

- 3.3 Revised Syllabus of Elective Course – Python Programming (IT 1552) of Department of Information Technology.
- 3.4 Revised Scheme of M Tech (Advanced Computing & Data Science) offered by Department of Computer Science & Engineering from 2018 admission.

The Council further emphasized that during academic revamp 2019, only UG programme across all the faculties will be considered and major revamp for PG programme will be done in year 2020.

Major revisions / Academic revamp be done only once in 4 years.

22AC (B-4) Faculty of Science

The Council approved the Scheme & Syllabi of MSc Environmental Science programme. The programme will be offered by the Department of Chemistry from Academic Year 2018-19.

The Council opined that before offering new programme, career prospect, employability and market demand be analyzed appropriately.

22AC (B-5) Faculty of Design

The Council approved the following:

- 5.1 **Inclusion of Environmental Studies in Scheme of various Departments of School of Planning & Design from Academic Year 2018-19.**
- 5.3 To offer one consolidated course of Packaging I (AA1405) instead of Packaging I (AA1305) and Packaging II (AA1405) of Bachelor of Fine Arts programme from Academic Year 2018 -19. Changes in the scheme and syllabus were also approved.
- 5.4 **Changes in the syllabi of Graphic I (1103) & Graphic II (1203) of BSc Interior Design programme. Offering of Environmental studies (CY1102) instead of Graphics III (1303) in curriculum of B Sc Interior Design programme.**

The Council deferred the proposal related to revision in Syllabus of Bachelor of Architecture programme (2015-16). Directors SA&D was requested to submit details in respect of CoA guidelines for consideration of the proposed agenda.

22AC (B-6) Faculty of Management & Commerce

The Council deferred the following and suggested the matter be considered appropriately during major academic revamp 2019:

- 6.1 Revised Scheme and Syllabus of B Com (Hons.) and B Com programme from AY 2018-19 onwards.
- 6.4 Revised Scheme and Syllabus of 1st year BBA programme.
- 6.5 Proposed Modification in syllabus of Open Elective Course titled 'Designing and Photography' (BB1490) was deliberated upon. The Council suggested that course be owned by the Department of J&MC and support from experts from other department be taken, if required. Revised proposal be placed before the Council in its next meeting.



Faculty of Design
School of Planning and Design
Department of Interior Design
Minutes of Meeting

Subject: Board of studies II – B.Sc. (Interior Design)

Venue: Board Room, FOD

Date: 20 December 2017

Agenda: Introduction of Environmental Studies and other Academic rules and regulation of B.Sc. (Interior design)

The following members were present in the meeting:

1. **Prof. (Dr.) Madhura Yadav** – Chairman – Board of Studies
2. **Ar, Anshuman Sharma** – Expert- (practicing architect & Interior Designer from Jaipur)
3. **Prof. Anantkumar Ozarkar**- Member – Board of Studies.
4. **Prof. Sunanda Kapoor** - Member – Board of Studies.
5. **Ar. Siddharth K.** – Member – Board of studies.
6. **Ar. Sneh Singh** – Member – Board of studies.
7. **Registrar, MUJ.** – Ex-officio Member
8. **Ar. Manjari Rai** – Special Invitee
9. **Ar. Richa Jagatramka** – Special Invitee
10. **Dr. Tanmoy Chakraborty** - Special Invitee

Following member was absent

1. **Prof. P. K. Pandey**

The Board of studies approved the updated Scheme with the following suggestions:

1. Graphics I & Graphics II courses will be revised and syllabus of Graphics III will be included in Graphics I and II.
2. Include Environmental Studies course in third semester in place of Graphics III with 3 credits, as course code ID 1303 Environmental Studies.
3. ID 1304- Furniture Design I course credits are revised to 4 Credits.
4. Revision in Clause 3.3.4.1, 3.5.2, 3.6 in line with university rules and regulations.
 1. 3.3.4.1 - Evaluation of Interior Design for students of the B.Sc (Interior Design) course.
 2. 3.5.2 – Promotion to Higher Semester – Academic performance requirement.



MANIPAL
UNIVERSITY

JAIPUR

**REGULATIONS
SCHEME OF EXAMINATION
AND
SYLLABUS**

(As prescribed by Manipal University Jaipur)

