EngineeringDrawing& Graphic Technology, McGraw Hill, New York.
- Millar Max, KnowHow to Draw, B T Batsford Ltd., London
- Shah, Kale & Patki, Building Drawing, Tata McGraw Publishing Co., New Delhi
- Pradeep Jain & A.P. Gautam, Engineering Graphics & Design, Khanna Publishing House, New York.

Websites

https://www.designingbuildings.co.uk/wiki/Types_of_drawings_for_building_design

BID203 Full Marks: 100

Colour, Light & Space for Interiors (Theory)

Objectives

To enable the students to:

- To gain insight into the factors to be considered while planning home lighting.
- To learn to evaluate the illumination available at task in relation to different activities and plan appropriate lighting.
- To know the effect of light and colour together on interiors.
- To understand the theory of colour.
- To understand the application of colour in interiors.
- To know the effect of light and colour together on interiors.

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Units	Course Content	
1	Introduction to:	
	• Colour theory	
	The colour wheel	
	The Prang Colour System	
	• Hue: classes of colour (primary, binary, intermediate, tertiary, quaternary), neutrals,	
	changing of hues, warm & cool colours, advancing & receding, hues & the seasons.	
2	• Value: value of normal colours, tints & shades, changing of values, effects of different values	
	• Intensity: dull and bright colours, complimentary colours, changing of intensity, texture &	
	its influence on intensity & taste	
	The Munsell Colour System	
	• The colour sphere	
	Munsell colour notation	
3	Complementary hues in Munsell colour system	
	Hue, value, chroma	
	Colours and emotions	
	Effect of colour on each other	
	Principles of Design Applied to Colour	
4	• Harmony in colour: standard colour schemes (related & contrasting harmonies), how to use colour harmonies, background colours, keyed colours through neutralizing, mixing etc	
	Balance in colours: balancing dull and bright colours, light & dark colours, warm & cool	
	colours, crossing or repetition.	
	Proportion in colour: law of colour areas	
_	Applications of Colour in Various Elements of Interiors	
5	Summing up of interiors in various colour schemes and its relation to work output	
6	Effect of Colour on Texture	
	Introduction to Lighting in Interior	
	The household activities with special reference to light requirement	
7	Cultural and social aspects of lighting	
/	Physiology of vision	
	Lighting sources: natural lighting and artificial lighting (traditional to modern)	
	Light measurements and units of measurement of lighting	

Quantity of Illumination		
	• Factors affecting the quantity of illumination in a room: room proportion, colour, texture and cleanliness of room surface, lamp lumen, lamp lumen depreciation	
	• Competition of room index, coefficient of utilization, maintenance factor of luminance	
	Planning lighting installation for a given interior space	
8	 Evaluation of illumination at task/work place against the recommended requirements of illuminization for various activities (ISI & IES recommendations) 	
	Quality of Illumination	
	Colour rendition	
	Spatial distribution of light: direct, indirect, diffused	
	Glare: luminance contrast, luminance uniformity	
	Types of Lighting	
	• Local & general lighting	
	Applied lighting	
9	Architectural lighting	
	Recessed lighting	
	Luminous walls & ceilings	
	Luminance & Lighting	
10	• Controls type, selection, care, maintenance and economic use, lamp holders, lighting	
	switches, motion sensors.	
11	Lighting for Outdoor Living & Gardens	
12	Effects of colour on Human Behavior	
12		

Books

- 1. Davidson J, The Complete Home Lighting Book, Casell, UK, 1997
- 2. De Chiara Joseph & Callender John, *Time Saver Standards for Architectural Types & Interior Design & Space Planning*, Mc Graw Hill Book Co.
- 3. Wieltide, Elizabeth, Lighting, Ryland, Peters & Small, London
- 4. Whitehead R, Home Lighting Ideas Bedrooms & Baths, Rockport Publishers, Masachusetts
- 5. Beazley Mitchell, Colour Book, Reed Consumer Books Pvt. Ltd.
- 6. Chijiwa Hideaki, Colour Harmony; Rockport Publishers
- 7. Halse A. O, The Use of Colour in Interiors; McGraw Hill Book Company
- 8. Stochton Tomes, Designer's Guide to Colour, Chronicle Books

BID282 Full Marks: 100

Design Studio II – Residential Interior Design Project (Practical) SESSIONAL

Outline

This module introduces you to the observing and recording techniques and skills, necessary to understand and communicate the interior space design of residential spaces.

You will consider the environmental and human interactions within the space, and use this to help inform you during the design process.

The module fosters creative, divergent and critical thinking from the view point of the designing of interior residential spaces, allowing students to fully engage and explore the experience, function and atmosphere of spaces. Students learn to express their ideas, primarily through freehand drawing and model making and communicate their design ideas.

Objectives

To enable the students to:

- Acquire knowledge of principles of Interior Design for residential spaces.
- Learn to provide adequate facilities for work, relaxation, comfort, privacy, aesthetics, and maintenance through design and proper choice of materials, services, fittings and fixtures in interiors of residences.
- Gain understanding of furniture design through anthropometric measurements
- Make designs and working drawings for various residential interior schemes and understanding their execution
- Learn techniques of presentation of designed interiors (manual)
- To develop technical layout, drafting and practical drawing and design skills
- To familiarize students with various symbols and signs used on plans and drawings for interior and architectural drawings.
- To develop awareness and understanding of the relationship of spaces within a given design context.
- To develop design skills within the constraints of a given interior design project brief.
- Understand basic requirements and infrastructural requirements, utilization of design studio and to gain hands on experience about design studio.
- Understand the benefits of using sustainable materials on adhering to Green Building legislation, The financial implications and benefits to the environment (both local and wider).

Units	Course Content	
	Design sketches and visual ideas for residential interior design.	
1	• Front view, Plan, Sections	
	Perspective of Drawings (One Point & Two Point)	
	Practical Design Layouts & Technical Drafting –	
2	Complete Floor Layouts & Furniture Layouts using correct measuring, scale, drafting skills	
	and symbols.	
3	Detail Documentation, Drawing, Observation and Notes, Quantification, Reporting,	
	Presentation.	
4	Study of Factors Influencing Decisions Related to Furnishing of Residential Interior Spaces	
	Principles of design, needs and preferences, climate, availability and budget	
5	Factors to be Considered While Designing Interiors	
3	Regulation and Bylaws of the plan sanctioning authority	

Persons Orientation Orientatio		Establishment of areas for different units - function, furniture requirement & number of
Orientation Grouping of user's area Circulation between and within user's area Light and Ventilation Flexibility Privacy Roominess (spaciousness) Services Aesthetics Requirement for air conditioning & central heating Cost Assessing & Allocating Space for Various Activities in Different Rooms Living Room Dining Room Bedrooms Kitchen Pantry Foyer, Lobby, Corridors Store Balcony / open areas Furniture requirements in the afore mentioned rooms Study & Analysis of Basic Floor Layouts (Standards) in Relation to Principles of Interior Designing. Planning simple furniture layouts of the different interior spaces such as: living room, dining Could Budging Recomediate of Colour, Texture & Pattern through Techniques of Rendering & Presentation Study & Analysis of Basic Floor Layouts (Standards) in Relation to Principles of Interior Designing. Planning simple furniture Layouts of the Different Interior Spaces Application of Colour, Texture & Pattern through Techniques of Rendering & Presentation Study & Analysis of Basic Floor Layouts (Standards) in Relation to Principles of Interior Designing. Planning simple furniture layouts of the different interior spaces such as: living room, dining Planning Efficiency Rectional Elevations of the Simple Furniture Layouts of the Different Interior Spaces Planning simple furniture layouts of the different interior spaces such as: living room, dining		
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• Planning simple furniture layouts of the different interior spaces such as: living room, dining		
	12	
Design Critic (group) – Visual and oral presentation of complete project -		
Writton avaluation and action plan for improvement		
13 • Visual presentation and organization of complete project.	13	• •
PowerPoint to explain project intentions, evaluations, decisions and rectifications.		

Books

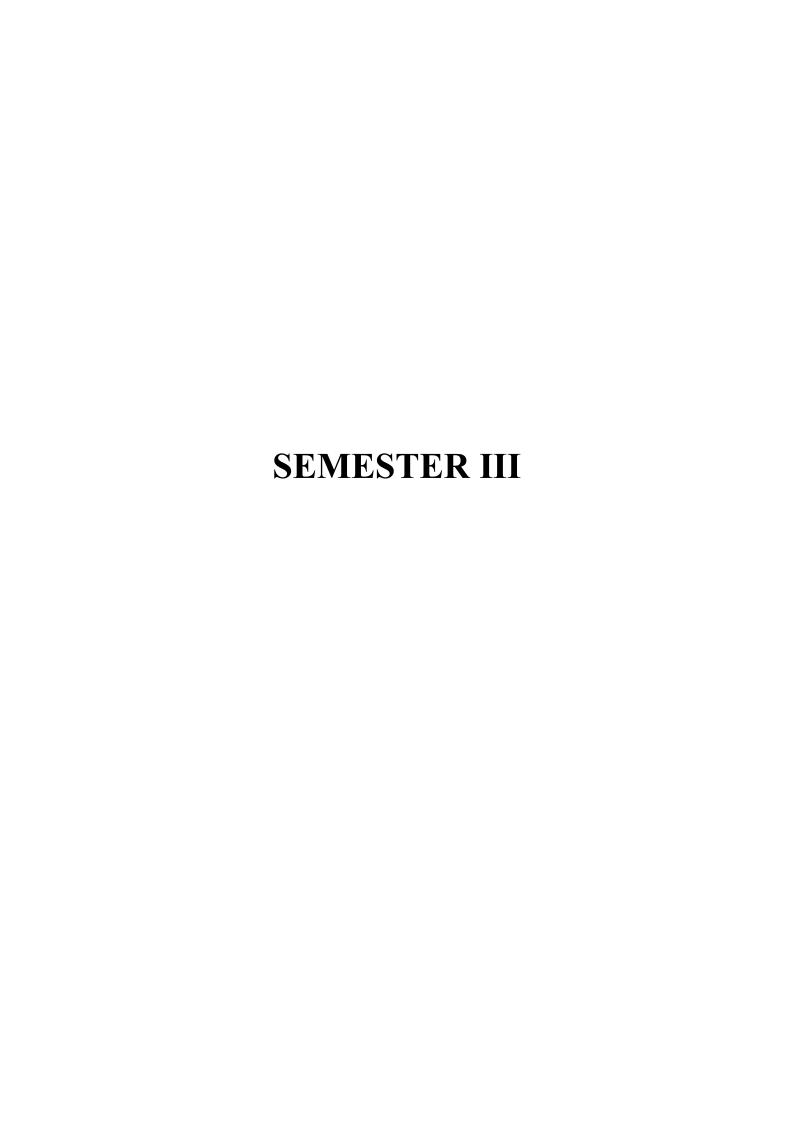
- Sigfried Giedion. Space, Time and Architecture: The Growth of a New Tradition. Harvard University Press, 1967
- William S. Saunders. Nature, Landscape, and Building for Sustainability: a Harvard Design Magazine Reader. Minneapolis, University of Minnesota Press, 2008.
- Al Gore. The Future: Six Drivers of Global Change. Random House, 2013
- AganTessi, The House Its Plan and Use, JB Lippincott & Co.,1976
- Alexander NJ Designing Interior Environment, Harcourt Brace, Johanovich, New York
- Allen Edward, How Buildings Work, Oxford University Press
- Conran T, New House Book, Guild Publishing, London
- De Chiara Joseph & Callender John, *Time Saver Standards for Building Types for Architectural Types, Interior Design*, McGrawHili Book Co.
- Deshpande, R S, Modern Ideal Homes for India, United Book Corporation, 1974
- Faulkner S. *Planning a House*, Holt, Richard & Winson
- Grandjean E, Fitting the Task to the Man; Taylor & Francis, London, 1988
- Leniham J & Fletchar W, The Build Environment, Environment & Man, Vol. 8, Blackie
- ReviAromar, Shelter in India, Vikas Publishing House, New Delhi
- A.K. Jain, Architecture & Buildings, Khanna Publishing House, New Delhi
- A.K. Jain, *Town Planning*, Khanna Publishing House, New Delhi

Websites

- https://www.dkorinteriors.com/lighting-modern-interior-design/
- https://www.hgtv.com/remodel/mechanical-systems/lighting-tips-for-every-room
- https://study.com/academy/lesson/what-is-residential-interior-design.html

Videos

https://www.youtube.com/watch?v=wjTcUzMDqzY



BID391 Full Marks: 100

Computer Aided Design Studies I - AUTOCAD (Practical)

Objectives

To enable the students to:

- Develop skills in the industry standard AutoCAD software programme for the production of plans and technical drawings in 2 Dimensions.
- Develop design and digital based skills in producing plans which demonstrate design intentions.
- Understand how digital design software is used in the industry for the production of accurate and detailed plans and layouts for interior and architectural drawings.

Units	Course Content
1	Introduction about Computer Aided Designing (Essentiality of CAD), Usage of AutoCAD,
1	Product Show Reel, User Interface of AutoCAD
2	Understanding Coordinate System, Classification of AutoCAD Coordinate System, Drafting
	Basic
	Shape with Dimension
3	Working with Architectural Unit System, Drawing & Modifying Simple Architectural Block.
4	Drafting Plan of Residential / Commercial Building
5	Drafting Front & Side Elevation of Residential / Commercial Building.
6	Making Layout of Different Sectional Views
7	Making a Complete Interior Layout with All Accessories.
8	Concept of AutoCAD Plotting. Plotting a Complete Layout
9	Designing & Modifying Complex Architectural Block (Doors, Windows Chajja, Sofa, Wardrobe
}	& Wall Unit).
10	Hatching Different Cross Sections & Applying Various Patterns.
11	Customizing Different Dimension Styles
12	Layout Slide Show
Defenences	

References

- 1. Book on Latest Version of Auto CAD
- 2. Parker, Charles. Understanding Computers Today & Tomorrow. Fort Worth, TX: Dryden Press, 1998.
- 3. Sabot, Gary. High Performance Computing Problem Solving with Parallel and Vector Architectures. Reading, MA: Addison-Wesley Publishing Company, 1995.
- 4. Taylor, Dean. Computer-Aided Design. Reading, MA: Addison-Wesley Publishing Company, 1992.
- 5. Pradeep Jain & A.P. Gautam, Engineering Autocad, Khanna Publishing House, 2017.

BID301 Full Marks: 100

Sustainable & Ethical Studies - II Materials, Technologies & Innovations (Theory)

Objectives

To enable students to:

- Understand the effects the construction & interior design industry has on resources and the environment.
- Become aware of sustainable materials and technologies traditional & new innovations for the construction of buildings and spaces.
- Become aware of sustainable materials and technologies traditional & new innovations for the construction of furniture, furnishings and products.
- Develop research and analytical skills with reference to sustainable designers and their work.
- Be aware of organizations, agencies and certification bodies.
- Be aware of regulations pertaining to the construction and interior design industries.

Units	Course Content
1	Environmental Impact and Sustainability associated to the construction & Interior space design
	industries:
	Issues on environmental impact and sustainability within the construction and interior design industries.
	Resource consumption and depletion associated to the construction & Interior space design
	industries:
2	Resource consumption within the construction and interior design industries. • Deforestation
	 Deforestation Non – Renewable Energies
	 Non – Renewable Energies Non – Renewable Materials
	Traditional Sustainable materials & technologies in the construction and interior space design
	industries:
	• Adobe
3	Bamboo
	Managed Forests
	Recycled/Up-cycled materials
	Innovations in sustainable materials and technologies associated to the construction & Interior
	space design industries:
4	Bamboo construction materials
4	Prefabricated construction
	Recycled and up-cycled materials
	Renovation and restoration
5	Upcycling and recycling within the construction, furniture and interior design industries.
	Ethical issues within the construction, furniture and interior design industries associated to:
	• Labour
6	• Conditions
	Health & Safety
	• Remuneration
	Waste management
7	Renewable Energy Vs. Non-Renewable Energy:
	 Impact of non-renewable i.e. traditional fossil fuel based energies.
	Renewable energy systems and technology innovations
	 Sustainable energy schemes and initiatives in India.

- O.P. Gupta, Energy Technology, Khanna Publishing House, 2018.
- M.P. Poonia & S.C. Sharma, Environmental Studies, Khanna Publishing House, 2018.

Videos

https://www.youtube.com/watch?v=AqhpFVFdEM0 - Sustainable Building Materials Segment 2

https://www.youtube.com/watch?v=RocreN7_sqs - Sustainable Building Materials Segment 1

https://www.youtube.com/watch?v=g1yUFUL-_AI - Sustainable materials: with both eyes open

https://www.youtube.com/watch?v=WPRgRBxfbss - Green Building Concepts-3.0

https://www.youtube.com/watch?v=JEUShQ7r_tE - Green buildings are more than brick and mortar | Bryn Davidson | TEDxRenfrewCollingwood

BID381 Full Marks: 100

Model Making - II (Practical) SESSIONAL

Module Outline:

This module explores advanced model making materials and techniques specifically Semi-detailed or detailed working models. 'Semi detailed' and 'Detailed' completed models represent the plans in 3 dimensional form to builders and show precisely what the project or building will look like after completion and it is important that the finest detail is depicted. Interior models show the internal set-up, complete with scale-model furniture and the interior decorating of the building. The model maker is expected to make the furniture to scale.

Objectives

To enable the students to:

- Develop practical skills in designing in 3 Dimensions, exploring relationships between form and space.
- Develop making skills and understanding of various model making materials, suitable applications and representations for visual interpretations of buildings, interiors and products.
- Develop an understanding of the function of space through 3 dimensional interpretations of structure and form
- Develop critical design thinking and evaluative processes in relation to desired objectives and design realization.
- Develop action planning skills for future learning.

Units	Course Content
1	Exploration of 3 dimensional interior design creative visual design ideas: Sketches of overall and details of design Floor plan Site plan Elevation Cross section Isometric and axonometric projections. Detail drawings Presentation drawings Design development process
2	Exploration of materials and techniques
6	 Integration of contextual references through visual design. Annotations and notes to explain connections to designers Diagrams and notes to explain visual intentions
7	Evaluation of outcomes against defined design objectives and desired visual design outcomes.
8	Generation of action plan(s) for future learning.

Websites

https://www.arch2o.com/architectural-model-complete-guide/

http://www.modelmakers-uk.co.uk/students-advice

http://www.instructables.com/id/How-to-make-an-Architectural-Model-by-hands/

Books

Architectural Model Building: Tools, Techniques, and Materials 1st Edition

by Roark T. Congdon (Author) - ISBN-13: 978-1563677731

Model Making (Architecture Briefs) 1st Edition by Megan Werner (Author) - ISBN-13: 978-1568988702

Ergonomics in Design Contexts (Theory)

Outline:

The practice of ergonomics has two primary objectives to enhancing workplace health, safety, and work design issues. These are to: 1) Enhance performance and productivity and 2) Prevent fatigue and injury.

These principles are integral to current thinking in modern lifestyles and the designing of spaces and furniture.

Objectives

To enable the students to:

- Understand the science and theory behind ergonomics.
- Understand the effects of design on humans.
- Understand how to incorporate ergonomics in furniture, product and interior space design.
- To be able to design an enabling environment that positively affects human physically.
- To develop research, written and analytical skills.
- To develop links between own work and the work of others.