**BACHELOR OF SCIENCE
(Interior Design)**

Three Year Degree Course

APPLICABLE FROM THE ACADEMIC YEAR
2015 - 2016

CURRICULUM & SCHEME OF EXAMINATION

B. Sc. [Interior Design]: Three Years Program

Y R	SUBJECT CODE	SUBJECT NAME	L/ S	T	P	C	Evaluation			Contact Hours	SUBJECT CODE	SUBJECT NAME	L/ S	T	P	C	Evaluation			Contact Hours	
							In Sem.	End Sem Theory	End Sem Jury /Practical								In Sem.	End Sem Theory	End Sem Jury /Practical		
FIRST	FIRST SEMESTER						SECOND SEMESTER	SECOND SEMESTER													
	ID 1101	Interior Design I	8	0	0	8		100	-	50	8	ID 1201	Interior Design II	8	0	0	8	100	-	50	8
	ID 1102	Building Technology & Materials I	3	0	2	4		50	50	-	5	ID 1202	Building Technology & Materials II	3	0	2	4	50	50	-	5
	ID 1103	Graphics I	3	0	2	4		100	-	-	5	ID 1203	Graphics II	3	0	2	4	100	-	-	5
	ID 1104	History of Interior Design I	2	0	2	3		50	50	-	4	ID 1204	History of Interior Design II	2	0	2	3	50	50	-	4
	ID 1105	Visual Arts I	3	0	2	4		100	-	-	5	ID 1205	Visual Arts II	3	0	2	4	100	-	-	5
	ID 1106	Communication Skills	1	0	2	2		50	50	-	3	ID 1206	Computer Application I	1	0	2	2	50	-	-	3
	TOTAL			20	0	10		25	450	200	30	TOTAL			20	0	10	25	450	150	30
THIRD SEMESTER						FOURTH SEMESTER															
SECOND	ID 1301	Interior Design III	8	0	0	8	100	-	50	8	ID 1401	Interior Design IV	10	0	0	10	100	-	50	10	
	ID 1302	Building Technology & Materials III	3	0	2	4	50	50	-	5	ID 1402	Interior Services II	2	1	0	3	50	50	-	3	
	ID 1303	Graphics III	3	0	2	4	100	-	-	5	ID 1403	Working Drawing I	2	0	2	3	50	-	-	4	
	ID 1304	Furniture Design I	2	0	2	3	100	-	-	4	ID 1404	Furniture Design II	3	0	2	4	100	-	-	5	
	ID 1305	Interior Services I	2	1	0	3	50	50	-	3	ID 1405	Specification & Estimation	1	0	2	2	50	50	-	3	
	ID 1306	Computer Application II	2	0	2	3	50	-	-	4	ID 1406	Landscape Design (Interior)	2	0	2	3	50	-	-	4	
	TOTAL			20	1	08	25	450	150	29	TOTAL			20	1	08	25	400	150	29	

Y R	SUBJECT T CODE	SUBJECT NAME	L/ S	T	P	C	Evaluation			Contact Hours	S UBJECT C ODE	SUBJECT NAME	L/ S	T	P	C	Evaluation			Contact Hours
	FIFTH SEMESTER						In Sem.	End Sem Theory	End Sem Jury /Practical			SIXTH SEMESTER						In Sem.	End Sem Theory	
THIRD	ID 1501	Interior Design V	10	0	0	10	100	-	50	10	ID 1601	Design Dissertation	9	0	2	10	100	-	100	11
	ID 1502	Interior Services III	2	1	0	3	50	50	-	3	ID 1602	Professional Training 08 Weeks	-	-	-	8	-	-	100	-
	ID 1503	Working Drawing II	2	0	2	3	50		-	4	ID 1603	Elective	6	0	2	7	100	-	-	8
	ID 1504	Accessories	3	0	2	4	50	-	-	5										
	ID 1505	Project Management	1	0	2	2	50	50	-	3										
	ID 1506	Professional Practice	2	0	2	3	50	50	-	4										
	TOTAL			20	1	08	25	350	200	29	TOTAL		15	0	4	25	200	200	19	

ELECTIVE- I
1. Interior studies in Hospitality industry
2. Interior studies in Commercial industry
3. Interior studies in Corporate industry
4. Interior studies in Institutional industry

2. Foster, Stroud, (1963), *Mitchell's Advanced Building Construction*, Allied Publishers Private Limited, Bombay.
3. Prabhu, Dr. T. S. Balagopal, (1987), *Building Drawing and Detailing*, Spades Publishers Pvt. Ltd, Calicut.
4. Chudley, R, (1998), *Construction Technology*, ELBS, England.
5. Ambrose, James, (1987), *Building Construction*, Van Nostrand Reinhold, New York.
6. Rangwala, S C., (1998), *Engineering Materials*, Charotar Publishing House, Anand.
7. Stephen Kieran, James Timberlake, (2004), *Refabricating Architecture, How Manufacturing Methodologies are Poised to Transform Building Construction*, McGraw-Hill Professional
8. Zeumer, Martin, Hegger, Manfred and Drexler, Hans, (2007), *Basic Materials*, Birkhauser Verlag AG
9. Bindra, S.P. and Arora, (2000), *S.P. Building Construction: Planning Techniques and Methods of Construction, 19th ed*, Dhanpat Rai Pub., New Delhi.
10. Moxley, R. Mitchell's, (1959), *Elementary Building Construction*, B.T. Batsford Ltd, London.
11. Sushil Kumar, (2003), *T.B. of Building Construction 19th ed.*, Standard Pub. Delhi.
12. Chowdary, (1990), *K.P. Engineering Materials used in India, 7th ed.* Oxford and IBH, New Delhi.
13. Rangwala, (1963), *S.C. Building Construction: Materials and types of Construction, 3rd ed.*, John Wiley and Sons, Inc., New York.
14. Francis D. Ching, (2008), *Building Construction Illustrated*, Wiley publishers.