Units	Course Content
	What is Ergonomics?
1	 The study of how a workplace and the equipment used there can best be designed for comfort, efficiency, safety, and productivity.
2	Perception of Space, Environment & Ecology in relation to living and commercial
2	space design and function
	Research Ergonomic Design and (Work of others):
2	• Furniture
3	Interior Spaces
	• Products
	Impact of bad design on:
4	• People
	Productivity
	Anthropometry & Biomechanics
	Definition and scope
	Physical dimensions of human body as a working machine
5	Human body as a system of levers
	Identification & analysis of posture
	Effect of wrong posture on cardio vascular and musculoskeletal system (eg. Back trouble, inter
	vertebral disc pressure, lower back and inter abdominal pressure)
	Design application of anthropometry
	Design of interiors and furniture according to consumer ergonomics.
	Study of basic furniture dimensions based on anthropometries measurements
	Innovations ergonomics in:
6	Furniture Design
	Product Design

- Art and Visual Perception: A Psychology of the Creative Eye (Rudolf Arnheim) Published in 1974
- Beisner, Beatrix and Kim Cuddington, editors. 2005. Ecological Paradigms Lost: Routes of Theory Change. Academic Press.
- Blackstone, William T. 1973. Ethics and Ecology. Southern Journal of Philosophy 11: 55–71.
- Buege, Douglas J. 1996. An Ecologically-Informed Ontology for Environmental Ethics. Biology & Philosophy 12(1): 1–20.
- Colyvan, Mark. 2005. Probability and Ecological Complexity. Biology & Philosophy 20(4): 869–879.
- Colyvan, Mark. Forthcoming. Population Ecology. In Sahotra Sarkar and Anya Plutynski, editors, A Companion to the Philosophy of Biology. Blackwell.
- Colyvan, Mark and L. R. Ginzburg. 2003b. Laws of nature and laws of ecology. Oikos 101(3):649.

Websites

https://ergo-plus.com/workplace-ergonomics-benefits/

Videos

https://www.youtube.com/watch?v=LAKImdMHpdE

BID392 Full Marks: 100

Furniture Design & Technology (Practical)

Objectives

To enable the students to:

- Acquire knowledge about the various materials used in furniture.
- Know the multiple use of furniture keeping the constraints of available space.
- Learn to care & maintain the furniture with various finishes.
- Appreciate the contribution of furnishings in satisfying family living.
- Recognize the importance of wise decision making in selection, use and care of home furnishings.
- Learn principles that will help one to judge the design of furnishing relative to their function and beauty.

Units	Course Content
1	Brief History of Furniture Styles & Techniques – Contemporary & Traditional to Modern Furniture - Innovations
2	Ergonomic Furniture Design Creation – Visual design ideas and sketches
3	Design development through drawings, sketches, models showing visual exploration
3	Orthographic Projections of Simple Furniture Pieces such as chair, table, bed, cupboard, wardrobe, cabinets etc
4	Isometric Projections of Furniture
5	Wooden Joinery & Carpentry The different types of joineries used in making furniture
6	Furniture Detailing Detailed drawing of different types of furniture with their joineries
7	Preparing furniture models
8	Market Survey of Furniture Materials, Furniture Finishes & Furnishings
9	Basic Materials used for Furniture Types of wood, processed wood (block boards, laminates, veneers, particle board), metals, cane & Other wicker materials, plastics, fiber glass.
10	Finishes Used on Furniture Varnish, polish, lacquer, melamine, paints, staining
11	Study of Basic Furniture Dimensions Based on Ergonomic/Anthropometric Measurements
12	Types of Furnishings Curtains, draperies, upholstery, bedspreads, cushion covers, loose covers, blinds, carpets and rugs, leather, rexine & fiberglass and new innovations in furnishing materials.
13	Selection of Material for Furnishing Colour, pattern, texture, style, cost, durability, maintenance etc

- 1. Charlotte & Peter Fiell, Modern Furniture ClassicsSince 1945, Thames & Hudson
- 2. Darby Tom, Making Fine Furniture; Guild of Master Craftsman Publications
- 3. De Chiara Joseph & Callender John, *Time Saver Standards for Architectural Types & Interior Design & Space Planning*; McGraw Hill Book Co.
- 4. Gilliatt Mary, *The Decorating Book*; Michael Joseph
- 5. Grandjean E, Fitting the Task to the Man; Taylor & Francis, London, 1988
- 6. Kasu Ahmed, *An Introduction to Art, Craft, Science, Technique & Professionof InteriorDesign*, Ashish Book Centre, Delhi, 2005

Videos

https://www.youtube.com/watch?v=s7pI0cHJQtY - Making Tension Based Furniture - Robby Cuthbert

BID382 Full Marks: 100

Design Studio - III – Innovative Green Building Project (Practical) SESSIONAL

Overview

This module explores sustainable and modern interior space design, students will investigate and explore how to integrate sustainable design and systems into their design work to allow them to create spaces that have limited impact on the environment.

Interior designers need to develop a broad range of skills and abilities to support them in their creative design and problem solving processes. Being aware of, and understanding how the built environment is used, occupied and constructed, is invaluable in helping initiate this. Selecting appropriate knowledge of key practical skill sets and techniques, and using professional standards and conventions to portray their technically and visually, is crucial to ensuring that these processes are developed and facilitated efficiently and effectively.

Objectives

A student passing this module should be able to:

- 1. Understand, analyze and evaluate a basic Design Brief, by acknowledging the importance of constraints and conditions imposed by client and site, and produce a small range of 3D spatial design ideas and concepts accordingly.
- 2. Understand the basic elements and principles of the sustainable design process, for generating ideas from Briefing to Concept proposals, including how to carry out a measured survey & drawings
- 3. Develop professional interior design skills & techniques including drawings, plans, illustrations and models.
- 4. Develop students understanding and skills in materials & techniques & technologies within interior design contexts and constraints.
- 5. Understand the construction process, and identify the difference between sustainable and unsustainable materials.
- 6. Produce a basic Environmental Strategy proposal to include e.g. energy, water and waste reduction.
- 7. Adopt either traditional or new methods of sustainable building construction and technology in their design proposals, to conform to the statutory requirements of the Building/Fire Regulations and Disabled Access.
- 8. Evidence the ability to think three dimensionally in response to contextual and environmental factors, and using appropriate sketch design and development techniques, reflect on the quality and appropriateness of their experiments to inform their progress
- 9. Develop technical layout, drafting and practical drawing and design skills.
- 10. Develop visual design skills for the generation of ideas and concepts.
- 11. To develop design skills within the constraints of a given interior design project brief.

Units	Course Content
	Design Ideas Generation
1	Creative Conceptual Interior Space Design ideas, sketches and drawings.
1	Process development of visual design ideas & sketches showing varied viewpoints for a
	proposed given interior.
2	Design Development of visual design idea through the exploration of layouts, concepts
2	And interior plans.
3	Exploration and investigation of materials, techniques and technologies for interior
3	Spaces and surface designs.
4	Technical Drafting and drawing of layouts and plans including correct symbols and
	Scale, within the constraints for given interior design project brief.

5	Application of media and drawing techniques to illustrate different viewpoints of a Given interior including perspective drawings, orthographic drawings of views and sections.
6	Model Making Materials, Techniques & Technologies
	Production of scale model(s) of proposed design
7	Understanding Architectural Symbols and scales for architectural and interior design.
8	Quantification, Reporting, Presentation.
9	Detail Documentation, Drawing, Observation and Notes
10	Visit to various sites (field visits) and to submit study report
1.1	Understanding constraints and needs of the given 'Design Brief' from a client's
11	Perspective and according to their requirements.
12	Quantification , Estimations and costing), Reporting, Presentation
13	Professional Presentation Skills
13	Sketches, plans, layouts, illustrations and models presented professionally
14	Group Design Presentation & Critic
References	

D 1

Books

- 1. Berger, C. Jaye. Interior Design Law and Business Practices. New York: John Wiley & Sons, Inc., 1994.
- 2. Burden, Ernest. Design Communication: Developing Promotional Material for Design Professionals. New York: McGraw-Hill, 1987.
- 3. Ching, Frank. Illustrated Guide to Interior Architecture. New York: Van Nostrand Reinhold, 1987.
- 4. Cvoxe, Weld, Maister, David, and The Coxe Group. Success Strategies for Design Professionals. New York: McGraw-Hill, 1987.
- 5. Dell'Isola, Alphonse, and Kirk, Stephen J. Life Cycle Costing for Design Professionals. New York: McGraw-Hill, 1981.
- 6. Epstein, Lee. Legal Forms for the Designer. New York: Design Publications, 1977.

Websites

https://www.dkorinteriors.com/lighting-modern-interior-design/

https://www.hgtv.com/remodel/mechanical-systems/lighting-tips-for-every-room

https://study.com/academy/lesson/what-is-residential-interior-design.html

Videos

https://www.youtube.com/watch?v=wjTcUzMDqzY

SEMESTER IV

BID491 Full Marks:100

Architectural Landscape Design (Practical)

Objectives

- To develop an understanding about the importance of functionality and aesthetics of landscaping.
- To enhance knowledge about its planning, various plant types & care & maintenance.
- To become aware of the various materials related to landscaping.
- To communicate effectively in graphic, written, and verbal formats.
- To understand the relationship of the history and theory of landscape architecture.
- To acquire knowledge of the basic fundamentals of environmental design, particularly the implications of social and natural factors.

• To apply design principles in a range of sites and scales.