3] ID1103: GRAPHICS - I:

Course objective:

- To understand the basic of plane and solid geometry through graphical exercises of increasing complexity.
- To introduce design drawing techniques and facilitate effective visual communication.

Course contents:

Fundamentals of drawing and its practice, introduction to drawing equipment, familiarization, use and handling; Simple exercises of object drawings – natural geometric forms with emphasis on depth and dimension, detail & texture, sunlight & shadow; Introduction to graphic standards for Interior practice, relevance in interior design furniture sketching and detailing; Freehand techniques for drawing

views, plans, elevations and sections of building material and components as per standard architectural drawings. Interiors and furniture sketching.

References:

1. Stephen Klimont, (1984), *Architectural Sketching and Rendering: Techniques for Designers and Artists*, Watson Guptill.
2. Ivo.D. Drpic, (1988), *Sketching and Rendering of Interior Space*, Watson-Guptill.
3. Maureen Mitton, (2007), *Interior Design Visual Presentation: A Guide to graphics, models and presentation techniques, 3rd edition*, wiley publishers.
4. Mogali Delgade Yanes and Ernest Redondo Dominquez, (2005), *Freehand drawing for Architects and Interior Designers*, WW. Norton & co.
5. Francis D.Ching, (1998), *Design Drawing*, Wiley publishers.
6. Moris, (1946), *I.H.Geometrical Drawing for Art Students*, Longmans, Green & Co, London.
7. Thoms, E.French. (1970), *Graphics Science and Design*, MC Graw Hill, New York.
8. Nichols, T.B. and Keep, Norman. (1959), *Geometry of Construction, 3rd ed.* Cleaver – Hume Press Ltd., London.
9. Bhatt, N.D. and Panchal, (2000), V.M. *Engineering Drawing: Plane and Solid Geometry, 42nd ed.*, Charotar Pub., Anand, 2000.
10. Dewan Suhil Kumar kataria, Ludhiana, (1986), *Geometrical Drawing, 3rd ed.* Gill, P.S.T.B.
11. Shah, M.G., Kale, C.M. and Patki, (2000.), *S.Y. Building Drawing: with an integrated approach to build environment, 7th ed.*, Tata Mc Graw Hill Pub., Delhi.
12. Nelson, A. John. (1983), *H.B. of Architectural and Civil Drafting*, Van Nostrand Reinhold, New York.
13. Francis D. Ching, (2002), *Architectural Graphics*, Wiley publishers.

4] ID 1104: HISTORY OF INTERIOR DESIGN - I:

Course objectives:

- To understand the developments of interior elements in response to social, religious, aesthetic and environmental factors.
- To understand the effects of design movements and various schools of thought on interior environment.

Course contents:

Elements of style and determinants of Interior environments in Egypt, Mesopotamia, Babylonia, Chinese, Japan, Greece, Rome and Europe in early

2. Moxley, R. Mitchell's, (1959), *Elementary Building Construction*, Technical Press Ltd.
3. Rangwala, S.C. (2004), *Building Construction 22nd ed.*, Charota Pub. House Anand.
4. Sushil Kumar. T.B., (2003), *Building Construction 19th ed.*, Standard Pub. Delhi.
5. Chowdary, K.P., (1990), *Engineering Materials used in India, 7th ed.*, Oxford and IBH, New Delhi.
6. Rangwala, S.C., (1963), *Building Construction: Materials and types of Construction, 3rd ed.*, John Wiley and Sons, Inc., New York.
7. Francis D. Ching, (2008), *Building Construction Illustrated*, Wiley publishers.
8. S.K.Duggal, (1998), *Building Materials, Illustrated*, A.A.Balkema.

3] ID 1203: GRAPHICS – II:

Course objective:

- To understand solid geometry through graphic exercises of increased complexity.
- To impart the techniques of rendering in different media and skills of three dimensional visualization and presentation.

Course contents:

Building Geometry – Study of points, lines and planes leading to simple and complex solid geometrical forms; Orthographic projections of points, lines, first angle projections of planes and solids, sections of solids, development of surfaces of solids and intersections of solids; Use of geometry in buildings - isometric, axonometric, and oblique view; Working with models to facilitate visualization; Introduction to Sciography – Simple and composite forms, shadows on horizontal, vertical planes and on their own surfaces; Study of shade and shadows of simple geometrical solids of various forms and groups of forms.

References:

1. Stephen Kliment, (1984), *Architectural Sketching and Rendering: Techniques for Designers and Artists*, Watson Guptill.
2. Ivo.D. Drpic, (1988), *Sketching and Rendering of Interior Space*, Watson-Guptill.
3. Maureen Mitton, (2007), *Interior Design Visual Presentation: A Guide to graphics, models and presentation techniques, 3rd edition*, wiley publishers.
4. Mogali Delgade Yanes and Ernest Redondo Dominquez, (2005), *Freehand drawing for Architects and Interior Designers*, WW.Norton & co.
5. Francis D.Ching, (2010), *Design Drawing*, Wiley publishers.

6. Atkin William W. Corbellent, Raniero and Fiore R. Vincent, (1962), *Pencil Techniques in Modern Design. 4th ed.*, Reinhold pub Corporation. New York.
7. Bately, Claude, (1973), *Design Development of India Architecture*, Academy Editions.
8. Bellings, Lance Bowen, (1969), *Perspective space and Design*, Van Nostrand Reinhold Co.
9. Burden, Ernest, (1982), *Architectural Delineation: A photographic approach to presentation, 2nd ed.*, McGraw Hill, Inc., New York.
10. John. F. Pile, (1989), *Perspective for Interior Designers*, Watson – Guptill.
11. Ernest. R. Norling, (1999), *Perspective made easy*, Dover publications.
12. Joseph D, Amelio, (2004), *Perspective Drawing Hand book*, Dover publications.

4] ID 1204: HISTORY OF INTERIOR DESIGN - II:

Course objectives:

- To understand the historical progression of art and interior architecture in India and its application to formulate themes and concepts for contemporary interior designs.
- To understand the various schools of thought on interior environment.

Course contents:

The course focuses on the three dimensional forms, plan forms and ornamentation. Elements of style, interior environment, furniture etc. in Jammu and Kashmir, Southern India, Gujarat, Rajasthan, Himachal Pradesh, states of North eastern India, Maharashtra, Uttar Pradesh, Orissa etc.

Designers and their works with respect to interior architecture and interior elements of design; Contemporary expressions of styles and art forms; Purpose and relevance of art, development of various art forms, study of traditional & contemporary art forms.

Traditional Indian Art – Sculpture (Buddhist/ North & South Temples), Paintings (Mural tradition, Miniature, Bengal School, Madras School).

References:

1. Tadgell Cristopher, (1990), *The History of Architecture in India: From the dawn of civilization to the End of the Raj*, Om Book Service, New Delhi.
2. Rowl Benjamin, (1971), *Art and Architecture of India*, Puffin.
3. J.C. Harle, (1994), *the art and Architecture of the Indian Subcontinent*, Yale University Press.
4. R.J. Mehta, (1974), *Masterpieces of Indian Temples*, D.B. Taraporewals, India.

Adhesives – Natural and Synthetic, their varieties, Method of application etc.
Composite materials – Types, properties & applications.

References:

1. Bindra, S.P. and Arora, (2000), *S.P. Building Construction: Planning Techniques and Methods of Construction, 19th ed.*, Dhanpat Rai Pub., New Delhi.
2. Moxley, R. Mitchell's, (1959), *Elementary Building Construction*, B.T. Batsford Ltd, London.
3. Rangwala, S.C. (2004), *Building Construction 22nd ed.*, Charota Pub. House Anand.
4. Sushil Kumar. T.B. (2003), *Building Construction 19th ed.*, Standard Pub. Delhi.
5. Chowdary, K.P. (1990), *Engineering Materials used in India, 7th ed.*, Oxford and IBH, New Delhi.
6. Rangwala, S.C. (1963), *Building Construction: Materials and types of Construction, 3rd ed.*, John Wiley and Sons, Inc., New York.
7. Francis D. Ching, (2008), *Building Construction Illustrated*, Wiley publishers.

3] ID 1303: GRAPHICS - III:

Course objectives:

- To introduce the techniques of architectural drawings pertaining to 3D views, perspective & presentation.

Course contents:

Understanding the basis and importance of perspective drawings in interior; Methods and techniques of drawing 1-point and 2-point perspectives of interiors of different building types; Importance of light and shade in interior drawings; Methods applied to represent and shadows in perspective drawings; Rendering techniques of perspective drawing including shades and shadows; Depicting tonal variations in drawings to represent material variations, shades and shadows; Using different media (color and black and white) to render plans, elevations and perspectives.

Drawing from imagination – speculative drawings, diagramming, drawing compositions, concept sketches, design development sketches, presentation sketches, Presentation drawings, Graphical presentations etc.