• To apply design principles in a range of sites and scales.		
Units	Course Content	
	Introduction to architectural Landscaping & Research	
	Historical & Contextual References.	
1	• Architectural Landscape designers & their work.	
	• Exemplar visual works of Architectural Landscape design.	
	• Research of: Materials, plants and furniture.	
	Fundamentals of Landscape design	
	• Contextualize the outdoor space.	
2	• Scale, part 1: The landscape to the existing house	
	• Scale, part 2: Humans to the landscape	
	• Lines, shapes, Forms, Textures, colours and Rhythm	
	Topographic Form & Design Technique	
3	• The interpretation of the shape and features of the surface of the Earth to enable	
	Visualisation of designs and design ideas.	
	Landscape Drawing Creation of sketches, visual ideas and initial diagrams/plans	
4		
	Development of designs through process	
	Materials and art & design techniques	
_	Factors Affecting Planning of Landscaping	
5	• Location & orientation, climatic conditions, land profile, soil type, water sources,	
	drainage, elements & principles of design	
6	Planning of Landscaping (Residential & Commercial)	
	Planning codes & procedures	
	Dimensions of Landscape Space	
_	• Foreground area (boundary, pathways, parking, arches, porch etc.)	
7	• Private living area (recreational area, play area, outdoor seating etc.)	
	• The service area (cleaning area, drying area, garbage area, disposal, water supply,	
	kitchen, garden)	
8	Plant Forms and Types	
	• Trees, plants, hedges, flowers, lawns, vines, creepers, Indoor plants, bonsai)	
9	Outdoor Furniture	
	Final Drawings & Technical Drafting of Plans	
	• Final Drawings and plans	
	Drawings showing a variety of viewpoints and perspectives	
	Critic & Presentation	
10	Presentation of project & research	
	Written evaluation against intentions	
	Action plan for future improvements	

- 1. Bose T K, *Tropical Garden Plants*, Kolkata, Horticulture & Allied Publishers, 1991
- 2. Cedric Crocker, All About Landscaping, Ortho Books.
- 3. Faulkner R & Faulkner S, Inside Today's Home, New York, Holt Rinehart & Winston Inc., 1960
- 4. Hooguett Fickle, *The Garden*, The Netherlands, Rebo Production, Lisse 1977
- 5. Learner J M, The Complete Home Landscape Designer.
- 6. Trivedi, P & Chawdhury B, Home Gardening, New Delhi, India, Council of Agricultural Research, 1983
- 7. The Fundamentals of Landscape Architecture 2nd Edition by Tim Waterman (Author)

Websites

https://www.curbed.com/2016/5/23/11700166/landscape-garden-design-101

BID401 Full Marks: 100

Estimation & Costing (Theory)

Objectives

To enable the students to:

- To be aware of the cost of various materials used in interiors.
- To enable students to estimate the cost of a product / interior by learning calculation methods.

Units	Course Content
	Importance of Estimation & Costing In Interiors
	• Individual item
1	• A room
	• A full apartment
	• A house
	Main areas of Cost Estimation
	• Walls (plastering, white washing, painting, textured finish, panelling etc.)
	• Flooring: material, laying
	• Ceiling: false ceiling, painting etc.
2	• Wood work (material, polishing, varnishing & other applied finishes)
2	• Furniture & furnishing
	• Plumbing
	• Drainage
	• Electrical fittings & layout
	• Other special features
3	Rules & Methods of Measurement
	Procedure of Estimating
	Metric system and primary units
4	• International system of units
	Degree of accuracy
	• Calculations
	Analysis of Rates
	Overhead costs
5	Task or out turn work
3	• Rates of material and labour (quantity take off schedule of item, schedule of rates,
	schedule of quantities)
	• Preparing analysis of rates
	S pecifications
	• General specifications
6	• Detailed specification of cement, concrete, R.C.C, brickwork, plastering, painting,
	white washing, colour washing snowcem, decorative cement colour washing, wood
	work, varnishing etc.

References

Books

- 1. Arora B D, *Electrical Wiring, Estimation & Costing*, New Heights, Karol Bagh, New Delhi.
- 2. Basu, *Economical Building designs*, Basu Publications, Kolkata.
- 3. Hungtington & Whitney Clark, Building Construction John Wiley & Sons Pvt. Ltd.
- 4. S.K. Sharma, Civil Engineering Construction Materials, Khanna Publishing House.

BID492 Full Marks: 100

Computer Aided Design Studies II - AUTOCAD (Practical)

Objectives

To enable the students to:

- Digital drawing production through the use of AutoCAD,
- Digital visualisation skills through the use of Adobe Photoshop and the Adobe Creative Suite
- To design and develop a plan with all the detailing through the use of this software
- To help in formulating and customizing designs with proper presentations

<u>nits</u>	Course Content
1	Re-Cap of principles of AUTOCAD software
2	Introduction to 3 Dimension digital drawing & 3Dimension Model Space
3	Working with 3D Primitives, Understanding Camera Trucking, Panning & Dolly.
4	3D Object Transformation, Designing Simple 3D Architectural Blocks.
5	Modifying 3D Block with Boolean Operations.
6	Designing Complex 3D Architectural Accessories with Dimensions.
7	Shading & Texturing With Interior Materials.
8	Placing Virtual Light (Exterior & Interior) within a Final Scene.
9	Rendering Various Perspective Views.
10	Managing Project File, File Import Export, Interoperability Between Autocad & 3D Max.
11	Conversion of Freehand sketch designs for plan and elevation into Computer Aided Designs
12	Points, Lines, Types of Lines, Angles, Triangles, Circles and other types of pictorial projections

References

- 1. Book on Latest Version of Auto CAD
- 2. Parker, Charles. Understanding Computers Today & Tomorrow. Fort Worth, TX: Dryden Press, 1998.
- 3. Sabot, Gary. High Performance Computing Problem Solving with Parallel and Vector Architectures. Reading, MA: Addison-Wesley Publishing Company, 1995.
- 4. Taylor, Dean. Computer-Aided Design. Reading, MA: Addison-Wesley Publishing Company, 1992.
- 5. Pradeep Jain & A.P. Gautam, Engineering AutoCAD, Khanna Publishing House, 2017.

BID402 Full Marks: 100

Introduction to VAASTU and FENG SHUI (Theory)

Objectives

• To introduce students to various ancient concepts & principles on Vaastu and Feng Shui and their present relevance in Interior and Architectural Design.

- To develop research and analytical skills
- To develop skills in applying learnt knowledge.

Units	Course Content
1	 What is Feng Shui? History & Traditions Principles Meanings Perceived Benefits
2	What is Vaastu? • History & Traditions • Principles • Meanings • Perceived Benefits
3	Various Principles of Indian Vaastu Shastra
4	Various Principles of Chinese Feng Shui and their application in modern building construction and interior design

References

- 1. "GOLDEN PRINCIPLES OF VASTU SHASTRA Vastukarta". Www.vastukarta.com. Retrieved 2016-05-08.
- 2. Acharya P.K. (1946), An Encyclopedia of Hindu Architecture, Oxford University Press
- 3. Vibhuti Sachdev, Giles Tillotson (2004). Building Jaipur: The Making of an Indian City. p. 147. ISBN 978-1861891372.
- 4. Vasudev (2001), Vastu, Motilal Banarsidas, ISBN 81-208-1605-6, pp 74-92
- 5. Sherri Silverman (2007), Vastu: Transcendental Home Design in Harmony with Nature, Gibbs Smith, Utah, ISBN 978-1423601326
- 6. Gautum, Jagdish (2006). Latest Vastu Shastra (Some Secrets). Abhinav Publications. p. 17. ISBN 978-81-7017-449-3.
- 7. BB Dutt (1925), Town planning in Ancient India at Google Books, ISBN 978-81-8205-487-5; See critical review by LD Barnett, Bulletin of the School of Oriental and African Studies, Vol 4, Issue 2, June 1926, pp 391
- 8. Vibhuti Chakrabarti (2013). Indian Architectural Theory and Practice: Contemporary Uses of Vastu Vidya. Routledge. pp. 1–2. ISBN 978-1-136-77882-7
- 9. Dunning, Brian. "Feng Shui Today". Skeptoid.com. Retrieved 30 October 2016.
- 10. Cheng Jian Jun and Adriana Fernandes-Gonçalves. Chinese Feng Shui Compass: Step by Step Guide. 1998: 21

Websites

https://www.teresahwang.com/services/feng-shui-objectives

https://galaxydraperies.com/psychology-interior-design-decor-affect-emotions/

http://www.mahavidya.ca/2015/06/26/the-vastu-tradition-in-hinduism/

http://www.vastu-design.com/introduction/

BID481 Full Marks:100

Computer Graphics (Practical) SESSIONAL

Objectives:

To enable the students to:

- This module aims to provide students with a working knowledge of basic engineering drawing and the software tools that can be used to produce various drawings.
- Create opportunity for the students in gaining skills using modern CAD InDesign software.