References:

1. Gill, Robert .W. (1991), *Manual of Rendering with Pen and Ink*, Thames and Hudson.

2. Stephen Kliment, (1984), *Architectural Sketching and Rendering: Techniques for Designers and Artists*, Watson Guptill.
3. Ivo.D. Drpic, (1988), *Sketching and Rendering of Interior Space*, Watson-Guptill.
4. Maureen Mitton, (2007), *Interior Design Visual Presentation: A Guide to graphics, models and presentation techniques, 3rd edition*, wiley publishers.
5. Mogali Delgade Yanes and Ernest Redondo Dominquez, (2005), *Freehand drawing for Architects and Interior Designers*, ww.Norton & co.
6. Francis D.Ching, (2010), *Design Drawing*, Wiley publishers
7. Atkin William W. Corbellent, Raniero and Firore. R. Vincent, (1962), *Pencil Techniques in Modern Design. 4th ed.*, Reinhold pub Corporation. New York.
8. Bately, Claude, (2009), *Design Development of India Architecture*, Aryan Books.
9. Bellings, Lance Bowen, (1969), *Perspective space and Design*, Van Nostrand Reinhold Co.
10. Burden, Ernest, (1982), *Architectural Delineation: A photographic approach to presentation, 2nd ed*, McGraw Hill, Inc., New York.
11. Conli, Claudius. *Drawings by Architects*.
12. John. F. Pile, (1989), *Perspective for Interior Designers*, Watson – Guptill.
13. Ernest. R. Norling, (1999), *Perspective made easy*, Dover publications.
14. Joseph D, Amelio, (2004), *Perspective Drawing Hand book*, Dover publications.

4| ID 1304: FURNITURE DESIGN - I:

Course objectives:

- To understand various styles, systems and products available in the market.
- To enhance the knowledge of ergonomics, materials, design and working parameters in designing furniture.

Course contents:

Detailed study of Furniture categories, exploration of the idea of furniture, role of furniture in interior design, Design approaches in furniture design; Brief overview of the evolution of furniture from Ancient to present. Furniture designers and movements. Analysis of furniture in terms of human values, social conditions, technology and design criteria. Functional and formal issues in design; Evaluation of visual design: study of Gestalt theory of design – law of enclosure, law of proximity, law of continuity etc. Human factors, engineering and ergonomic considerations: principles of universal design and their application in furniture design; An introduction of various manufacturing processes most frequently

adopted in furniture design such as Injection Molding, investment casting, sheet metal work, die casting, blow- molding, vacuum - forming etc.

Seating Design: Different types of seating with a focus on the following –
Functionality, Aesthetics, Style, Human factors and ergonomics

References:

1. Joseph Aronson, (1961), *The Encyclopedia of Furniture: Third Edition* ,
2. Bradley Quinn, (2006), *Mid-Century Modern: Interiors, Furniture, Design Details*, Conran Octopus Interiors.
3. Jim Postell, (2007), *Furniture Design*, Wiley publishers.
4. Edward Lucie-Smith, (1985), *Furniture: A Concise History (World of Art)* Thames and Hudson.
5. Robbie. G. Blakemore, (2005), *History of Interior Design and Furniture: From Ancient Egypt to Nineteenth-Century Europe*, Wiley publishers.
6. John.F. Pile, (1995), *Interior Design, 2nd edition, illustrated*, H.N.Abrams.

5] ID 1305: INTERIOR SERVICES - I:

Course objectives:

- To understand the significance of designing water and sewerage systems in interior design.

Course contents:

- Water supply: Demand and supply, sources and quality of water supply
 - Water supply layouts of different interior schemes
 - Pipes: materials, types, sizes and joining methods
 - Fittings: taps, valves, bathtubs, washbasins etc.
 - Water supply design criteria for kitchens and bathrooms
- Sanitation: Principles and concepts of sanitation and disposal, size requirements calculations
 - Systems of disposal methods
 - Sanitary fittings: fixing methods, materials, types and standards
 - Trap: type, materials and functions
 - Testing drainage pipes for leakage - smoke test, water test etc.
 - Bathroom interior layouts and market survey of products & selection of sanitary accessories.

Refuse, forms of refuse garbage, house refuse – its collection, storage and transport, refuse chutes etc.

References:

1. Hussain S.K, (1994), *T.B of water supply and sanitary engineering, 3rd ed*, Oxford and IBH pub. Ltd., New Delhi.



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**REGULATIONS
SCHEME OF EXAMINATION
AND
SYLLABUS**

(As prescribed by Manipal University Jaipur)

**BACHELOR OF SCIENCE
(Interior Design)**

Three Year Degree Course

APPLICABLE FROM THE ACADEMIC YEAR

2017 - 2018

CURRICULUM & SCHEME OF EXAMINATION

B. Sc. [Interior Design]: Three Years Program

Y R	SUBJECT CODE	SUBJECT NAME	L/ S	T	P	C	Evaluation			Contact Hours
							In Sem.	End Sem Theory	End Sem Jury /Practical	
FIRST	FIRST SEMESTER									
	ID 1101	Interior Design I	8	0	0	8	100	-	50	8
	ID 1102	Building Technology & Materials I	3	0	2	4	50	50	-	5
	ID 1103	Graphics I	3	0	2	4	100	-	-	5
	ID 1104	History of Interior Design I	2	0	2	3	50	50	-	4
	ID 1105	Visual Arts I	3	0	2	4	100	-	-	5
	ID 1106	Communication Skills	1	0	2	2	50	50	-	3
	TOTAL			20	0	10	25	450	200	30
THIRD SEMESTER										
SECOND	ID 1301	Interior Design III	8	0	0	8	100	-	50	8
	ID 1302	Building Technology & Materials III	3	0	2	4	50	50	-	5
	CY 1120	Environmental Studies	3	0	0	3	50	50	-	3
	ID 1304	Furniture Design I	2	0	4	4	100	-	-	6
	ID 1305	Interior Services I	2	1	0	3	50	50	-	3
	ID 1306	Computer Application II	2	0	2	3	50	-	-	4
	TOTAL			20	1	08	25	400	200	29
	FOURTH SEMESTER									
SECOND SEMESTER										
ID 1201	Interior Design II	8	0	0	8	100	-	50	8	
ID 1202	Building Technology & Materials II	3	0	2	4	50	50	-	5	
ID 1203	Graphics II	3	0	2	4	100	-	-	5	
ID 1204	History of Interior Design II	2	0	2	3	50	50	-	4	
ID 1205	Visual Arts II	3	0	2	4	100	-	-	5	
ID 1206	Computer Application I	1	0	2	2	50	-	-	3	
TOTAL			20	0	10	25	450	150	30	
ID 1401	Interior Design IV	10	0	0	10	100	-	50	10	
ID 1402	Interior Services II	2	1	0	3	50	50	-	3	
ID 1403	Working Drawing I	2	0	2	3	50	-	-	4	
ID 1404	Furniture Design II	3	0	2	4	100	-	-	5	
ID 1405	Specification & Estimation	1	0	2	2	50	50	-	3	
ID 1406	Landscape Design (Interior)	2	0	2	3	50	-	-	4	
TOTAL			20	1	08	25	400	150	29	

Y R	SUBJECT CODE	SUBJECT NAME	L/S	T	P	C	Evaluation			Contact Hours	SUBJECT CODE	SUBJECT NAME	L/S	T	P	C	Evaluation			Contact Hours		
							In Sem.	End Sem Theory	End Sem Jury /Practical								In Sem.	End Sem Theory	End Sem Jury /Practical			
THIRD	FIFTH SEMESTER									THIRD	SIXTH SEMESTER											
	ID 1501	Interior Design V	10	0	0	10	100	-	50		10	ID 1601	Design Dissertation	9	0	2	10	100	-	100	11	
	ID 1502	Interior Services III	2	1	0	3	50	50	-		3	ID 1602	Professional Training 08 Weeks	-	-	-	8	-	-	100	-	
	ID 1503	Working Drawing II	2	0	2	3	50		-		4	ID 1603	Elective	6	0	2	7	100	-	-	8	
	ID 1504	Accessories	3	0	2	4	50	-	-		5											
	ID 1505	Project Management	1	0	2	2	50	50	-		3											
	ID 1506	Professional Practice	2	0	2	3	50	50	-		4											
	TOTAL		20	1	08	25	350	200			29	TOTAL						15	0	4	25	200

1. McKay, G.B, (1972), *Building Construction (Metric)*, Longman, London.
2. Foster, Stroud, (1963), *Mitchell's Advanced Building Construction*, Allied Publishers Private Limited, Bombay.
3. Prabhu, Dr. T. S. Balagopal, (1987), *Building Drawing and Detailing*, Spades Publishers Pvt. Ltd, Calicut.
4. Chudley, R, (1998), *Construction Technology*, ELBS, England.
5. Ambrose, James, (1987), *Building Construction*, Van Nostrand Reinhold, New York.
6. Rangwala, S C., (1998), *Engineering Materials*, Charotar Publishing House, Anand.
7. Stephen Kieran, James Timberlake, (2004), *Refabricating Architecture, How Manufacturing Methodologies are Poised to Transform Building Construction*, McGraw-Hill Professional
8. Zeumer, Martin, Hegger, Manfred and Drexler, Hans, (2007), *Basic Materials*, Birkhauser Verlag AG
9. Bindra, S.P. and Arora, (2000), *S.P. Building Construction: Planning Techniques and Methods of Construction, 19th ed*, Dhanpat Rai Pub., New Delhi.
10. Moxley, R. Mitchell's, (1959), *Elementary Building Construction*, B.T. Batsford Ltd, London.
11. Sushil Kumar, (2003), *T.B. of Building Construction 19th ed.*, Standard Pub. Delhi.
12. Chowdary, (1990), *K.P. Engineering Materials used in India, 7th ed.* Oxford and IBH, New Delhi.
13. Rangwala, (1963), *S.C. Building Construction: Materials and types of Construction, 3rd ed.*, John Wiley and Sons, Inc., New York.
14. Francis D. Ching, (2008), *Building Construction Illustrated*, Wiley publishers.

3] ID1103: GRAPHICS - I:

Course objective:

- To understand the basic of plane and solid geometry through graphical exercises of increasing complexity.
- To introduce design drawing techniques and facilitate effective visual communication.