Units	Course Content
Units	
	• The module is designed to enable students to create their own concept designs using
	industrial standard Computer Aided Design (CAD) software - InDesign. These computer
	representations will be required to explore digital design for small and large batch
	components and products. Students will be able to explore the software, according to the
	design and manufacturing requirements of the design.
	Adobe Indesign: Getting started with Adobe Indesign, working with adobe
	InDesign to create Mood & Trend Presentation
	Boards, Creating textile patterns and layouts, Creating invitation card, visiting cards and greeting cards, books layouts. (Selection, layering and masking, painting, editing, filing, distortion, rotation, scaling, copying, repetition, colour changes and image adjustment techniques.)
1	 Introduction to Interior Graphics on InDesign. Introduction to print development on InDesign

ADOBE INDESIGN

Adobe InDesign CC Classroom in a Book (2018 release) by Kelly Kordes Anton and Tina Dejarld

Adobe InDesign CS6 Classroom in a Book by Adobe Creative team

Adobe Indesign 2018: An Easy Guide to Learning the Basics by Dale Michelson

Adobe Creative Suite 6 Design and Web Premium All-in-One For Dummies by Jennifer Smith and Christopher Smith

Learn Adobe InDesign CC for Print and Digital Media Publication: Adobe Certified Associate Exam Preparation (Adobe Certified Associate (ACA) by Jonathan Gordon and Rob Schwartz

Full Marks: 100

DESIGN STUDIO - IV - Commercial Interior Design Project (Practical) SESSIONAL

Overview

This module focuses on the design of commercial interior spaces. Students will research existing creative commercial spaces and explore the core elements of the design process for a given interior space. The project will touch on all aspects of interior design such as interior architecture and space design. Interior designers need to develop a broad range of skills and abilities to support them in their creative design and problem solving processes. Being aware of, and understanding how the built environment is used, occupied and constructed, is invaluable in helping initiate this. Selecting appropriate knowledge of key practical skill sets and techniques, and using professional standards and conventions to portray their technically and visually, is crucial to ensuring that these processes are developed and facilitated efficiently and effectively.

Objectives

- To develop the skill in visualizing and designing spaces of commercial interiors considering the principles of designs, anthropometric data and ergonomic criteria.
- To understand the criteria for selection of appropriate material for different surfaces taking into consideration of ergonomic factors, aesthetics and cost.
- To develop creative and practical design skills for creating interior spaces.
- To develop research and written analytical skills for specific topics and processes.

Units	Course Content
	Research & Study of Commercial Interior Design with the Perception of Purpose, Function & Aesthetics:
	Basic needs: ergonomic consideration, psychological, aesthetic, occupational and professional development
1	Analysis of clients' specific requirements
1	• Location
	Space requirement
	Availability of materials
	Design principles
	Budget
	Research Current Trends in Commercial Interior Design
2	Design Innovations
	Regional and genre trends
	Interior Design of Commercial Spaces with Their:
	• Types
	• Planning considerations: functions, orientation, circulation, grouping, light, ventilation, privacy, Climatic and ergonomic factors, aesthetics & cost.
3	• Standards
	Service (electrical, lighting, water supply, drainage, air conditioning)
	 Materials & finishes (wood, glass, plastic, metals, acoustical boards, floor covering, panelling materials, false ceiling material)
	Furniture details

4	Research & analyse the work of a range of professional Interior Designers with a focus on Commercial Space design: Restaurants & Cafeterias Educational Facilities Retail Outlets & Stores
5	Working Design Drawings & Sketches A range of initial designs, sketches, drawings and illustrations to show your conceptual design ideas.
6	Service Drawings and symbols
7	Developing simple models Explore form and space through model making
8	Typical Commercial Interior Project Formulation Implementation plan for project and management
9	Design Development Development of visual design idea through the exploration of layouts, concepts and interior plans.
10	Exploration and investigation of materials Exploration and investigation of materials, techniques and technologies for interior spaces and surface designs.
11	Technical Drafting and drawing Technical Drafting and drawing of layouts and plans including correct symbols and scale, within the constraints for given interior design project brief.
12	Application of media and drawing techniques to illustrate different viewpoints of a given interior including perspective drawings, orthographic drawings of views and sections.
13	Quantification, Reporting, Presentation. Budget Provision and Project Schedule
14	Final Technical Drafting Plans & Layouts Viewpoints
15	Organisation and Presentation Organisation of the working drawings for the same including service drawing with professional guidance.
16	Group Design Critic, Evaluation and Action Planning Written evaluation against brief objectives and intended outcomes. Action palnybased on critic feeback from others and own informed evaluations.

- 1. Alexander, N J, Mercoust Brace, *Designing Interior Environment*, Havanovich Inc.
- 2. Cerver F A, Commercial Space, Office Design & Layout, Rotovision SA
- 3. Cerver F A. Commercial Space, Bars, Hotels & Restaurants, Rotovision SA, Switzerland
- 4. Cerver F A., Shops, Malls & Boutiques, Rotovision SA
- 5. De Chiara Joseph & Callender John, *Time Saver Standards for Architectural Types & Interior Design & Space Planning*, McGraw Hill Book Co.
- 6. Gustafsan K & Yes Robert, Corporate Design, Thames & Hudson, London
- 7. National Building Code of India, Bureau of Indian Standards, New Delhi, 1999
- 8. Reznikoff S C, *Specifications for Commercial Interiors*, Whitney Library of Design.

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http://www.vegas.com.sg/retail-interior-design/

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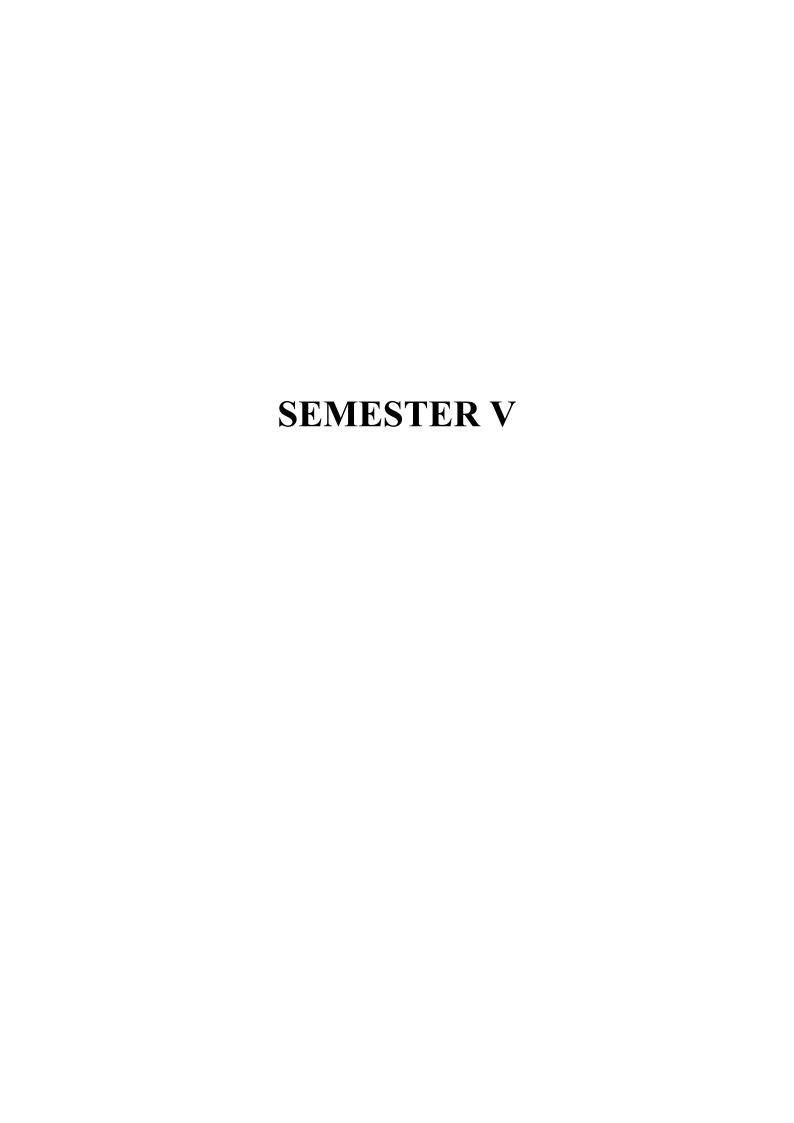
https://www.architonic.com/en/projects/interior-architecture/0/5910002/1

https://www.forbes.com/sites/yjeanmundelsalle/2017/12/14/the-worlds-best-interior-designers-hot-

list/#74bedfe93312

http://www.martynlawrencebullard.com/

http://mydesignagenda.com/interior-design-and-architecture-projects-need-inspired/



BID591 Full Marks: 100

Professional Industry Internship (Practical)

Objectives

- To enable the students to get first hand practical industry training experience.
- To gain practical industry training from skill industry professionals.
- To allow students to be able to integrate the theoretical knowledge into practical situation.
- To develop students ability in industry working practices and conditions.
- To develop students documentation and written skills in terms of report writing.
- To develop written presentation skills in the form of a case study document.
- To develop students practical design skills in the contexts of industry based projects.
- To develop skills and experience in working within industry constraints.
- To develop professional industry practice design skills.

Course Content

Duration: Approx 8-10 weeks

A professional industry practical Internship at an Interior Design or Architectural Firm or Real Estate/ Promoters / Construction Firm or Furniture Design Unit.

Students to work on a given practical design project or project sections within professional constraints and contexts as set by the firm. Students will follow a design process to industry standards and produce a full interior design project (or part of varied design projects) with supporting research, photos and written information and diary/planner recording the full internship and project development.

BID501 Full Marks: 100

Sustainable & Ethical Studies - III Green and Energy Efficient Buildings (Theory)

Objectives

Upon completion of this module students should be able to:

- Understand sustainability associated with the construction, architectural and interior design industries, which includes an outline set of green specifications, construction methods and technologies..
- Differentiate clearly between sustainable and unsustainable, construction methods and materials, when analyzing and making design decisions.
- Communicate the application of their research findings and design development abilities, using industry standard methods.
- Recognize and address some of the main environmental challenges facing the design and building construction industry.
- Understand the importance of, identify with, and reflect on the wider benefits of sustainably and biodiversity to local communities.

	local communities.	
Units	Course Content	
	Human Ethics & Environment	
	Resource consumption pattern and the need for equitable utilization	
	• Equity-disparity in the northern and southern countries	
1	Urban-rural equity issues	
	Need for gender equity	
	Preserving resources for future generations	
	The ethical basis of environment education and awareness	
	Fundamentals of Environment	
	Environmental definitions	
2	Life and the environment	
2	Changes in the environment: anthropogenic and non-anthropogenic	
	Environmental hazards and risks	
	Natural resources: conservation & sustainable development	
	System Concept in Ecology	
	Ecosystem, and its functional attributes	
3	Energy flow in the ecosystem	
	Material cycling	
	Development and evolution of ecosystems	
	Population & Environment	
4	Carrying capacity: limits to population growth	
	Population growth and natural resources	
	Impact of population growth on economic development and environment	
	Land & Water Resources of the Earth	
5	• Land resources of the earth	
	• Land use pattern	
	Water resources of the earth	
	Pollution & Environment with Reference to Air, Water, Soil & Noise	
6	• Concept of pollution	
	• Sources of pollution	
	Remedies to control pollution	
	Environment & Public Health	
7	Environmental pollution and community health	
	Waste management: types of waste and solid waste management	

	Environmental registration and policies
	Environmental ethics and human rights issues relating to environment
	Women and environment
0	 Fuel & Energy Management Fossil fuels & solid, liquid and gaseous fuels Hydel power: potential, limitations and adverse environmental impacts Solar energy: principle (water heating, refrigeration, cooking, desalination)
8	 Energy from biomass: biogas and gasohol Energy audits & management Different measures of energy saving
9	Sources of Energy Classification (nonrenewable and renewable, alternative, conventional & non-conventional).
10	Solar Energy • Principle of liquid collectors • Concentrating collectors and air heaters • Storage devices
11	Solar Energy Application of solar energy in water heating, refrigeration, cooking, desalination, power generation, photovoltaic conversions and solar salt ponds.
12	 Energy Conservation Utilization of Biogas energy Waste heat recovery and utilization Maintenance of domestic heaters, cooking, lighting
13	 Green Buildings Nature of Green buildings Principles of Green Buildings Difference between the conventional and the Green Buildings Benefits of Green Buildings Green building Rating System
14	Eco friendly Construction Materials Use of eco-friendly construction materials in flooring, walls, ceiling& roof
15	 Energy Efficiency Air conditioning Lighting System: efficient light sources, dimmer controls, use of natural light and solar light Wind tower and power generation
16	 Water Efficiency Recycling of waste water Rainwater Harvesting Water Efficient Fittings
17	 The social implications and economic value of sustainability, to local and global communities The application of sustainable theories and strategies, and green building construction principles to a design proposal The Green and BIM Overlays to the RIBA's Plan of Work How to conform to the Building Research Establishments Environmental Assessment Method (BREEAM) principles

- Reusing fittings, recycling materials, and reducing waste, conservation of energy and Biodiversity
- Basic sustainable construction methods for walls, floors and ceilings
- Spatial psychology of 'New Ways of Working'.

Books

- 1. Cllicott B, In Defense of Land Ethics: Essays in Environmental Philosophy, Albany State University of New York Press, 1989
- 2. Enrlich P R & Heldren J P, Human Ecology, 1973.
- 3. Nash R F, The Rights of Nature: A History of Environmental Ethics, Madison University of Wisconsin Press, 1989
- 4. Owen D F, What is Ecology? Oxford University press, 1974
- 5. Scheneider S H, Global Warming: Are We Entering the Greenhouse Century, 1989
- 6. Anink, D, Handbook of Sustainable Buildings, James & James, 1997
- 7. Baggs, Sand J, The Healthy House, Thames & Hudson, London, 1996
- 8. Woolly & Kimmins, Green Building Handbook, E & FN Spon, 1997
- 9. M.P. Poonia & S.C. Sharma, Environmental Studies, Khanna Publishing House, 2018

BID502 Full Marks: 100

Entrepreneurship Management (Theory)

Objectives

- To develop entrepreneurship skills in students.
- To motivate students towards seeking an entrepreneurial career.
- To help the students understand the process & procedure of setting up small enterprises.
- To develop analytical skills of students regarding the environment related to small-scale industries & businesses.
- Demonstrate an understanding of the potential variety of roles of a professional Landscape Architect or Interior Designer, and the range of projects they may undertake.
- Demonstrate an appreciation of the professions potential future role and contribution to environmental development and 'place-making'.

Units	Course Content
	Enterprise Management
	Concept of entrepreneurship development
1	Need, scope, process & role in economy.
	• Types of enterprises: merits & demerits.
	• Institutional support, government polices & schemes for enterprise development.
	The Entrepreneur
2	• Definition behavior, characteristics, entrepreneurial competency, concepts & development.
	• Self-awareness, interpersonal skills, creativity, assertiveness.
	• Factors influencing entrepreneur's role.
	Setting & Managing an Enterprise
	• Need, scope & approaches for project formation, market assessment, S.W.G.T analysis & techno-economic feasibility of project.
3	• Resource mobilization-finance, technology, raw materials, site & manpower.
	Costing, marketing management & quality control institutions.
	• Book of accounts, financial statements, funds flow analysis & financial incentives.
	Feedback, monitoring & evaluation
4	Critical Path Method, Project Evaluation, Review Techniques for Establishing Small-Scale Industries.
5	Creativity & Problem Solving Personnel Management.
3	• Salaries, wages & incentives, performance appraisal, quality control etc.
	Marketing & Sales Management
6	• Marketing management & sales techniques, packaging, label intervention, pricing & after sales service.
	Legislation
7	• Licensing, registration, principal laws, business ethics, income tax, labour law application, consumer complaint redressal.

Books

- 1. A handbook of learning Systems, Entrepreneurship Development, Institute of India, New Delhi, 1982
- Deshpande M V, Entrepreneurship of Small Scale Industries, Concept, Growth & Management, Deep & Deep Publications, New Delhi, 1984
- 3. Hirsch R D. & Peter M P, Entrepreneurship, Starting Developing & Managing a NewEnterprise, Richard. D Irwin, Inc, U.S.A, 1995
- 4. Parekh V & Rao T V, Personal Efficiency in Developing Entrepreneurship Learning System, New Delhi, 1978
- 5. Premvir Kapoor, Principles of Management, Khanna Publishing House

BID592 Full Marks: 100

Computer Aided Design - III - 3D MAX (Practical)

Objectives

- To develop students practical design skills 3D Max & its application.
- To develop students technical knowledge of AutoCAD with reference to technical drawing and drafting in 3 Dimensional format.

Units	Course Content
1	Essentiality of 3Ds Max in Architectural Design Visualization, Product Show Reel & Other Demo Reel, User Interface of 3D Max
2	Negotiating with Objects Transformation (Move, Rotate, Scale), Understanding Various 3D Model Types (Spline, Mesh, Poly, Patch, Nurbs)
3	Changing System Unit & Working with Architectural Unit System, Drafting & Modifying Simple 2D Architectural Block with Spline Shape
4	Usage of Spline Modifiers (Extrude, Lathe, Bevel Profile, Sweep) to Generate 3D Surface Model.
5	Creating a Simple Building Plan with Dimension.
6	Importing Plan from Autocad to 3D Max & Modeling a Complete 3Dd Building (by Using Wall Tool & other AEC Extended Objects).
7	Mesh & Poly Modeling of Different Interior Accessories.
8	Concept of Patch & Nurbs Model & Understanding their Characteristics. Usage of Them in Architectural Modeling.
9	Definition Of Material And Textures And Relation Of Them With Virtual Scene Light.
10	Working with Different Architectural Materials, Placing Proper Lights in a Small Interior Scene.
11	Handling Target & Free Camera, Placing Camera in a Scene to Get Perspective View from a Specific Angle.
12	Examples of Advanced Material (Mental Ray Arch & Design) & Photometric Light (Area, Linear, Isotropic, Spot) with Indirect Illumination (Final Gathering)
13	Casting Mental Ray Sun & Sky Light for Exterior Scene, Generating Atmospheric Effects such as Fog, Mist, Fire, Cloud
14	Rendering into Photo Realistic Raster Images of Various Formats & Sizes.
15	Definition of Animation. Classification of Animation. Examples of 3D Max Key Frame Animation
16	Creating Camera Fly through in Both Int& Ext Scene
17	Managing Project File, File Import Export, Xref Objects & Communicating with Other 3D Packages

- 1. Arnaud, Remi & Barnes, Mark C. "COLLADA: sailing the gulf of 3D digital content creation". Wellesley, Mass. A K Peters, 2006.
- 2. Blundell, Barry G. & Schwarz, Adam J. "Creative 3-D display and interaction interfaces: a transdisciplinary approach". Hoboken. Wiley-Interscience, 2006.
- **4.** Blundell, Barry. "Introduction to computer graphics and creative 3-D environments". London. Springer, 2008.
- **5.** Boardman, Ted & Hubbell, Jeremy. "Inside 3D studio max 3: modeling, materials and rendering". New Delhi. Techmedia, 1999.
- **6.** Brown, Tim H.[et al.]. Art of Maya: an introduction to 3D computer graphics, 4th ed. California. Autodesk Maya Press, 2007.
- 7. Buss, Samuel R. "3D computer graphics: a mathematical introduction with OpenGL". Cambridge. Cambridge University Press, 2003
- **8.** Chen, Jim X. & Chen, Chunyang. "Foundations of 3D graphics programming: using JOGL and Java3D, 2nd ed." London. Springer, 2008.
- **9.** Derakhshani, Dariush, Munn, Randi L. & McFarland, Jon. "Introducing 3ds Max 9: 3D for beginners". Indiana. Wiley Publishing, 2007.
- 10. Discreet. "3ds max 7 fundamentals and beyond courseware". Delhi. Focal Press, 2005.
- 11. Ferguson, R. Stuart. "Practical algorithms for 3D computer graphics". Natick. A K Peters, 2001.
- 12. Giambruno, Mark, "3D graphics and animation, 2nd ed." Delhi. Pearson Education Asia, 2002.

BID581 Full Marks: 100

Design Studio - V - Professional Mentored Design Project (Practical) SESSIONAL

Overview

This module focuses on the design of a substantial interior space, working with a professional mentor. Students will research existing creative interior spaces and explore the core elements of the design process for a given interior space. The project will touch on all aspects of interior design such as interior architecture and space design, with an emphasis on creating a unique cutting edge design.

You will use the broad range of skills which you have gained to support your creative design and problem solving processes. You will understand and be aware of, and understanding how the built environment is used, occupied and constructed, is invaluable in helping initiate this. Selecting appropriate knowledge of key practical skill sets and techniques, and using professional standards and conventions to portray their technically and visually, is crucial to ensuring that these processes are developed and facilitated efficiently and effectively.

Objectives

A student passing this module should be able to:

Further examine and digest a written design brief, site contexts and user requirements to logically and competently produce an innovative solution to a design problem.

- 2. Appraise the ergonomic impact of classic design furniture and products, to help create an aesthetically pleasing as well as a functional atmosphere within an interior.
- 3. Understand the value of coherently incorporating sketching, model making, technical drawing and CAD, into an acceptable professional standard of communication, using materials and techniques to coordinate the presentation.
- 4. Follow the design process to create creative unique sustainable and healthy environment, using the basic strategic knowledge and tactics of e.g. planar form, movement, light, colour and surface finishes.
- 5. Document and contextualize research to help inform the design decision making process for the benefit of the end users.
- 6. Produce correct and professionally presented drawings, design ideas, proposals and models.
- 7. Further demonstrate and apply basic knowledge of building construction and materials for informing a sustainable design project resolution.

Units	Course Content
1	Professional Project Planning Identify a client, a practical site and develop the design requirement, related design issues and provide alternate design scenarios and develop the most practical alternative.
2	Ideas Generation Generation and development of visual design ideas & sketches showing varied viewpoints for a given interior.
3	Design Development Development of visual design idea through the exploration of layouts, concepts and interior plans.
4	Exploration and investigation of materials Exploration and investigation of materials, techniques and technologies for interior spaces and surface designs.
5	Technical Drafting and drawing Technical Drafting and drawing of layouts and plans including correct symbols and scale, within the constraints for given interior design project brief.
6	Model Making 3 Dimensional Scale model of space design using correct techniques
7	Symbols, Scale and Technical Drawing Application of symbols on technical architectural plans and drawings. Using correct and accurate scale and drafting methodology.

8	Application of media and drawing techniques to illustrate different viewpoints of a given Interior including perspective drawings, orthographic drawings of views and sections.
9	Quantification, Reporting, Presentation. Budget Provision and Project Schedule
10	Organization and Presentation Organization of the working drawings for the same including service drawing with professional guidance.
11	Group Design Critic, Evaluation and Action Planning Written evaluation against brief objectives and intended outcomes. Action plan based on critic feedback from others and own informed evaluations.

Books

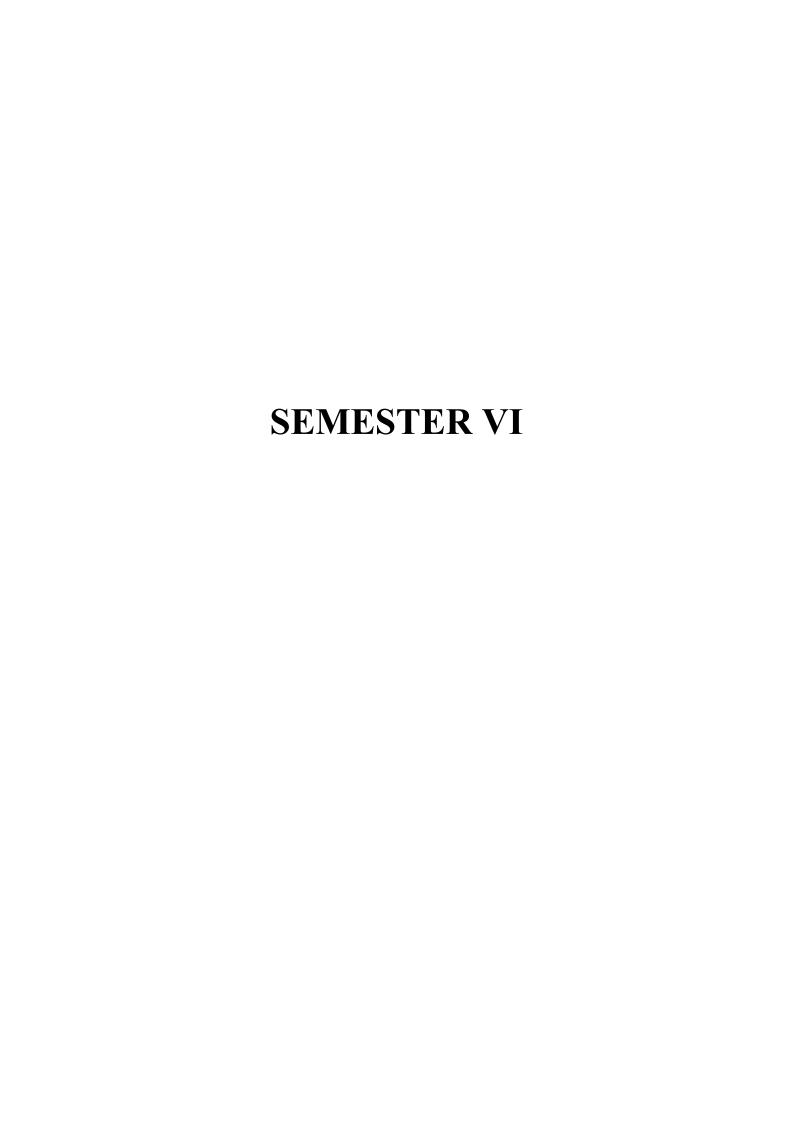
- Habitat: The Field Guide to Decorating: Lauren Liess: 9781419717857
- https://www.amazon.com/Habitat-Field-Decorating-Lauren-Liess/dp/141971785
- Patterns in design, art and architecture: Petra Schmidt Annete Tiebenberg Ralf Wolheim: Birkhauser.
- In Details Interior Surfaces and Materials: Christian Schittick Editions Detail.
- Material Skills Evolution of materials Els Zijlstra Materia Rotterdam.
- Kevin Lynch. The Image of the city. The MIT Press, 1960.
- Christopher Alexander. A Pattern language: towns, buildings, construction. Oxford University Press, 1978.
- Kenneth Frampton. Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture. The MIT Press, 1995.

Websites

- https://www.designingbuildings.co.uk/wiki/Types_of_drawings_for_building_design
- https://www.dkorinteriors.com/lighting-modern-interior-design/
- https://www.hgtv.com/remodel/mechanical-systems/lighting-tips-for-every-room
- https://study.com/academy/lesson/what-is-residential-interior-design.html
- http://mydesignagenda.com/interior-design-and-architecture-projects-need-inspired/

Videos

• https://www.youtube.com/watch?v=wjTcUzMDqzY



BID601 Full Marks: 100

Restoration & Renovation of Building Interiors (Theory)

Objectives

- To develop students understanding and knowledge in buildings restoration and renovation.
- To develop students understanding of the role of conservation of historical and locally nationally important buildings.
- To develop critical thinking skills in relation to the repair and renovation of buildings and interior spaces.
- To become aware of the needs for repairing and associated restoration problems.
- To develop research and written skills in recording and analysing issues and topics associated with conservation, restoration and renovation of buildings and interior spaces.

Units	Course Content
	Renovation
	Importance of renovation
1	• Need for renovation
	• Areas of concern: walls, floor, ceiling/roof, wood work, electrical, plumbing, sanitary, furniture & furnishing
2	Research – Renovation Projects
2	• Source and gather research of exemplar local renovation projects, including site visit.
	Importance of Restoration
	Historical heritage
2	Economical significance
	Sustainability - Up-cycling and recycling
	• Design trends
	Considerations of Additions & Alterations
3	• Evaluation of existing conditions, structural stability.
3	• Study of prevalent rules and regulations of local authorities
	• Integration of 'new' and 'old' structures and interiors
	Preparing repair proposal
4	• Preparing repair proposal: the blending of repair work with old work giving consideration to purpose, stability and asthetics.
	• Sketches and drawings for a given proposal, showing different viewpoints and where appropriate elevations, including written annotations.

References

- 1. Basic Woodworking, Sunset Books
- 2. Chudley, R, **Building Technology**, Vol. 1 –5,
- 3. Davidson James, *Complete Home Lighting Book*, Casell Publishers, U.K.
- 4. Faulkner & Faulkner Inside Today's Home
- 5. Hiraskar G K, *The Great Age of World Architecture*, Dhanpat Rai Publications
- 6. Housing, A Factual Analysis; Macmillan, New York.
- 7. John Pile, History of Interior Design
- 8. JouhnBu'lock Bjorn Kristianseir, *Basic Biotechnology*, Academic Press, London, 1987

BID602 Full Marks: 100

Sustainable & Ethical Studies IV - Dissertation (Theory)

Objectives

- Develop a body of research of sustainable innovations and solutions within the fields of Architecture, Construction and Interior Space Design industries.
- Written analysis and interpretations of data, facts and other information in the form of a dissertation.
- Present an original dissertation on a chosen area of sustainability and ethics within the construction
 and design industries, which includes facts, specific examples, technical information, discussions and
 conclusions within given contexts.
- Communicate and present articulately, objective rationales and discussions on the environmental impact and health and well being of their topic.

Units	Course Content
1	Research and sourcing: • Sustainable/Ethical Topic related to industry. • Related articles, facts, figures, diagrams and images. • Organisations, bodies and agencies • Technological developments innovations and discoveries within given context and Subject.
2	Written analysis & responding to research: Notes Written observations
3	 Drafting and refinement of ideas, arguments, discussions and facts: First written draft with notations for refinement, corrections and additions Second written draft with corrections
4	Final Written Draft • Proof-read & complete with all corrections
5	Bibliography & referencing: • Written bibliography • Correct referencing
6	Presentation & Evaluation • Professionally Presented Bound dissertation • Written evaluation against desired outcomes

References

Books

• Case Study Handbook: How to Read, Discuss and Write Persuasively About Cases Paperback – 15 Mar2007 by Ellet (Author)

Websites

http://equip.sbts.edu/article/20-tips-to-help-you-finish-your-dissertation/

 $\underline{https://www.edugeeksclub.com/blog/How_to_Write_Your_Best_Dissertation/}$

https://www.oxbridgeessays.com/blog/top-10-masters-dissertation-writing-tips/

https://neilpatel.com/blog/creating-a-great-case-study/

BID603 Full Marks: 100

Professional Practice - II (Theory)

Objectives

On successful completion of this module, a student will be expected to be able to:

- 1. Demonstrate an appreciation of the professions potential future role and contribution to environmental development and 'place-making'.
- 2. Identify professional methods of communication and presentation.
- 3. Sustain a degree of involvement in one major piece of work from initiation to completion, accepting accountability for determining its outcome.
- 4. Work independently, and exercise informed judgements about the demands of the subject at high level.
- 5. Manage their time, meet deadlines and produce a piece of work demonstrating high standards of presentation and creativity.
- 6. To be oriented about professional aspects of management.
- 7. To learn to execute Interior work for residential & commercial areas.

Units	Course Content
1	Introduction to Professional Management Concept, Organisation, Presentation, responsibilities & Significance/consequences.
	Professional Components of Managing Interior Work
	Office managing, code/conduct,
2	 Scale of professional fee & charges,
	 Duties of employer under labour welfare provisions,
	Structure of interior designers office, Conditions of engagement
	Estimating Interior Work
3	Definition & importance of estimating, types, units & mode of measurement, rate, analysis, bills of quantities etc.
	Tenders & Contracts
	• Definition & meaning of tender & contract, tender notice, tender document, types of
4	tender, legal aspects etc.
	Types of contract, articles of agreement, execution, scope of contract, duties and liabilities
	of contractor, legal aspects of contract.
_	Professional Communication Skills:
5	Visual, Demonstration, Verbal, Presentations.
References	

- 1. Drucker, Peter, *Innovation & Entrepreneurship Practices & Principles*, William Hernmann Ltd., London, 1969
- 2. Drucker, Peter.F, The Effective Executive, William Hernmann Ltd., London, 1969
- 3. Laboeuf, Michael, The General Management Principles in the World. Barkley Books, New York
- 4.Roshan, Nanavati, Professional Practices Estimating & Valuation, Lakhani Book Depot, Bombay, 1994

BID682 Full Marks:100

DESIGN STUDIO - VI - Final Major Design Project (Practical) SESSIONAL

Overview

Through architectural and design interventions, we engage with collaborative and creative ventures to enhance human interaction with their environment. This can be applied at an architectural scale whilst appreciating the detail and fabrication of objects, surfaces and materials within spaces.

The core elements of this major project are taught by practising designers and architects, touching on all aspects of interior design and interior architecture for commercial spaces.

The module advocates the synthesis of this ideology as a creative, rigorous and intellectual process. Students need to explore creative ideas, invention and practical resolution in the creation of new, and often unconventional interior identities, whilst creating experiential, experimental and functional spaces. Students are asked to shape environments, generate identities, question programmes, detail objects, design or specify materials and furniture.

Ultimately, students should place human involvement with space at the centre of all their design work.

Objectives

- 1. Develop professional interior design skills & techniques including drawings, plans, illustrations and models.
- 2. Develop students understanding and skills in materials & techniques & technologies within interior design contexts and constraints.
- 3. Understand the construction process, and identify the difference between sustainable and unsustainable materials.
- 4. Identify, promote and support inspiring, innovative and creative applications of design and building technology for an interior design proposal.
- 5. Understand how to produce a Production Information Package (PIP) including e.g. Details, Set of Specifications, Lighting Schedule, Working Drawing package, which have all been developed from a previously 'Signed off' interior design Sketch Scheme proposal.
- Select either traditional or new innovative methods of building construction and technology in their design proposals, to conform to the statutory requirements of the Building/Fire Regulations and Disabled Access.
- 7. Evidence the ability to think three dimensionally in response to contextual and environmental factors, and using appropriate sketch design and development techniques, reflect on the quality and appropriateness of their experiments to inform their progress
- 8. Demonstrate elemental visual, verbal communication and presentation skills, using a selection of graphic and technical methods
- 9. Demonstrate an evolving understanding of how to utilise case and precedents studies from research information gathered, as sources of inspiration and transferable ideas for generating and refining concepts
- 10. Develop technical layout, drafting and practical drawing and design skills.
- 11. To develop awareness and understanding of the relationship of spaces within a given design context and to deadlines.
- 12. To develop design skills within the constraints of a given interior design project brief.

Units	Course Content
1	Identify a client, a practical site and develop the design requirement, related design issues and
	Provide alternate design scenarios and develop the most practical alternative.
2	Generation and development of visual design ideas & sketches showing varied viewpoints for a
	Given interior.
3	Development of visual design idea through the exploration of layouts, concepts and interior
	Plans.
4	Exploration and investigation of materials, techniques and technologies for interior spaces and
	Surface designs.
5	Technical Drafting and drawing of layouts and plans including correct symbols and scale,

	Within the constraints for given interior design project brief.
6	Application of symbols on technical architectural plans and drawings
_	Application of media and drawing techniques to illustrate different viewpoints of a given
7	Interior including perspective drawings, orthographic drawings of views and sections.
8	Understanding Architectural Symbols and scales for architectural and interior design.
9	Quantification, Reporting, Presentation.
	Organisation of the working drawings for the same including service drawing (with assistance
10	From the Consultants) with Budget Provision and Project Schedule and probable
	management strategy.
D C	

Books

- 1. Alexander, N J, Mercoust Brace, Designing Interior Environment, Havanovich Inc.
- 2. Domino: The Book of Decorating: A room-by-room guide to creating a home that makes you happy (DOMINO Books), 14 October 2008 by Deborah Needleman and Sara Ruffin Costello
- 3. Cerver F A, Commercial Space, Office Design & Layout, Rotovision SA
- 4. Cerver F A. Commercial Space, Bars, Hotels & Restaurants, Rotovision SA, Switzerland
- 5. Cerver F A., Shops, Malls & Boutiques, Rotovision SA
- 6. De Chiara Joseph & Callender John, *Time Saver Standards for Architectural Types & Interior Design & Space Planning*, McGraw Hill Book Co.
- 7. Gustafsan K & Yes Robert, Corporate Design, Thames & Hudson, London
- 8. National Building Code of India, Bureau of Indian Standards, New Delhi, 1999
- Reznikoff S C, Specifications for Commercial Interiors, Whitney Library of Design.
- 10. Natural History: Herzog & De Meuron: Philippe Ursprung: Lars Muller Publischers.
- 11. Skin + bones: Parallel practices in Fashion and Architecture by Brooke Hodge: Thames and Hudson.

Websites

https://www.architonic.com/en/projects/interior-architecture/0/5910002/1

https://www.forbes.com/sites/yjeanmundelsalle/2017/12/14/the-worlds-best-interior-designers-hot-list/#74bedfe93312

http://www.martynlawrencebullard.com/

http://mydesignagenda.com/interior-design-and-architecture-projects-need-inspired/

BID681 Full Marks: 100

Professional Portfolio Development (Practical) SESSIONAL

Aims/Outline:

This module builds on the core 2D and CAD skills developed in the course, embodying areas of research, creativity, development, reflection, analytical and professionalism as a designer to inform the development of a final major design portfolio. Students will present a full body of their own design work which communicates the breadth of their individual creative art and design skills, demonstrating process and informing their own personal creative practice.

The final outcome will be professionally presented in an international industry standard portfolio.

Objectives

- 1. To develop students professional portfolio presentation skills when developing a professional portfolio of design work.
- 2. To develop student's ability to propose, conceptualise and execute a final professional Portfolio in digital and tangible formats.
- 3. To develop professional concept and visual communication skills to enable the production of a stimulating visual collection of a student's Art & Design work, including major project outcomes displayed in tangible and digital formats.
- 4. To develop students digital design presentation and communication skills.
- 5. To develop student's ability in making correct aesthetic choices in relation to how best present (and communicate) their design projects and supporting work.

Course Content

On successful completion of this module, a student will be expected to be able to:

- 1. Undertake and present in-depth research of exemplar tangible and digital portfolio concepts and designs.
- 2. Refine, edit and present to a professional standard a body of presented design work in both tangible and digital formats.
- 3. Confidently demonstrate and evidence the professional design presentation process.
- 4. Communicate and collaborate effectively with internal and external photographers, media and reprographics specialists in the process of design portfolio development.
- 5. Effectively communicate to an audience about their own processes, intentions and outcomes in design process contexts, identifying areas of strength and areas for improvement and development.
- 6. Produce a professional international industry standard design portfolio (digital & tangible).

References

Websites

https://www.fastcompany.com/3035190/designers-at-facebook-dropbox-and-pinterest-on-how-to-build-a-world-class-portfolio

https://www.creativebloq.com/create-perfect-design-portfolio-111153

https://www.studentartguide.com/articles/how-to-make-an-art-portfolio-for-college-or-university