Course contents:

Fundamentals of drawing and its practice, introduction to drawing equipment, familiarization, use and handling;

Introduction to graphic standards for Interior practice, relevance in interior design furniture sketching and detailing;

Freehand techniques for drawing views, plans, elevations and sections of building material and components as per standard architectural drawings.

Rendering techniques of perspective drawing including shades and shadows
Using different media (color and black and white) to render plans, elevations and free hand perspectives, Presentation drawings, Graphical presentations etc.
Building Geometry – Study of points, lines and planes leading to simple and complex solid geometrical forms.

References:

1. Stephen Kliment, (1984), *Architectural Sketching and Rendering: Techniques for Designers and Artists*, Watson Guptill.
2. Ivo.D. Drpic, (1988), *Sketching and Rendering of Interior Space*, Watson-Guptill.
3. Maureen Mitton, (2007), *Interior Design Visual Presentation: A Guide to graphics, models and presentation techniques, 3rd edition*, wiley publishers.
4. Mogali Delgade Yanes and Ernest Redondo Dominquez, (2005), *Freehand drawing for Architects and Interior Designers*, WW. Norton & co.
5. Francis D.Ching, (1998), *Design Drawing*, Wiley publishers.
6. Moris, (1946), *I.H.Geometrical Drawing for Art Students*, Longmans, Green & Co, London.
7. Thoms, E.French. (1970), *Graphics Science and Design*, MC Graw Hill, New York.
8. Nichols, T.B. and Keep, Norman. (1959), *Geometry of Construction, 3rd ed.* Cleaver – Hume Press Ltd., London.
9. Bhatt, N.D. and Panchal, (2000), V.M. *Engineering Drawing: Plane and Solid Geometry, 42nd ed.*, Charotar Pub., Anand, 2000.
10. Dewan Suhil Kumar kataria, Ludhiana, (1986), *Geometrical Drawing, 3rd ed.* Gill, P.S.T.B.
11. Shah, M.G., Kale, C.M. and Patki, (2000.), *S.Y. Building Drawing: with an integrated approach to build environment, 7th ed.*, Tata Mc Graw Hill Pub., Delhi.
12. Nelson, A. John. (1983), *H.B. of Architectural and Civil Drafting*, Van Nostrand Reinhold, New York.
13. Francis D. Ching, (2002), *Architectural Graphics*, Wiley publishers.

4] ID 1104: HISTORY OF INTERIOR DESIGN - I:

Course objectives:

- To understand the developments of interior elements in response to social, religious, aesthetic and environmental factors.
- To understand the effects of design movements and various schools of thought on interior environment.

Course contents:

Elements of style and determinants of Interior environments in Egypt,

2] ID 1302: BUILDING TECHNOLOGY AND MATERIALS - III:

Course objectives:

- To impart knowledge on the various materials while highlighting the current trends and innovations in the usage of interior design materials.

Course contents:

Glass and glass products – Composition and fabrication of glass, classification, types, properties and uses in buildings; Physical and behavioral properties, tools and technology of its application in built forms. Material and workmanship, specifications.

Rubber – Natural rubber, latex, coagulation, vulcanizing and synthetic rubber-properties and application.

Plastics – Types, thermosetting and thermoplastics, acrylics, resins, common types of moldings, fabrication of plastics, polymerization and condensation-properties, uses and applications.

Adhesives – Natural and Synthetic, their varieties, Method of application etc.

Composite materials – Types, properties & applications.

References:

1. Bindra, S.P. and Arora, (2000), *S.P. Building Construction: Planning Techniques and Methods of Construction, 19th ed.*, Dhanpat Rai Pub., New Delhi.
2. Moxley, R. Mitchell's, (1959), *Elementary Building Construction*, B.T. Batsford Ltd, London.
3. Rangwala, S.C. (2004), *Building Construction 22nd ed.*, Charota Pub. House Anand.
4. Sushil Kumar. T.B. (2003), *Building Construction 19th ed.*, Standard Pub. Delhi.
5. Chowdary, K.P. (1990), *Engineering Materials used in India, 7th ed.*, Oxford and IBH, New Delhi.
6. Rangwala, S.C. (1963), *Building Construction: Materials and types of Construction, 3rd ed.*, John Wiley and Sons, Inc., New York.
7. Francis D. Ching, (2008), *Building Construction Illustrated*, Wiley publishers.

3] CY 1120: ENVIRONMENTAL STUDIES - I:

Course objectives:

- Offers the knowledge of how natural world works, Environmental and natural processes which effects humans and how human activities and developmental processes change the environment and natural

systems. Conservation of nature and natural resources, ecosystems and their services, biodiversity loss and its conservation, environmental pollution, effects and control, environmental policies and practices, human communities and the environment. Students are expected to have basic knowledge of science and social sciences for a better learning.

Course contents:

INTRODUCTION TO ENVIRONMENTAL STUDIES Multidisciplinary Nature of Environmental Studies, Scope and importance, concept of sustainability and sustainable development

ECOSYSTEMS Concept, structure and function, energy flow in an ecosystem, food chain, food webs and ecological succession, Forest, Grassland, Desert and Aquatic (Ponds, Streams, Lakes, River, Oceans, Estuaries) ecosystem

NATURAL RESOURCES (RENEWABLE & NON RENEWABLE RESOURCES) Land Resources and land use change, Land degradation, soil erosion and desertification; Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. Water: Use and overexploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state). Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies **BIODIVERSITY AND CONSERVATION** Levels of biological diversity: genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots, India as a mega-biodiversity nation; Endangered and endemic species of India, Threats to biodiversity: Habitat loss, poaching of wildlife, man---wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity. Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value;

ENVIRONMENTAL POLLUTION Environmental Pollution: type, causes, effects, and controls; Air, Water, Soil and Noise pollution, Nuclear hazards and human health risks, ill effects of fireworks, Solid waste management: control measures of urban and industrial waste, pollution case studies

ENVIRONMENTAL POLICIES & PRACTICES Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture, Environment laws; Environmental Protection Act, Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act; International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD). Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context **HUMAN COMMUNITIES AND THE ENVIRONMENT** Human population growth: impact on environment, human health and welfare, Resettlement and rehabilitation of project affected persons; case studies, Disaster management: flood, earthquake, cyclone and landslides.

Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan, Environmental ethics: Role of Indian and other religions and cultures in environmental conservation, Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi). Field Work and visit.

References:

1. Gadgil, M., & Guha, R. This Fissured Land: An Ecological History of India. Univ. of California, Press, 1993.
2. Carson, R. Silent Spring. Houghton Mifflin Harcourt, 2002.
3. Groom, Martha J., Gary, K. Meffe, and Carl Ronald Carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006.
4. Singh, J.S., Singh, S.P., Gupta, S.R. Ecology, Environmental Science and conservation. S. Chand Publishing, New Delhi, 2014.
5. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). Conservation Biology: Voices from the Tropics. John Wiley & Sons, 2013.

4] ID 1304: FURNITURE DESIGN - I:

Course objectives:

- To understand various styles, systems and products available in the market.
- To enhance the knowledge of ergonomics, materials, design and working parameters in designing furniture.

Course contents:

Detailed study of Furniture categories, exploration of the idea of furniture, role of furniture in interior design, Design approaches in furniture design; Brief overview of the evolution of furniture from Ancient to present. Furniture designers and movements. Analysis of furniture in terms of human values, social conditions, technology and design criteria. Functional and formal issues in design; Evaluation of visual design: study of Gestalt theory of design – law of enclosure, law of proximity, law of continuity etc. Human factors, engineering and ergonomic considerations: principles of universal design and their application in furniture design; An introduction of various manufacturing processes most frequently adopted in furniture design such as Injection Molding, investment casting, sheet metal work, die casting, blow- molding, vacuum - forming etc. Seating Design: Different types of seating with a focus on the following – Functionality, Aesthetics, Style, Human factors and ergonomics

References:

1. Joseph Aronson, (1961), *The Encyclopedia of Furniture: Third Edition* ,
2. Bradley Quinn, (2006), *Mid-Century Modern: Interiors, Furniture, Design Details*, Conran Octopus Interiors.

3. Jim Postell, (2007), *Furniture Design*, Wiley publishers.
4. Edward Lucie-Smith, (1985), *Furniture: A Concise History (World of Art)* Thames and Hudson.
5. Robbie. G. Blakemore, (2005), *History of Interior Design and Furniture: From Ancient Egypt to Nineteenth-Century Europe*, Wiley publishers.
6. John.F. Pile, (1995), *Interior Design, 2nd edition, illustrated*, H.N.Abrams.

5] ID 1305: INTERIOR SERVICES - I:

Course objectives:

- To understand the significance of designing water and sewerage systems in interior design.

Course contents:

- Water supply: Demand and supply, sources and quality of water supply
 - Water supply layouts of different interior schemes
 - Pipes: materials, types, sizes and joining methods
 - Fittings: taps, valves, bathtubs, washbasins etc.
 - Water supply design criteria for kitchens and bathrooms
- Sanitation: Principles and concepts of sanitation and disposal, size requirements calculations
 - Systems of disposal methods
 - Sanitary fittings: fixing methods, materials, types and standards
 - Trap: type, materials and functions
 - Testing drainage pipes for leakage - smoke test, water test etc.
 - Bathroom interior layouts and market survey of products & selection of sanitary accessories.

Refuse, forms of refuse garbage, house refuse – its collection, storage and transport, refuse chutes etc.

References:

1. Hussain S.K, (1994), *T.B of water supply and sanitary engineering, 3rd ed*, Oxford and IBH pub. Ltd., New Delhi.
2. Kshirsagar, S. R, (1980), *Water supply engineering, 6th ed*, Roorkee publications.
3. Rangwala, S.C. (2004), *water supply and Sanitary Engineering : Environmental Engineering, 19th ed*, Charotar pub house, Anand

6] ID 1306: COMPUTER APPLICATION - II:

Course objective: