UNIVERSITY INSTITUTE OF ENGINEERING & TECHNOLOGY

SCHOOL OF ENGINEERING & TECHNOLOGY

Vision

To achieve excellence in engineering education, empower students to be technically competent professionals and entrepreneurs with strong ethical values so as to significantly contribute as agents for universal development and societal transformation.

Mission

To provide affordable quality education at par with global standards of academia and serve society with harmonious social diversity

To encourage new ideas and inculcate an entrepreneurial attitude amongst the students, and provide a robust research ecosystem

To practice and encourage high standards of professional ethics and accountability among students

Bachelor of Vocational studied in Interior Design

Program Outcomes (POs)

PO1	**Design knowledge**: A graduate will be able to apply their creativity, skill knowledge to meet the ever-changing needs of the society.
PO2	**Problem analysis:** A graduate will demonstrate his/her knowledge in History of Architecture, Theory of Architecture & Professional Practice for architectural design problems for local as well as global community.
PO3	**Design/development of solutions**: A graduate will be able to use his skill in freehand sketching, graphics, model making and services to develop design solutions.
PO4	**Conduct investigations of complex problems:** A graduate will be able to investigate client & user needs of space, furniture & equipment's requirements and analyse site conditions, bye laws in relation to site, climate & design development.
PO5	**Modern tool usage:** A graduate will be able to apply the knowledge of latest computer software such as Auto CADD, Revit, sketch up, 3D's Max, Lumion, Corel Draw, Photoshop & other supporting tools for the visualization of design projects
PO6	**The designer and society:** An Interior Designer & society apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional Architectural 7 design practices.
PO7	**Environment and sustainability:** Understand the impact of the professional Architectural solution in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics, responsibilities, and norms of the Architectural practice
PO9	**Individual and teamwork:** Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.
PO10	**Communication:** The graduate will be able to identify, Communicate effectively. The critical issues involved in the solutions of architectural design problems.
PO11	**Project management and finance:** A graduate will be able to demonstrate the understanding of HR, Finance and Contract Management for the profession individually or as a team member.
PO12	**Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO-1	To produce highly competent Interior Designers to professionally contribute to the field of Interior Design, who are technically sound and understands related industry needs.
PSO-2	To produce effective team members and leaders who can efficiently communicate through oral and graphical communication.
PSO-3	To produce Interior Designers who possess lifelong learning attitude and will contribute to the body of knowledge in the field of Interior Design.

Semester-wise Course Structure

1st Year - Semester I

Sl. No.	Course Code	Course Title	L	T	S	Credits
1.	DID-1001	Fundamental of Computers	2	1	0	3
2.	DID-1002	Communication Skills	2	0	0	2
3.	DID-1009B	Trade Enquiry (Market Survey) - I	0	2	0	2
4.	DID-1003	Basic Design Principles	2	0	8	6
5.	DID-1004	Art and Interior Graphics - I	1	0	6	4
6.	DID-1005	Furniture Design Workshop - I	1	0	6	4
7.	DID-1006	History of Interior Furniture - I	1	2	0	3
8.	DID-1007	Textile and Accessories	1	2	0	3
9.	DID-1008	Site Visits	0	0	0	3
		Total	**10**	**7**	**20**	**30**

1st Year - Semester II

Sl. No.	Course Code	Course Title	L	T	P	Credits
1.	DID-2001	Environmental Science	3	0	0	3
2.	DID-2010B	Trade Enquiry (Market Survey) - II	0	2	0	2
3.	DID-2002	Interior Design-I	1	0	4	3
4.	DID-2003	Display Design-I	1	0	4	3
5.	DID-2004	Art and Interior Graphics - II	1	0	4	3
6.	DID-2005	Furniture Design Workshop - II	1	0	4	3
7.	DID-2006	History of Interior Furniture - II	1	2	0	3
8.	DID-2007	Interior Materials & Construction Tech. - I	1	0	4	3
9.	DID-2008	Interior Project (Minor) - I	2	0	6	5
10.	DID-2009	Winter Project - I	0	0	0	2
		Total	**11**	**4**	**26**	**30**

2nd Year - Semester III

Sl. No.	Course Code	Course Title	L	T	P	Credits
1.	DID-3001	Business Management	3	0	0	3
2.	DID-3002	Interior Design & Landscape - I	1	0	4	3
3.	DID-3003	Display Design - II	1	0	4	3
4.	DID-3004	Furniture Design Workshop -III	1	0	4	3
5.	DID-3005	Interior Services - I	1	0	4	3
6.	DID-3006	Interior Materials & ConstructionTech. –II	1	0	4	3
7.	DID-3007	AutoCAD – I	1	0	4	3
8.	DID-3008	Interior Project - II	0	1	8	5
9.	DID-3009	Site Visits	0	0	0	2
10.	DID-3010	Summer Project - I	0	0	0	2
		Total	**09**	**1**	**32**	**30**

2nd Year - Semester IV

Sl. No.	Course Code	Course Title	L	T	P	Credits
1.	DID-4001	Life Skills	3	0	0	3
2.	DID-4002	Interior Design & Landscape - II	1	0	4	3
3.	DID-4003	Display Design -III	1	0	4	3
4.	DID-4004	Furniture Design Workshop -IV	1	0	4	3
5.	DID-4005	Interior Services -II	1	0	4	3
6.	DID-4006	Interior Materials & ConstructionTech. - III	1	0	4	3
7.	DID-4007	AutoCAD - II	1	0	4	3
8.	DID-4008	Interior Project - III	0	1	8	5
9.	DID-4009	Site Visits	0	0	0	2
10.	DID-4010	Winter Project - II	0	0	0	2
		Total	**10**	**1**	**32**	**30**

3rd Year - Semester V

Sl. No.	Course Code	Course Title	L	T	P	Credits
1.	DID-5001	Technical English	3	0	0	3
2.	DID-5002	Legal Ethics & Professional Practice	3	0	0	3
3.	DID-5010B	NSS/ Sports/ ECO Club	0	2	0	1
4.	DID-5003	Interior Design - I	1	0	4	3
5.	DID-5004	Visual Merchandising - I	1	1	4	4
6.	DID-5005	Product Design - I	1	1	4	4
7.	DID-5006	Interior Materials Construction technique - V	1	0	4	3
8.	DID-5007	Interior Project - IV (Minor Project)	1	0	8	5
9.	DID-5008	Site Visits	0	0	0	2
10.	DID-5009	Summer Project - II	0	0	0	2
		Total	**11**	**4**	**24**	**30**

3rd Year - Semester VI

Sl. No.	Course Code	Course Title	L	T	P	Credits
1.	DID-6001	Entrepreneurship & Project Management	3	1	0	4
2.	DID-6002	Interior Design - II	1	0	4	3
3.	DID-6003	Visual Merchandising - II	1	1	4	4
4.	DID-6004	Product Design - II	1	1	4	4
5.	DID-6005	Interior Budgeting & Estimation	1	0	4	3
6.	DID-6006	Interior Project - V (Major Project)	0	0	12	6
7.	DID-6007	Exhibition and Portfolio	0	0	0	4
8.	DID-6008	Winter Project – III	0	0	0	2
		Total	**07**	**3**	**28**	**30**

Total Credits – 180

Detailed Syllabus

Course Code:DID-1001 **Breakup:2 –1 – 0 – 3**
Course Name: Fundamentals of Computers

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Basic knowledge of computer system and its parts, component of computers, uses and characteristics, operating system
CO2	Introduction to Microsoft Office and its application
CO3	Internet and its advantages and disadvantages and web designing.
CO4	Downloading/Uploading e contents and e books, emailing, web services etc.

Course Details

UNIT-I BASIC KNOWLEDGE

Block diagram of computer and its working, Components of computer, About operating system, Booting and installation, File management, Printing.

UNIT-II WORD PRECESSING

Opening and saving documents, Editing, Character and paragraph editing.

UNIT-III BASIC POWER POINT PRESENTATION

Opening and saving a slide, Inserting picture and movie clip, Publishing a presentation

UNIT-IV INTERNET BROADCASTING

Opening and saving a page, Creating an account, Elements of web page

Reference Book(s): -

[R1] Dummies Publication, Fundamentals of Computing

Course Code: DID-1002 **Breakup: 2 –0 – 0 – 2**
Course Name: Communication Skills

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Develop concept of communication and speaking skills.
CO2	Develop the ways to improve personality, soft skills, and organizational skills.
CO3	Develop the thinking ability and expression improvement in group discussion.
CO4	Design the effective resume as per industry requirement.
CO5	Be ready for personal interview through mock interviews and has knowledge of various interviews.

Course Details:

UNIT-I

Recognizing and Understanding Communication Styles: What is Communication? Passive Communication, Aggressive Communication, Passive-Aggressive Communication, Assertive Communication, Verbal and Non-Verbal Communication, Barriers and Gateways to Communication.

UNIT-II

Listening Skills: Types of Listening (theory /definition), Tips for Effective Listening Academic Listening- lecturing), Listening to Talks and Presentations, Basics of Telephone communication

Writing Skills: Standard Business letter, Report writing, Email drafting and Etiquettes, Preparing Agenda and writing minutes for meetings, Making notes on Business conversations, Effective use of SMS, Case writing and Documentation.

UNIT-III

Soft Skills: Empathy (Understanding of someone else point of view), Intrapersonal skills, Interpersonal skills, Negotiation skills, Cultural Aspects of Communication.

UNIT-IV

Group Communication: The Basics of Group Dynamics, Group Interaction and Communication, how to Be Effective in Groups, Handling Miscommunication, Handling Disagreements and Conflicts, Constructive Criticism.

Text Book(s):

[T1] McKay, M., Davis, M. & Fanning, P. (2008). Messages: The Communication Skills Book, New Harbinger Publications

[T2] Perkins, P.S., & Brown, L. (2008). The Art and Science of Communication: Tools for effective communication in the workplace, John Wiley and Sons

Reference Book(s):

[R1] Krizan et al (2010). Effective Business Communication, Cengage Learning.
[R2] Scot, O.(2009). Contemporary Business Communication, Biztantra, New Delhi.
[R3] Chaney & Martin(2009). Intercultural Business Communication, Pearson Education
[R4] Penrose et al (2009). Business Communication for Managers, Cengage Learning.

Course Code: DID-1003 **Breakup: 2 –0 – 8 – 6**
Course Name: Basic Design Principles

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction to various elements and principles of design and their composition.
CO2	Colour theory, Colour Planning, and guidelines for various Interiors
CO3	Study of Form, Pattern, Tones and Textures and their relationship in Interiors.
CO4	Study of Natural patterns, Types of Textures, and their relationship psychological; impact.
CO5	Role of accessories in Interiors, Role of Colour, Light, Shades, and shadows in interiors.
CO6	Development of concepts in Interior Designing, Preparation of scrap files for accessories, furniture, and fittings.

Course Details:

UNIT-I:

Design: Definitions of Design, Arrangement, Composition.

Principles of Composition-Elements and Principles.

1. Introduction to various elements of composition, line, direction, shapes, form, color, value, ones, and Textures.
2. Principles of Composition
3. Repetition, Rhythm, Harmony, Unity, Balance, Dominance, Scale, Proportion, Contrast, practice exercise in composition with reference to above.
4. Designing of Murals, Paintings and Wall Paintings etc.

UNIT-II: Colours:

1. Terminology- Hue, Tints and Shade, Value, Intensity, Chroma
2. Theories of Colors, Color Wheels
3. Different types of Color Schemes
4. Color Harmony, Color Contrast in relation to Interior Planning.
5. Psychological aspects of color - Warm and Cool
6. Advancing & Receding colors
7. Color, Pattern and Texture and their relationship in Interiors.
8. Color Planning and guidelines for various Interiors.

UNIT-III: Study of Form, Pattern, Tones, and Textures

1. Factors influencing design.
2. Functional and Non-functional
3. Shapes and Patterns derive from natural forms.
4. Pattern and Textures in relation to colors
5. Types of Textures and their relationship psychological; impact.
6. Textures in pencils, inks, and color.

UNIT-IV: Aesthetics of Interiors:

1. Role of accessories in Interiors
2. Role of Color, Light, Shades, and shadows in interiors.

Development of concepts in Interior Designing:

1. Preparation of scrap files for accessories, furniture, and fittings
2. Simple practice exercise in their development

NOTE:

There will be written and drawing examination on the above: Internal assessment will bebased upon the drawings, drawings charts and written assignments.

Drawings Charts should be prepared on each topic mentioned above.

Text Book(s):

[T1] Interior Design-Ahmed Kasu
[T2] Interior Design Principal and Practice-M. Prataprao

Reference Book(s):
[R1] Basic Design of Anthropometry – Shiris Bapat
[R2] Living Area (Interior Space)
[R3] Time Saver Standard for Interior Design and Space Planning - Mcgraw Hill New York
[R4] Interior Design and Decoration, Sherrill Winton, Prentice Hall

Course Code: DID-1004 **Breakup: 1 –0 – 6 – 4**
Course Name: Art & Interior Graphics-I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Knowledge of instruments, papers, usages of graphic in present and future in Interior Design presentation.
CO2	Free hand lettering in pencil, pen, brush, sketching of various geometrical shapes, Simple objects of interiors furniture and accessories, human forms, animals, interior Views.
CO3	Knowledge of 2-dimensional and 3-dimensional geometry. Exercise on drawing of simple plan, elevation, and sections.
CO4	"Drafting techniques, graphic codes, symbols and architectural lettering and Architectural scales".

Course Details:

UNIT-I:

Instructional Objective:
Knowledge of instruments, papers, usages of graphic in present and future in Interior Design presentation. Skills in free hand presentation - Pencils, crayons, ink pen, Brush, cut paper, marker, sketch pen etc. in different mediums.

UNIT-II:

Introduction to Free Hand Drawing:
Free hand line on paper- horizontal and vertical lines, free hand circles, curves, parallel Etc. free hand lettering in pencil, pen, brush, sketching of various geometrical shapes, Simple objects of interiors furniture and accessories, human forms, animals, interior Views.

UNIT-III:

Skills in scaled drawing (Pencil and Pen)

1. Knowledge of use of engineering scales- metric, foot and inches.
2. Reduction and enlargement
3. Physical measurements- exercises of different interior objects
4. Simple drafting of measured objects
5. Knowledge of 2-dimensional and 3-dimensional geometry
6. Exercise on drawing of simple plan, elevation and sections.

Projections:

1. Orthographic, Isometric, Axonometric
2. Drafting of furniture objects with projections.

UNIT-IV:

Measured Lettering
Presentation techniques and standards adopted, pen, pencils and brush.

Understanding of Architectural graphic symbol

Drawing of simple layout for single room - with furniture, accessories dimensions.

NOTE:

1. There will be written and drawing examination on the above: Internal assessment will be based upon the drawings, drawings charts and written assignments.
2. Drawings Charts should be prepared on each topic mentioned above

Text Book(s):

[T1] Drawing - A creative Process, Francis D.K. Ching, John Wiley Sons, New York

[T2] Geometrical drawing for art students, 2nd revised edition- I.H.Morris, Orient Longman,

Reference Book(s):

[R1] Architectural Drafting and Design, 4th Edition- Ernest R.Weidhaas, Allyn and Bacon, Boston, 1981.

[R2] Building drawing, 3rd Edition- MG Shah, CM Kale, Tata Mcgraw - Hill Publishing,

New

Course Code: DID-1005 **Breakup: 1 –0 – 6 – 4**
Course Name: Furniture Design Workshop-I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Importance of furniture in relation to interior design
CO2	Introduction to various interior materials and their application
CO3	Techniques of finishing the surfaces
CO4	Study of anthropometry and ergonomics

Course Details:

UNIT-I:

Importance of furniture in relation to Interiors: study of shapes, forms finish on furniture. Environmental conditions influencing furniture designs: Climatic, social, economic, availabilityof materials and construction techniques.

UNIT II:

Introduction to various Materials: Wood, metals used in Furniture. Types of wood-based products, Methods of care and maintenance, economics of furniture, durability, and usability.

UNIT-III:

Techniques of finishing the Surfaces: Wood and Metal Paints, Polishes, and varnishes etc: hand painting, brush painting, roller, spray etc.

UNIT-IV:

Study of Anthropometric and ergonomic data in relation to various furniture, Diagrammatic representation through charts. An exercise has to be done where actual measurements have to be taken in relation to various furniture presentations in report form.

NOTE:

1. Furniture to be designed freehand sketch files to be made topic wise.
2. Visit to various furniture workshop exhibitions and showrooms for demonstrations and information from time to time

Text Book(s):

[T1] The Encyclopedia of Furniture, Joseph Aronson, Crown Publishers, New York
[T2] Time Saver Standards for Interior Design, Joseph De Chiara, McGraw Hill, New York

Reference Book(s):

[R1] Interior Design, Francis D.K. Ching, John Wiley & Sons, New York
[R2] Office Furniture,Susan S. Szenasy, Facts on file Inc, New York

Course Code: DID-1006 **Breakup:1 –2 – 0 – 3**
Course Name: History of Interior Furniture-I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction to prehistoric architecture and interior design
CO2	Indian handicraft and handloom
CO3	History of different construction techniques and materials used in interior design
CO4	Influences of British architectural on Indian Interior Design

Course Details:

UNIT-I: Introduction: Pre-Historic:

Indus Valley Civilization: Methods of planning decorative features figures and forms used Cultural features and lifestyles.

UNIT-II:

Indian Handicrafts and Handlooms. Analysis of Hindu, Buddhist, Indo-Islamic interiors with special emphasis on decoration, ornamentation, and motifs.

UNIT-III:

Different Construction technique and materials used in interiors as part of structure/decorations with reference from influence of different factors or architectural forms and decorations such as Doors, Windows, Pillars, Columns, Paneling, Ceiling, Cornice frieze, Dado, Stone inlay and architectural decoration.

UNIT-IV:

Different schools of Paintings in India. Influence of British Architectural on Indian Interiors and then gradual change in Architectural features in **"British India".**

NOTE:

1. Preparation of reports and assignments.
2. Visits to Museums, Stores, State Emporium, Manufacturing Workshops, Exhibitions,Trade Fairs, Melas etc.

Text Book(s):

[T1] History of Fine Arts in India and West by Edith Tomary[T2] History of World Architecture by Sir Banister Flecher

Reference Book(s):

[R1] Indian Architecture by Satish Kumar [R2]Interior Deign by Ahmed Kasu

Course Code: DID-1007 **Breakup:1 –2 – 0 – 3**
Course Name: Textile & Accessories

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Importance of furniture in relation to interior design
CO2	Introduction to various interior materials and their application
CO3	Techniques of finishing the surfaces
CO4	Study of anthropometry and ergonomics

Course Details:

UNIT-I:

Floors-Introduction: Warmth, Safety, Noise, Choice and Planning.

Types of Floors: Hard, Semi- Hard, Soft Floor.

UNIT-II: Floor Coverings:

1. Types of Carpets & Rugs
2. Natural fibers and Man - made fiber
3. Handmade Carpets & Lying of Carpets.
4. Machine made Carpets

UNIT-III:

Types of Windows & Treatments:

1. Types of Curtains & Blinds
2. Fittings & Accessories required for Curtains & Blinds.
3. Valance, Swags, Tails, Tracks, Poles and other hardware materials used in curtainsand blinds.

UNIT-IV:

1. Fittings & Fixtures of Bathroom & Kitchen.
2. Sanitary & Hardware

NOTE:

1. Visiting Furnishing & Fitting showrooms for collecting samples or make sketch of the same and prepare a file.
2. Taking one Interior space showing use of different types of Floor, wall finishes, Window Treatment using the above study material.

Text Book(s):

[T1] Interior Design Illustrated, Francis D.K. Ching
[T2] House Book (The complete guide to Home Design) by Terence Conron.

Reference Book(s):

[R1] Window Fashion, Charles TIRANDALL
[R2] A.J. Metric Handbook: Editors Jan, Bilwas & Leslie fair weather.

Course Code: DID-1009B **Breakup: 0 –2 – 0 – 2**
Course Name: Trade Enquiry (Market Survey-I)

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Construction of Bricks, cement, aggregates and their market survey and sample collections.
CO2	Collection of schedules of rates in market and other relevant information related to materials specifies above.
CO3	Collection of wooden samples and brochure from company
CO4	Introduction to upholstery materials and tapestry.
CO5	Home furnishing, Fabrics used in furniture, and window treatment & collection of leatherette samples and fabric samples

Course Details:

UNIT-I: BASIC BUILDING MATERIALS:

1. Collections of basic building materials samples such as Bricks, Cement, Aggregates etc.
2. Wall finishes -
3. Collection of Brochures of various company in the market, rates and other relevant information's such as application advantages and disadvantages of Distemper, Paints, Wall papers etc.

UNIT-II: WOOD & WOOD BASED PRODUCTS:

1. Types of woods in markets, Rates, Company
2. Laminates, Veneer, Plywood, Block board etc.

UNIT - III: UPHOLSTERY MATERIAL AND TAPESTRY:

1. Types of fabric used for different types of furniture, and window treatment.
2. Rates, Collection of Samples.

NOTE: Students must prepare a project file along with the samples, rates otherinformation.

Course Code: DID-2001 **Breakup: 0 – 0 – 3**
Course Name: Environmental science

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Demonstrate the structure and functions of various ecosystems, their natural history and ecology.
CO2	Understands the importance of biosphere and life sustaining processes on earth.
CO3	Understands the importance of biodiversity & its conservation
CO4	Introduction to natural resources their uses and causes of overexploitation, problems and prospects.
CO5	Understands the basic concepts in environmental chemistry and its applications.
CO6	Demonstrate the structure and functions of various ecosystems, their natural history and ecology.

Course Details:

UNIT-I

Environmental Studies: Ecosystems, Bio-diversity and its Conservation

1. **The Multidisciplinary Nature of Environmental Studies**

Definition, scope and importance of Environmental Studies, Biotic and a biotic component ofenvironment, need for environmental awareness.

2. **Ecosystems**

Concept of an ecosystem, structure and function of an ecosystem, producers, consumers and decomposers, energy flow in the ecosystem, ecological succession, food chains, food webs and ecological pyramids. Introduction, types, characteristic features, structures and function of the following ecosystem:

(a) Forest ecosystem

(b) Grassland ecosystem

(c) Desert ecosystem

(d) Aquatic ecosystem (ponds, streams, lakes, rivers, oceans, estuaries).

3. **Bio-diversity and its Conservation**

Introduction to biodiversity - definition: genetic, species and ecosystem diversity, Bio-geographical classification of India, Value of biodiversity: Consumptive use, productive use, social, ethical, aesthetic and option values, Biodiversity at global, national and local levels, India as a mega-diversity nation, Hot-spots of biodiversity, Threats to biodiversity: Habitat loss, Poaching of wildlife, man-wildlife conflicts, rare endangered and threatened species(RET) endemic species of India, method of biodiversity conservation: *In-situ* and *ex-situ* conservation.

UNIT-II

Natural Resources: problems and prospects

Renewable and Non-renewable Natural Resources; Concept and definition of Natural Resources and need for their management

Forest resources: Use and over-exploitation, deforestation, case studies, timber extraction,

mining, dams and their effects on forests and tribal people.

Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits, and problems. Water conservation, rainwater harvesting, watershed management.

Mineral resources: Uses are exploitation, environmental effects of extracting and using mineral resources, case studies.

Food resources: World food problems, changes cause by agriculture and over-grazing, effectsof modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.

Energy resources: Growing energy needs, renewable and non-renewable energy sources, useof alternate energy sources. Urban problems related to energy, case studies.

Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.

UNIT-III

Environmental Chemistry and Pollution Control

(i) Chemistry of Environment

(a) Green Technology: Principles of Green technology, Zero Waste Technology, Green Chemistry & Its basic principles, Atom Economy, Green Methodologies, clean development mechanisms (CDM), concept of environmental impact assessment,

(b) Eco-Friendly polymers: Environmental degradation of polymers, Biodegradable, Photo-biodegradable polymers, Hydrolysis & Hydrobiodegradable, Biopolymers & Bioplastics:polylactic acid, polyhydroxybutyrate, polycaprolactone,. Concept of bioremediation.

(ii) Environmental Pollution

Definition, types, causes, effects and control measures of (a) Air pollution, (b) Water pollution,

(c) Soil pollution, (d) Marine pollution, (e) Noise pollution, (f) Thermal pollution, (g) Nuclear hazards. Pollution case studies. Solid waste and its management: causes, effects and control measures of urban and industrial waste.

Chemical toxicology **-** Terms related to toxicity, impact of chemicals (Hg, As, Cd, Cr, Pb) on environment.

UNIT-IV

Disaster Management, Social Issues, Human Population and the Environment

(i) Disaster Management

Disaster management: floods, earthquake, cyclone and land-slides, nuclear accidents and holocaust, *case studies.*

(ii) Social Issues, Human Population and the Environment

Sustainable development, Climate change, global warming, acid rain, ozone layer depletion, Environmental ethics: Issues and possible solutions, Consumerism and waste products, Wasteland reclamation. Population growth, problems of urbanisation, Environment Protection Act, 1986; Air (Prevention and Control of Pollution) Act, 1981; Water (Prevention and
Control of Pollution) Act, 1974; Wildlife Protection Act, 1972; Forest Conservation Act, 1980; Environmental management, system standards-ISO 14000 series.

Text Book(s):

[T1] E. Barucha, Textbook of Environmental Studies for Undergraduate Courses, Universities Press (India) Pvt. Ltd., 2005.
[T2] S. Chawla, A Textbook of Environmental Studies, McGraw Hill Education Private Limited, 2012

References Books:

[R1] G. T. Miller, Environmental Science, Thomas Learning, 2012
[R2] W. Cunningham and M. A. Cunningham, Principles of Environment Science: Enquiry and Applications, Tata McGraw Hill Publication, N. Delhi, 2003. [R3] R. Rajagopalan,Environmental Studies: From Crisis to Cure, 2nd Edition, Oxford University Press, 2011.
[R4] A.K. De, Environmental Chemistry, New Age Int. Publ. 2012,
[R5] A. Kaushik and C.P. Kaushik, Perspectives in Environment Studies, 4th Edition, New Age International Publishers, 2013
[R6] Environmental Engineering by Gerard Kiely, Tata McGraw-Hill Publishing Company Ltd.New Delhi, 2010

Course Code: DID-2002 **Breakup: 0 – 4 – 3**
Course Name: Interior Design-I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Spatial planning and arrangement of spaces with proper furniture layout.
CO2	Concepts in bedroom and Living Room interiors
CO3	Use of Anthropometry and ergonomics while designing a space and for proper functional activity.
CO4	Work triangle and planning for activity
CO5	Introduction to natural and artificial lighting
C06	Perspective in black and white, colour with simple rendering techniques with pen and ink

Course Details:

UNIT-I:

Planning the flow of space, negative & positive space, space requirement, usage with furniture and functional Spaces. Space distribution and factors influencing it. Drawing required, plan and elevation of single rooms, Simple Layout plans of different rooms for different Functions. Placement of Furniture, making furniture layout, plans and elevations of rooms of different functions.

UNIT-II

Bedrooms & Living Rooms: Concepts in bedroom & Living room interiors- various layout of these spaces - the use of furniture and accessories to create a good ambience - materials & finishes - lighting, color & Texture.
Toilets: Anthropometry - various types of sanitary ware and their use - types of layouts - concepts in modern day toilet interiors - with materials & finishes -lighting, Color, Texture & pattern.

UNIT-III

Kitchens: Work triangle, planning for activity - types of kitchens - Modular Kitchens. Materials Used for counters, shelves, worktops, washing areas.
Lighting & Color Scheme - natural & artificial light.

UNIT-IV

Perspective in Blank & White, Colour with simple rendering visit for case study of existing interiors, Record file of these to be prepared in freehand drawing.

Note:

1. There will be written and drawing examination on the above: Internal assessment will bebased upon the drawings, drawings charts and written assignments.
2. Drawings Charts should be prepared on each topic mentioned above

Text Book(s):

[T1] Interior Design - Ahmed Kasu
[T2] Interior Design Principal and Practice- M. Prataprao

Reference Book(s):

[R1] Time Saver Standard for Interior Design and Space Planning - Mcgraw Hill New York [R2] Interior Design and Decoration, Sherrill Winton, Prenice Hall [R3] Designs for 20th century Interiors - Fiona Leolie, VH Publication, London 2000 [R4] Interior Design: The NewFreedom, Barbaralec Diamonstein, Rizzoli International Publications, New York, 1982.

[R5] Interior Color by Design, Jonathan Poore, Rockport Publishers, 1994

[R6] Worldwide Interiors - International Federation of Interior Architects & Designers, Rikuyo - Sha, Japan, 1987.

Course Code: DID-2003 **Breakup: 0 – 4 – 3**
Course Name: Display Design-I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction to display design and their scope
CO2	Conceptualisation of display design
CO3	Props design, Publicity Media, Hoardings and banners design.
CO4	Importance of lettering, colour and light in poster making.
CO5	Panel, Stand and Blocks display design
CO6	Thematic display design with proper choice of colours

Course Details:

UNIT-I:

Introduction: Display of various products/commodities, display and their scopes for sale, promotion at shop, City, State, National and International levels.
Classification: Window, Wall, Island, Counter, Atrium, Mobile, Kiosk, Store & Exhibition Display.

UNIT-II
Conceptualization: Thematic Message, Seasonal Festival, State & Country oriented Display.

UNIT-III

Display Props and Display Media:

Use of Props, Publicity Media, Newspaper Ads, T.V., Hoardings, Posters, Banners, Billboards, Flyer, Panels, Logo, Trademarks.

UNT-IV

Importance of Devices: Lettering, Color, Lights and different types of Lights to be used for Display,
Mechanical Devices used.
Devises used for Display: Panels, Stands, Blocks.

Note: Lectures, Demonstrations & visits to various shopping Area, Departmental Stores, Malls, Exhibitions etc.

Presentation: Sketch Files, Drawings with Colours to give clear concept of Theme of Different types of Display.

Textbook(s):

[T1] Designs for 20th century Interiors - Fiona Leolie, VH Publications, London.
[T2] Worldwide Interiors - International Federation of Interior Architects & Designers,Rikuyo-

Sha, Japan, 1987

Reference Book(s):

[R1] Interior Design: the new Freedom, Barvaralec Diamonstein, Rizzoli International Publications, New York, 1982

[R2] Interior Colour by Design, Jonathan Poore, Rockport Publishers, 1992.

Course Code: DID-2004 **Breakup: 0 – 4 – 3**
Course Name: Art & Interior Graphics-II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Techniques in skill drafting and perspectives
CO2	Knowledge of standard drawings, introduction to various architectural symbols and their implementation in interior design.
CO3	Drafting plan, elevation, and levelling in sections.
CO4	Drafting perspective view in one point, two point perspective, Bird eye view and worm's eye view level
CO5	Introduction to sciography & their implementation in plan and elevations.

Course Details:

UNIT-I Measured Drawings:

1. Techniques in skilled drafting and perspectives
2. Knowledge of standardized drawings, importance, various architectural symbols andusage in drawing.
3. Drafting of Simple Room layout plan, elevations, and sections with dimensions, showinglevels, and specifications writing.

UNIT-II

Drafting of Simple Room layout plan, elevations, and sections with dimensions, showing levels,and specifications writing.

UNIT-III

Axonometric views of rooms as per the drafted layout plan, furniture, etc.

1. Perspective
2. Terminology of perspective drafting and drawing viz planes, vanishing point, cone of vision, one point, two-point, birds eye view, worm's view etc.
3. Drafting perspective views - one point, two-point perspectives with colours and pencil rendering, knowledge of tones and textures, colour applications and choice of different medium.

UNIT-IV

Sciography: Sciography in plan, elevation and basic sciography use in orthographic projectionsof simple objects and use of letterset and stencils.

Note:

1. There will be written and drawing examination on the above: Internal assessment will be based upon the drawings, drawings charts and written assignments.
2. Drawings Charts should be prepared on each topic mentioned above.

Text Book(s):

[T1] Perspective & Sciography by Shankar Mulik, Allied Publishers.

[T2] Engineering Drawing, M.S. Kumar, D.D. Publications, Chennai

Reference Book(s):

[R1] Geometrical drawing for Art Students, I.H. Morris, Orient Longman, Chennai

[R2] Perspective Principles, M.G. Shah & K.M. Kale, Asia Publications, Mumbai.

Course Code: DID-2005 **Breakup: 0 – 4 – 3**
Course Name: Furniture Design Workshop-II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction of Wood as construction material and availability of its type in market along with the current rates.
CO2	Introduction of Metal as construction material and availability of its type in market along with the current rates.
CO3	Introduction of glass as construction material and availability of its type in market along with the current rates.
CO4	Joinery details and redesigning of existing furniture's on proper scale.
CO5	Application of upholstery materials and their manufacturing techniques.
CO6	Introduction of Wood as construction material and availability of its type in market along with the current rates.

Course Details:

UNIT-I:

Introduction of various materials used in furniture.

1. Wood, metal, and glass
2. Wood and wood based products uses, availability and cost of soft and hard woods, defects, properties and structures of different woods. Different types of wood-based products available e.g., plywood, board, particle board, veneer etc.

UNIT-II

Metals: Mild steel, aluminum, brass, copper, wrought iron, GI springs steel etc. sections and raw materials available; market study and rates of the same.
Glass: Sizes, Thickness, Treatments, Rates and available of sheet properties, plates, wired, laminated colored insulated, heat Resistant and block glass.

UNIT-III

Analysis of existing furniture with full size measured drawings like plan, elevation, sections and details. To understand the structure properly.

1. Joinery as applied to furniture.
2. Redesigning of existing furniture keeping in mind the market and user's need

UNIT-IV

Upholstery Materials: Types of foams, springs and other materials used for upholstering - Techniques of upholstering and various hardware used for the same.

NOTE:

1. Free hand sketches of furniture
2. Report to be made of above items based on market study and factory visits for the same to understand the actual process.

Text Book(s):

[T1] Butter Harry, "Do It Yourself Furniture".
[T2] Marlo Dal Febro, "How to Build Modern Furniture".

Reference Book(s):

[R1] Joseph Aronson, "The Encyclopedia of Furniture", Crown Publishers, New York
[R2] Joseph De Chiara, "Time Saver Standards for Interior Design", McGraw Hill, New York.

Course Code: DID-2006 **Breakup: 2 – 0 – 3**
Course Name: History of Interior Furniture -II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction of the period of history, cultural and interior planning from ancient to Middle Ages to modern periods.
CO2	concept and architectural characteristics of ancient, medieval, and renaissance period explaining different factors.
CO3	European furniture's & its influence on ornamentation & furniture.
CO4	Introduction to Tudor to Victorian style of furniture and decorations.
CO5	Methods of building, embossing, moulding and stencilling in Oriental Furniture

Course Details:

UNIT-I Occidental Interiors:

1. Introduction to the periods of History, Cultural, Architectural & Interior Planning from ancient to Middle Ages, Renaissance, Modern Periods.
2. Concepts and Architectural characteristics of Ancient, Medieval, renaissance period explaining different Factors.
3. Influence ornamentations- Motifs, Furniture, Doors, Windows, Pillars, Columns, Paneling, Ceiling, Cornices, Frieze, stone, or wood inlay etc.

UNIT-II Study of period furniture and motifs:

1. European Furniture - (Renaissance onwards)
2. Italian, Spanish, French
3. Renaissance and its influence on ornamentation and furniture.

UNIT-III:

1. English, 15-18 Century (from Tudor to Victorian) style of furniture & decoration.
2. American Colonial period furniture and Ornamentation
3. 19th and 20th Century - French, English and American Styles.

UNIT-IV: ORIENTAL

Difference in basic shapes, form & motifs of East and West.
Wood & other materials used, familiarity with methods of GUILDING, EMBOSSING, MOULDING, STENCILING
Demonstration of marquetry, Brass, Ivory, Mother of Pearl, Inlay, Wood etc.

NOTE:

1. Study of market trends and styles and visits to Furniture factory & showroom.

2. Project on Design & Detailing of Single residential or Commercial Furniture wood, cane, and metal.

Textbook(s):

[T1] English Furniture Style (1500 - 18) by Ralph E
[T2] Interior Design, Francis D. K. Ching, John Wiley & Sons, New York

Reference Book(s):

[R1] The Encyclopedia of Furniture, Joseph Aronson, Crown Publishers, New York
[R2] Time Saver Standards for Interior Design, Joseph De Chiara, McGraw Hill, New York

Course Code: DID-2007 **Breakup: 0 – 4 – 3**
Course Name: Interior Materials & Construction Techniques-I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction to basic building materials, stone, and brick masonry
CO2	Roof and types of arches, doors, and windows.
CO3	Introduction to structural system: Beam, RCC slab and columns.
CO4	Comparison of steel and RCC structure in the buildings.
CO5	Introduction to seismic zone considerations on high rise structures.

Course Details:

UNIT-I

1. Basic Building Components: Foundation till super structure
2. Stone and Brick Masonry: Types of Bonds
3. Different types of Stone Masonry

UNIT-II:

Openings:

1. Types of Arches & Lintels
2. Types of Doors & Windows
3. Types of Roofs.

UNIT III:

Introduction to Structure:
RCC, Structural Elements, RCC Beams, Reinforced Beams, Slabs & Columns

UNIT IV:

1. Steel structure elements - Comparison of steel and RCC structure in building
2. Introduction to seismic zone considerations on high rise structures.
3. Introduction to design implications to disasters.

NOTE:

1. There will be written and drawing examination for Unit I & Unit II, and Unit III & IV will be theory based: Internal assessment will be based upon the drawings, drawings sheets and written assignments.
2. Drawings sheets should be prepared on each topic mentioned above

Text Book(s):

[T1] Sushil Kumar, "Building Construction"
[T2] S.C.Rangwala, "Engineering Materials", Charotar Publishing, Anand

Reference Book(s):

[R1] W.B. Mackay, "Building Construction", Vol. 1, 2, 3, 4 [R2] Francis D. K. Ching, "Building Construction Illustrated", VNR, 1975.

Course Code: DID-2010B **Breakup: 0 – 6 – 5**
Course Name: Trade Enquiry (Market Survey-II)

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Basic knowledge of materials, market rates and trending materials. Collection of samples and application in interior design.

Course Details

UNIT-I: Floor Finishes

- Types of Floor- Hard floor, Soft Floor finishing materials, rates.

UNIT-II:

Wood & Wood based Products:

- Types of woods in markets, Rates & collection of samples
- Laminates, Veneer, Plywood, Board etc.

UNIT - III:

Upholstery Material and Tapestry:

- Types of fabric used for different types of furniture, and window treatment.
- Rates, Collection of Samples.

UNIT - IV:

Electrical Fitting and Fixtures:

- Collection of samples for lights fittings, Fans, Air Conditioning, switch boards.
- Rates and the company dealing.

Note: - Student have to prepare a project file along with the samples, rates other information's.

Course Code: DID-3001 **Breakup: 3 – 0 – 0 - 3**
Course Name: Business Management

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction to business management and different school of managements
CO2	Various management theories & Process of management along with the responsibilities of manager.
CO3	Planning process & techniques. Managerial functions-organising, structuring & staffing.
CO4	Contemporary issues in management- Directing, controlling, problem solving and decision making.

Course Details

UNIT-I

Introduction to Management: Meaning and Nature of Management, Basic Concepts of Management Definition, Need and scope. Different schools of management - Behavioural, Scientific, Systems, Contingency, Management by Objectives, Management and Society: The External Environment, Social Responsibility, and Ethics: An Overview.

UNIT-II

Management theories - F.W. Taylor - Henry Fayol - Elton Mayo, Evolution of Management (inIndia and Abroad), Levels of management, Process of Management: Managerial Skills, Tasks and Responsibilities of a Professional Manager.

UNIT-III

Planning-Process and Techniques, Organizing- Definition, Process and Organizational Structure, Nature, Importance, principles, centralization - de centralization Organization. structures - Line & staff, functional, product, matrix, geographical, customer, virtual, boundary less. Staffing - Definition, Nature, Importance & steps.

UNIT-IV

Directing-Principles and Process, Controlling-Process and Techniques, Problem Solving and Decision Making - Definition, Nature, Importance, steps; Controlling - Techniques & Steps, Leading - Nature and scope. Contemporary issues in Management.

Text Books:

[T1] Stoner, R. James A.F., Edward Freeman Daniel R Gilbert Jr., Management 6th Ed.

Prentice-Hall of India
[T2] Essentials of management by Koontz H and Weitrich, Tata, McGraw-HillEducation, Delhi.

Reference Books:

[R1] Principles & Practice Of Management (Paper Back), Author: T.N.Chhabra, Publisher: Dhanpat Rai & Co (P) Ltd, Delhi
[R2] Management by James A.F.Stoner, Philip.W.Yetton, Jane F.Craig, Kim D.Johnston,Second Edition. Prentice Hall of India, Delhi.

Course Code: DID-3002 **Breakup: 1 – 0 – 4 - 3**
Course Name: Interior Design & Landscape-I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Design small apartment like 2 BHK/ 3 BHK with complete furniture Layout, Drawing - Plan, Elevation 3D view/Perspective View, Furniture detailing, using Color schemes, Accessories, and Electrical Layout Plan etc.
CO2	Design commercial space like small store or Petrol Pumps convince store complete furniture Layout
CO3	Relation between Outdoor and Indoor Spaces.
CO4	Potted plants, hanging baskets, shrubs, creepers, Hedges Fences, Tree Guards, Trills, water bodies, Fountain, Sculpture, Artificial pools and different types of lights used in Exteriors and their uses

Course Details

UNIT-I

Design small apartment like 2 BHK/ 3 BHK with complete furniture Layout, Drawing - Plan, Elevation 3D view/Perspective View, Furniture detailing, using Colour schemes, Accessories, and Electrical Layout Plan etc.

UNIT-II

Design commercial space like small store or Petrol Pumps convince store complete furniture Layout, Drawing - Plan, Elevation 3D view/Perspective View, Furniture detailing, using Colour schemes, Accessories and Electrical layout.

UNIT-III FOR LAND ESCAPE

- Relation between Outdoor and Indoor Spaces.
- How to relate interior & Exterior Spaces?
- Type of land escape - Hard and soft landscape & its use in Interiors.
- Use of materials - Constriction, ground modeling, ground cover, laying of grass, stone Pathways.

UNIT-IV

- Potted plants, hanging baskets, shrubs, creepers, Hedges Fences, Tree Guards, Trills, water bodies, Fountain, Sculpture, Artificial pools, and different types of lights used in Exteriors andtheir uses.
- Project on land escape Balcony area/Private gardens with layout, and a Colored perspective

Note: Design to be made by students under the guidance of faculty.

Text Book(s):

[T1] Indoor Plants by Xania Field
[T2] World Architecture (With Introduction to landscape Architecture) by G.K. Hiraskar[T3] World of house plants by JOHANS
[T4] Indoor garden by HUNTER
[T5] Indoor gardening by READER DIGEST ASSOCIATION (LONDON)
[T6] Japanese homes and gardens by Marcus G. Sims

Reference Book(s):

[R1] Interior Decoration by Satish Chandra Agarwala

Course Code: DID-3003 **Breakup: 1 – 0 – 4 - 3**
Course Name: Display Design-II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Window display for sales promotion of different types of products/commodities
CO2	Planning designing & 3D views in colour using props for expressing theme or message in display.
CO3	Writing and designing for electronic media.
CO4	Logo designing and counter display.

Course Details

UNIT-I

- Window Display for sales promotion of different types of products/ commodities
- Use of different devices like blocks, stands, panels.
- Use of different types of lights and colors.
- For shops like Gift Gallery, Leather Goods like Bags, Shoes, Pottery and Kitchenware, Apparel for kids, ladies and gents (Branded Stores)

UNIT-II

Planning designing and 3D views in colour using props for expressing 'Theme' or 'Message' in display

UNIT-III

Use of lettering and designing of logo and trademark as an exercise on paper

UNIT-IV

COUNTER DISPLAYS

- Types and use of counters in store display
- Importance of Counter Display
- Planning and designing the counter display for Jewelry, spectacles/ shades, cosmetic goodsand precious goods like Ivory items, precious stones, and sandal wood items using theme fordisplay.
- All the above to be carried out in lecture studio class.
- Visits to various stores, malls, and exhibitions

Note: Demonstration and visit to various malls, stores, exhibition, and workshops.
Practical: Sketching existing display and making sketch files on various topics.

Course Code: DID-3004 **Breakup: 1 – 0 – 4 - 3**
Course Name: Furniture Design Workshop-III

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction of oriental period for furniture design
CO2	History of furniture in Middle Ages & furniture development in Italy
CO3	Neoclassicism & furniture development in England, Germany, and European countries.
CO4	Research and writing ethics

Course Details

UNIT-I

Introduction to Furniture Period. Oriental furniture Period, Period Furniture - Oriental furniture, Historic & Period Furniture, History of furniture is Ancient World - Ancient Egypt, Greece, Rome, and Byzantine

UNIT-II

History of Furniture in Middle Age early mediaeval 500-1000, Romanesque, Gothic -1200-1300, Furniture Development in Italy - Pre-Renaissance (1100-140), Quattrocento (1400-1500), Cinqueccento (1500-1600), Baroque (1560-1700), Classical Revival (1750-1800), Italian Directoire (1795-1799), Italian Empire (1800-1815) Furniture Development inFrance, Early Renaissance (1515-1547), High Renaissance (1560-1610), Baroque (1643-1745), Rococo (1725-1774)

UNIT-III

Neo-Classicism (1774-1793), Directorie (1795-1799), Empire (1800-1815), Art Nouvea (1870-1909), French provincial, Furniture Development in England Tudor/ Elizabethan, Restoration (1600-1685), William &Mary (1689-1702), Queer Anne (1702-1714), Early George (1714-1760)

UNIT-IV

Age of the great Designers (1725-1800), Thomas Chippendale (1718-1779), Robert Adam (1728-1792), George Happlewhite (1786), Thomas Sheraton (1751-1806) History of the 20th Century Furniture - Furniture Development in Germany, France, England,Italy, Scandinavia & USA

Note:

1. There will be written and drawing examination on the above: Internal assessment will be based upon the drawings, drawings sheets and written assignments.
2. Drawing sheets should be prepared on each topic mentioned above.

Text Book(s):

[T1] Interior Design - Ahmed Kasu
[T2] World Furniture Edited by Helena Hayward

Reference Book(s):

[R1] English Furniture Styles (1500 - 18) by Ralph ETime Saver Standard for Interior Designand Space Planning - Mcgraw Hill New York
[R2] Antique Furniture by David P. Lindquist and Carlone C. Warren

Course Code: DID-3005 **Breakup: 1 – 0 – 4 - 3**
Course Name: Interior Services-I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction to Water supply system. (a) Hot and cold-water supply system (b) Types and sizes of pipes (c) Water supply fitting.
CO2	Introduction to Drainage system & Simple exercises on preparation of layout plans for toilet, kitchen; both public and residential.
CO3	"Lighting & - Electrical layout (a) Planning - using electrical symbols (b) Selection of fitting for different work areas."
CO4	Basic knowledge of material finishes and maintenance.

Course Details

UNIT-I Water Supply

(a) Hot and cold water supply system
(b) Types and sizes of pipes
(c) Water supply fitting to -
(i) Bathroom (ii) Water closet (iii) Sink (iv) Bath tub (v) Wash Basin (vi) Bidets (vii) Showers (viii) Urinals

UNIT-II Drainage

(a) Principles of Drainage
(b) Material s for drains
(c) Traps - types, sizes, function and usage
(d) Pipes sizes and shapes Sanitary fixtures - WC, washbasins, bath tubs, sinks (Sizes and types)
(e) Septic Tank

Note: Simple exercises on preparation of layout plans for toilet, kitchen; both public and residential

UNIT-III Lighting

(a) Different systems of lighting - (i) natural (ii) artificial
(b) Units for measuring light

UNIT-IV Electrical layout

(a) Planning - using electrical symbols
(b) Selection of fitting for different work areas as - drawing room, bedroom, study room, bath, kitchen, etc.

(c) Public places like offices, Malls, Hospitals

Note: Include basic knowledge of material finishes and maintenance

Textbook(s):

[T1] Building Construction by B.C. Punmia [T2] Building Construction by Sushil Kumar[T3] Materials by RANGWALA
[T4] Sanitory engineering by RS DESHPANDEY
[T5] Water supply and sanitation by CHARANJIT SHAH
[T6] A-Z of practical building constructions & its management by SANDEEP MANTRI[T7] Electrical engineering by O.P. SHUKLA
[T8] Water supply and sanitation engineering by P.K. UPADHYAY

Reference Book(s):

[R1] Sanitary Engineering by R.S. Deshpandey
[R2] Water supply & Drainage Gurcharan Singh

Course Code: DID-3006 **Breakup: 1 – 0 – 4 - 3**
Course Name: Interior Materials & Construction Techniques-II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Different types of flooring materials, laying details
CO2	Introduction to Pitched and its different type and trusses.
CO3	Introduction to Mechanized door & its different type.
CO4	Introduction to windows & its different type.

Course Details

UNIT-I FLOORS

(a) Ground and upper floor
(b) Different types of flooring materials, laying details

UNIT-II ROOFS

(a) Pitched - different types,
(b) Trusses - types and parts in sketches

UNIT-III DOORS (WITH MECHANICAL DEVISED)

(a) Aluminum and steel doors
(b) Types of door closing devices
(c) Sliding doors
(d) Sliding and folding doors
(e) Revolving doors
(f) Swing doors
(g) Shop window front

UNIT-IV WINDOWS

(a) Aluminum and steel windows
(b) Different types - Bay, Bow, Corner, Dormer, Sky light, Louvered (French),
(c) Casement, clerestory, Pivoted, Sliding, Ventilators.

Text Book(s):

[T1] Building Construction by B.C.Punmia
[T2] Building Construction by Sushil Kumar

Reference Book(s):

[R1] Building Construction by W.B. Mckay

Course Code: DID-3007 **Breakup: 1 – 0 – 0 - 4**
Course Name: AutoCAD-I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	CAD and interior design, the future of CAD.
CO2	Basic Terminology and Interior designing using AutoCAD.
CO3	Drawing tools, modify tools.
CO4	How to create a custom simple line type?

Course Details

UNIT-I

- Introduction to Hardware and Software of CAD
- Introduction: what is CAD? What to expect from CAD?
- A look at CAD industry, working of a CAD system
- CAD and interior design, the future of CAD.
- Components of CAD system
- Hardware software overview, CAD hardware, CAD software, CAD user interface
- Drawing with a computer. CAD software in the future

UNIT-II

- Introduction to AutoCAD
- Advantages of CAD
- Business applications for CAD
- Building Information Modeling, wrapping it up
- Benefits of CAD Design
- What is AutoCAD?
- Starting AutoCAD
- World Coordinate System
- AutoCAD Basics
- Basic Terminology
- Interior designing using AutoCAD

UNIT-III- CAD DRAWINGS

- A prototype CAD drawing
- Limit setups for drawings
- Understanding scale concept and limits in AutoCAD
- Drawing tools, modify tools

UNIT-IV- COLOURS AND LINE TYPES

- Line type, line type scale, line weights
- How to create a custom simple line type?
- AutoCAD command list

Text Book(s)

[T1] Mastering AutoCAD by George Omura (BPB Publications)

Reference Book(s)

[R1] Joseph A. Fiorello, CAD for interior basics, John Wiley &Sons [R2] Timothy J. Barnes, Electronic CAD frame works,
Springer [R3] Schoon Maker, Ebook Corporation, Marcel Dekker
[R4] The CAD Guidebook: a basic manual for understanding and

improvingComputer-Aided Design, CRC Press

Course Code: DID-3008 **Breakup: 0 – 1 – 8 - 5**
Course Name: Interior Project- II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Design commercial interiors, Any type of Indian • Any state with special effects of decor. • Chinese • Japanese
CO2	Layout plan, furniture to match the theme wall, floor, ceiling finishes and specific use of lights. Importance of Furniture and its design to justify the type of restaurants students wants to design.
CO3	Role of artwork and elements used in, to enhance the theme of Restaurants may be justified in the views.
CO4	Beauty Parlour: Requirements for drawing are the same.

Course Details

Restaurants: Any type Indian

- Any state with special effects of decor.
- Chinese
- Japanese

Requirements: layout plan, furniture to match the theme wall, floor, ceiling finishes and specificuse of lights.

Importance of Furniture and its design to justify the type of restaurants students wants todesign. Role of upholstery wall finishes

- Paints
- Wallpapers
- Wall paneling, etc.
- Furniture sketches with dimensions and material details.
- 3D views in color
- Role of art work and elements used in, to enhance the theme of Restaurants may bejustified in the views.
- Beauty Parlor: Requirements for drawing are the same.

Course Code: DID-4001 **Breakup: 3 – 0 – 0 - 3**
Course Name: Life Skills

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Definition and importance of life skills.
CO2	Introduction to Learning and Performance skills, Pillars of life skills.
CO3	Introduction to Social skills, negotiation skills and thinking skills.
CO4	Introduction to coping skills: coping with emotions, stress, thinking skills, social skills

Course Details

UNIT-I

Introduction: Definition and importance of Life Skills, Livelihood Skills, Survival Skills, LifeSkills Approach, Life Skills based education, Life Skills Training- Implementation Models

UNIT-II

Learning and Performance, Cognitive Development, Maturation, Adult Learning, Approaches to Learning Pillars of Education and Life Skills- Four Pillars: Learning to Know, learning to Do, learning to Live Together, learning to be learning throughout Life.

UNIT-III

Social Skills and Negotiation Skills: Self Awareness, Empathy, Effective Communication, Interpersonal Relationships

Thinking Skills: Nature, Element of Thought, Types, Concept Formation, Reasoning, Creativeand Critical Thinking

UNIT-IV

Coping Skills: Coping with Emotions, coping with Stress, Integrated use of thinking skills,social skills and coping skills

Text Book(s):

[T1] Rajasenan, N.V. (2010). Life Skills, Personality and Leadership, Rajiv Gandhi NationalInstitute of Youth Development, TamilNadu

[T2] Duffy, Grover,K., Eastwood, A. (2008). Psychology for Living-Adjustment, Growth andBehaviour Today, Pearson Education

Reference Book(s):

[R1] Debra McGregor, (2007), "Developing Thinking; Developing Learning - A Guide to Skillsin Education", Open University Press, New York, USA

[R2] Singh Madhu, (2003). "Understanding Life Skills, Background paper prepared forEducation for All: The Leap to Equality"

[R3] Nair. A. Radhakrishnan, (2010). "Life Skills Training for Positive Behaviour", RajivGandhi National Institute of Youth Development, Tamil Nadu.

[R4] Dahama O.P., Bhatnagar O.P, (2005). "Education and Communication for Development,(2nd Ed.)",

Oxford& IBH Publishing Co. Pvt. Ltd. New Delhi

Course Code: DID-4002 **Breakup: 1 – 0 – 4 - 3**

Course Name: Interior Design & Landscape-II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Scheme preparation for interior of commercial office space
CO2	Preparation of interior cubicles for commercial space. Designing cubical for commercial spaces.
CO3	Designing fast food restaurant with perspective views.
CO4	Designing public open spaces with full landscaping.

Course Details

UNIT-I

Preparing Interior Scheme for

(i) Office Area for Architects or Interior Designers, Any Office

(ii) Office Private individual office

UNIT-II

Commercials office containing Reception Area chairman's chamber, Directors Room, Staff areawith open cubicles, pantry & Toilet /Washroom area, conference hall & common staff area anddrawing required as layout plans, elevation and perspective Views of different area in color withuse of proper accessories, plants and flower arrangement for various areas of office.

UNIT-III

Fast Food Restaurant: - Existing Restaurant in neighborhood with layout plan and perspective view in the form of free hand sketches.

UNIT-IV

Public Park of your own colony/ area or specified park by the faculty. Create space for public function stage and gazebo etc. Terrace garden to be designed, laying of grass on terrace, potted plants, hanging baskets, use of lights and making sitting areas for small family get-togethers.

Drawing required: -

Layout plan, Elevations, and Perspective view of different areas in color with use of proper Accessories, plants and flower arrangements for various areas in office.

NOTE: - Design to be made by students under the guidance of faculty, lecture, demo visit of various malls/ shopping area for restaurants/ fast food visit, visit of nursery for the knowledge ofplants and sculptures.

Text Book(s):

[T1] Indoor Plants by Xania Field
[T2] World Architecture (With Introduction to landscape Architecture) by G.K. Hiraskar[T3] World of house plants by JOHANS
[T4] Indoor garden by HUNTER
[T5] Indoor gardening by READER DIGEST ASSOCIATION (LONDON)
[T6] Japanese homes and gardens by Marcus G. Sims

Reference Book(s):

[R1] Interior Decoration by Satish Chandra Agarwala

Course Code: DID-4003 **Breakup: 1 – 0 – 4 - 3**
Course Name: Display Design-III

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Designing island display with the properties of mobility and flexibility.
CO2	Preparation of plan elevations and 3 d views in colour showing proper use of light, colour, lettering, and props.
CO3	Designing wall cum island display for toy shop.
CO4	Site visit of various showrooms for case study purposes along with preparation of report.

Course Details

UNIT-I

- Island display. Use and importance of island display.
- Special equipment's and display aids.
- Electronic and mechanical devices to create movement in display.
- Display of handicraft and handlooms of different states
- Electronic goods using proper theme.
- Furniture of different types (Residential, offices, etc.)

UNIT-II

Preparation of plans, elevations, and 3D views in colour showing proper use of lights, colours,lettering and props.

UNIT-III

- Wall-cum-island display.
- Furnishing store, toy shop, sports goods, etc.

UNIT-IV

- Preparing plans, elevation, and view, at least two different types of projects to be done in each semester.
- For understanding lectures demonstration in studio classes, visits to various showrooms, emporia, malls, exhibitions, etc.
- Brief reports of the visits to be submitted.

Note: Demonstration and visit to various malls, stores, exhibition and workshops.
Practical: Sketching existing display and making sketch files on various topics.

Course Code: DID-4004 **Breakup: 1 – 0 – 4 - 3**

Course Name: Furniture Design Workshop-IV

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Designing flexible furniture/space saving furniture.
CO2	Designing flexible furniture/space saving furniture with the use of bamboo, cane, wood, glam, metal, pvc.
CO3	introduction of folding and knock down furniture, movable modular furniture.
CO4	introduction to different finishes according to climatic condition of the countries.

Course Details

UNIT-I

Introduction & Study of the space saving furniture. Residential & Commercial area

UNIT-II

Different material used for making furniture like cane, Bamboo, Wood, Glam, Metal, PVC.

UNIT-III

Concept of folding & Knock Down furniture, Movable, Modular furniture

UNIT-IV

Different finishes used on furniture according to the climatic Conditions of different Countries.

Note:

Furniture to be designed freehand sketch files to be made topic wise.Visit to various furniture workshop exhibitions and showrooms for demonstrations andinformation from time to time.

Text Book(s):

[T1] The Encyclopedia of Furniture, Joseph Aronson, Crown Publishers, New York
[T2] Time Saver Standards for Interior Design, Joseph De Chiara, McGraw Hill, New York[T3] Portable Furniture by Vicki Brooks
[T4] Shelves and Cabinets by Alexandria, Virgina

Reference Book(s):

[R1] Interior Design, Francis D.K. Ching, John Wiley & Sons, New York
[R2]Office Furniture, Susan S.Szenasy, Facts on file Inc, New York

Course Code: DID-4005 **Breakup: 1 – 0 – 4 - 3**
Course Name: Interior Services-II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction to sound and thermal insulation & it uses in interior design.
CO2	Introduction to fire safety system, fireproof material, and its application interior design.
CO3	Introduction to ventilation system, its types and its requirements.
CO4	Air conditioning, its types and essential of air conditioning.

Course Details

UNIT-I SOUND AND THERMAL INSULATION

- Behavior of heat and sound propagation
- Acoustical defects such as echo, reverberation, sound foci
- Methods of correcting
- Sound absorbing materials.
- Use of sound insulating materials in interiors like auditorium conference hall typing room

UNIT-II FIRE SAFETY SYSTEMS

- Causes of fire, Fireproof (Resistant) material, Application of fireproof (Resistant) material
- Survey - Firefighting equipment's

UNIT-III VENTILATION

- Ventilation (i) Natural (ii) Artificial or Mechanical
- Requirement of ventilations system, Artificial (mechanical) Ventilation systems - Extraction, Plenum, Extraction-Plenum, AirConditioning

UNIT-IV AIR CONDITIONING

- Definition
- Essentials of comfort Air Conditioning
- Types - Unit A/C, Central A/C, Split A/C, Package Unit, Central and Direct Expansion & Chilled water system(Indirect)
- Essentials of Air conditioning - Filtration, heating and cooling, humidification or dehumidification, air Circulation or distribution
- Latent heat, ton of air conditioning, refrigeration etc.

Note: Case study of Analysis of existing building

Text Book(s):

[T1] Building Construction by B.C.Punmia [T2] Building Construction by Sushil Kumar[T3] Materials by RANGWALA
[T4] Sanitory engineering by RS DESHPANDEY
[T5] Water supply and sanitation by CHARANJIT SHAH
[T6] A-Z of practicle building constructions & its management By SANDEEP MANTRI[T7] Electrical engineering by O.P. SHUKLA
[T8] Water supply and sanitation engineering by P.K. UPADHYAY

Reference:

[R1] Fire Fighting by S. Shah
[R2] Ready Reckoner by Charan Jeet S. Shah

Course Code: DID-4006 **Breakup: 1 – 0 – 4 - 3**
Course Name: Interior Materials & Construction Techniques-III

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction to panelling, its fixing details and material used for it.
CO2	Introduction to partitions with different materials, sound proofing in it and modern materials used for it.
CO3	Introduction to false ceiling, material and its fixing details and designing false ceiling with timber.
CO4	Fixing details of POP in false ceiling and role of glass, gypsum, and pop in false ceiling

Course Details

UNIT-I PANELING

- Design and fixing details of paneling,
- materials used for paneling in interior
- Paneling in plywood

UNIT-II PARTITIONS (SPACE DIVIDERS- FULL OR HALF PARTITIONS)

- Types
- Simple partitions in wood, glass and metal
- Movable partitions & Sound proof partition
- Various modern materials available in markets

UNIT-III FALSE CEILING (TIMBER)

- Purpose
- Materials used for fixing and finishing.
- Design and details of false ceiling in timber.

UNIT-IV FALSE CEILING (OTHER MATERIALS)

- Role of glass, gypsum, POP in false ceiling
- Fixing of Plaster of paris in false ceiling

Text Book(s)

[T1] Building Construction by Sushil Kumar

Reference Book(s)

[R1] Building Constructions by W. B. Mckay, V.P. Sikka, B.C. Punmia, ARORA AND BIRD

Course Code: DID-4007 **Breakup: 1 – 0 – 4 - 3**
Course Name: Autocad-II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Working with layers a, coordinates, Texting, and dimensioning.
CO2	Drawing intersection, OSNAP, PAN & zooming.
CO3	Introduction to 3 D coordinate system, line thickness drawing techniques.
CO4	Enhanced 3 D- Extruding and lofting, revolving in AutoCAD.

Course Details

UNIT-I

- Introduction to working in AutoCAD and layers
- Introduction: the x, y co-ordinate system, AutoCAD basics, Layers
- Layer, text and dimensioning
- Working with layers

UNIT-II

- Drawing insertion, object snap, zooming and panning
- Insert a graphic file into an existing Visio drawing
- Insert command
- Building Information Modeling, wrapping it up
- Benefits of CAD Design
- What is AutoCAD?

UNIT-III

PLAN AND 3D VIEW DRAWING

- Introduction
- 3D CAD Terminology
- Isometric Drawing
- The 3D co-ordinate system
- 3D rotation
- Viewing in 3 -D objects
- Wire frame Drawing Techniques
- Line thickness Drawing Techniques
- Regions and 3-D faces

UNIT-IV ENHANCED 3-D

- Extruding and lofting

- Revolving objects
- AutoCAD 3-D modeling -3D views

Text Book(s)

[T1] Mastering AutoCAD by George Omura (BPB Publications)

Reference Book(s)

[R1] Joseph A. Fiorello, CAD for interior: Beyond the basics John Wiley & Sons
[R2] John K. Krouse, what every engineer should know about CAD & computer aided manufacturing.

Course Code: DID-4008 **Breakup: 0 – 1 – 8 - 5**

Course Name: Interior Project-III

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Design commercial interiors, Any type of Indian • Any state with special effects of decor. • Chinese • Japanese
CO2	Layout plan, furniture to match the theme wall, floor, ceiling finishes and specific use of lights. Importance of Furniture and its design to justify the type of restaurants students wants to design.
CO3	Role of artwork and elements used in, to enhance the theme of Restaurants may be justified in the views
CO4	Design commercial interiors, Any type of Indian • Any state with special effects of decor. • Chinese • Japanese

Course Details

Nursery school-cum-day boarding and activities school study at least two schools in the neighborhood. Submit the report before initiating the project.

Drawings required are-

- Layout plan of different areas and small open activity areas.
- Furniture and special furniture for day boarders.
- The overall ambience with effective designs and landscape.

Creative Art Center: - For the age group of 12 onwards to learn dance, drama, music, drawing, painting, etc. Required drawings are the same as above (nursery school project).

Course Code: DID-5001 **Breakup: 3 – 0 – 0 - 3**

Course Name: Technical English

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Technical writing skills and stages.
CO2	Formal formatting and citation
CO3	Writing and designing for electronic media
CO4	Research and writing ethics.

Course Details

UNIT-I

Technical Writing: Definition, Purpose, and Characteristics of Technical Writing.
Technical Writing Skills: Methods and means of the Pre-writing stage, the Writing Stage and thePost-Writing Stage.

UNIT-II

Formal Formatting: Arrangement of Formal Elements, Front Material, Format Devices in the Body of Formal Report-Heading, Pagination, End Material - Citations, References and Bibliography, Appendix.

UNIT-III

Writing and Designing for Electronic Media: Use of Internet as a Writing tool; designing andwriting for multimedia applications and the World Wide Web.

UNIT-IV

Research and Writing Ethics: Explaining Forms and Consequences of Plagiarism, Introduction o Intellectual Property Right and Copy Right Laws.

Text Book(s):

[T1] Sides, Charles H., "How to Write and Present Technical Information", Cambridge Univ. Press, 1999.
[T2] Basu, B. N., "Technical Writing", PHI Learning Pvt. Ltd., 2007.

Reference Book(s):

[R1] Beer, David F. and David A. McMurrey, "A Guide to Writing as an Engineer", New York: Wiley, 2005.
[R2] Gibaldi, Joseph, and Walter S. Achtert, "MLA Handbook for Writers of Research Papers, Thesis, andDissertations", Modern Language Association, 1980.
[R3] Rubens, Philip, "Science and Technical Writing: A Manual of Style", Routledge, 2002.
[R4] Anderson, Marilyn, Pramod K. Nayar, and Madhucchandra Sen, "Critical Thinking, Academic Writing and Presentation Skills", Pearson. 2010.

Course Code: DID-5002 **Breakup: 3 – 0 – 0 - 3**
Course Name: Legal Ethics & Professional Practice

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Describe the characteristics/attributes of interior designer professionals.
CO2	Describe the educational and professional requirements to be an interior designer;
CO3	Describe the different functions of profession in business activities.

Course Details

UNIT-I Introduction - Contract Document

- Contract and conditions of engagement of interior projects
- Responsibilities, liabilities, and duties of interior designer
- Terms and conditions for entering Contact, Scale of charges and mode ofpayment for the professional services to be offered Duties and liabilities as per the Architect Act, 1972, Contractor's and Owner's (Employer's) Duties and liabilities.

UNIT-II Professional Procedures:

- Procedure from date of enquiry, keeping of cost, job records, modifications, alteration to estimates, Preparation of schedules and progress charts, Supervision of sub-trades and sub-contractors.

UNIT III Code of Practice

- Confidential information for client's employer, Encroachment on existing project of another designer in direct competition, Fees, scale of change, commission, and discount,retaining fees, rejection.
- Advertising, press display, classified columns, announcement of change of address, sizeof name plate etc.
- Conditions of agreements and terms of contracts alternatives agreements, out of pocket expenses, stages of payment, settlement of disputes and arbitration.

UNIT IV Job Procedures

- Regulations & restrictions on various types of new & old work, Local by-laws pertainingto interiors & renovation of buildings, Storage & maintenance of plants & materials, Liabilities, Local tradesmen working conditions & practices.

Text Book(s):

[T1] Professional Practice by Dr. Roshan H. Namavati

[T2] Metric Handbook (Planning & Design Data) 2nd Ed. Edited by, David Adler

Reference Book(s):

[R1] Professional Practice by Krishnamurthy K.G

[R2] The Construction of Building by R. Barry.

Course Code: DID-5003 **Breakup: 1 – 0 – 4 - 3**
Course Name: Interior Design -I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Green architecture, eco-friendly & intelligent interiors.
CO2	Disaster management & Fire safety designs
CO3	Perspective in all mediums: planning of small party events
CO4	Washroom design of a five star hotel.

Course Details

UNIT-I

- Green Architecture - Construction Techniques & usages of building materials - efficient,earth friendly or recycled for the creation of eco-friendly & intelligent interiors.
- Fire Safety - Introduction to fire safety, causes of death in fire, Responsibility ofDesigner's towards fire safety.
- Disaster Management - Understanding Disasters, Geological and Mountain AreaDisasters, Wind and Water Related Natural Disaster, Man Made Disasters.

UNIT-II Perspective in all mediums

Eating house: Cuisine based restaurants and fine dining areas. Bed and Breakfast or Guest HouseProject with dining area which could be used for small events like Birthday Parties, weddings, functions (like Mehndi, Sangeet, etc.) or for exhibitions, etc.

UNIT-III Washroom -Perspective in all mediums.

- Residential area with all latest equipment's, Commercial washroom; Either of 5 Star Hotel or a Mall.

UNIT-IV Perspective in all mediums

- A retail out let like Reliance Fresh, Big Apple, Save Max, Big Bazar, etc
- Layout plan, elevation with special stacking racks, special effects of light in displays areasof goods, 3D view in color. In all projects drawings required would be: Plan, light/ electrical plan, elevations, 3Dviews,sketches of special related services and areas too.

Textbook(s):

[T1] Color dictionary by Brasi & Workman[T2] Indian history by Goyal
[T3] Building Services, Anthony Rowley[T4] Fire Fightings, S. Shah
[T5] Great interiors by Grant
[T6] Central Water Commission, 1989, Manual of Flood Forecasting, New Delhi.

Reference Book(s):

[R1] Interior design by Ahmed A. Kasu
[R2] Landscape Detailing Surfaces- Michael Littlewood[R3] Illustrated history of Interior Decoration by Praz

Course Code: DID-5004 **Breakup: 1 – 1 – 4 - 4**
Course Name: Visual Merchandising -I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	What is atrium or foyer display and Its importance and how to present the same.
CO2	Automobile -Car -Two-Wheeler • Cold drinks or new juice introduction in the atrium.
CO3	Mobile displays • Its importance and use • Introducing new products with the help of publicity material like placard, hoarding, leaflet/flyers.
CO4	Exercises on cosmetic display, landscape, plants and landscape accessories display.

Course Details

UNIT-I Atrium/ Foyer Display

- What is atrium or foyer display?
- Its importance and how to present the same?
- Scope of atrium display,
- Planning and colored view for approval on sheet/ drawings.

UNIT-II Automobile

-Car

-Two Wheeler

- Cold drinks or new juice corner introduction in the atrium

UNIT-III Mobile displays

- Its importance and use
- Introducing new products with the help of publicity material like placard, hoarding, leaflet/flyers

UNIT-IV

Exercises on cosmetic display, landscape, plants and landscape accessories display

NOTE: Students must visit malls, shopping areas, exhibitions for the understanding the same.

Text Book(s):

[T1] Image India by Dhamija

[T2] Indian folk art and craft by Dhamija

[T3] Indian cultures through the ages by Vidyarthi

Reference Book(s):

[R1] International shop design by Kasper

[R2] Indian architecture according to silpsastra by Acharya

Course Code: DID-5005 **Breakup: 1 – 1 – 4 - 4**
Course Name: Product Design -I

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Section of material, understand the properties of material.
CO2	Photo frame, table calendar, wall clock, wall hanging, etc. With proper design and drawing on sheet with details
CO3	Accessories/ props for Birthday Party for theme oriented, etc. All these accessories must be drawn on paper with complete details and colour schemes
CO4	wind chimes, decorative balance, flowers with cloth, ribbon, and wool, etc. All designs to be made on drawing sheets

Course Details

UNIT-I:

- Section of material, understand the properties of material.
- The material to work on I unit is PAPER.
- Products which can be made are Pen stand, tissue paper box, gift box, wedding card box, sweets or chocolate box. The drawing with complete size and details must be made.

UNIT-II:

Material: - mount board, Choksi board

Products: - Photo frame, table calendar, wall clock, wall hanging, etc. With proper design anddrawing on sheet with details.

UNIT-III:

Material: - Thermocol

Products: - accessories/ props for Birthday Party for theme oriented, etc.

All these accessories must be drawn on paper with complete details and color schemes Prepare: Masks for different occasions, Candles, Diya's, Flowers, etc. to orient he theme.

UNIT-IV:

Material: - Cloth, wire, ribbon, wool, sutli, etc.

Products: - wind chimes, decorative balance, flowers with cloth, ribbon and wool, etc. Alldesigns to be made on drawing sheets

TOOLS/ EQUIPMENTS REQUIRED FOR HOLDING PRODUCT DESIGN

WORKSHOP: Scissors, paper cutters, pliers, small hammers. These are required for cutting the edges of material smoother and turning and twisting of wire,or other materials for better and firm joints.

Text Book(s):

[T1] Wood bonding handbook by Stevens & Turner[T2] Indian decorative design by Aryan
[T3] Furniture in color by Synge [T4] Furniture making by Collisehon

Reference Book(s):

[R1] Furniture face lifts by Wagstaff & Thurgood[R2] How to make your own furniture

Course Code: DID-5006 **Breakup: 1 – 1 – 4 - 4**
Course Name: Interior Materials & Construction Techniques-V

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Introduction and Construction techniques of the staircase.
CO2	Calculation of step size & Types of steps
CO3	CLASSIFICATION OF STAIRCASE and various materials used
CO4	CLADDING & CEILING MATERIALS & FINISHES & its APPLICATION
C05	TYPES OF FALSE CEILING: • Gypsum, Plaster of Paris, Wooden, Glass, Metal, • Synthetic Leather or Cloth Ceiling.

Course Details

UNIT-I

TECHNICAL TERMS - e.g. Tread, riser, flight, landing, nosing, Scotia, soffit, newel post, balusters, headroom, handrail, balustrade, etc.

REQUIREMENTS OF GOOD STAIRS:

- Location
- Width of stair
- Length of flight
- Pitch of stair
- Headroom
- Balustrade
- Step dimensions
- Material of construction

UNIT-II

- Calculation of step size
- Types of steps-
- Round ended
- Bull nose step
- Flier
- Splayed step
- Commode step
- Dancing step

UNIT-III CLASSIFICATION OF STAIRCASE

- Straight
- Turning stairs- quarter turn
- Half turn (dog legged, open newel, geometrical)
- 3-quarter turn
- Bifurcated
- Continuous stair (circular, spiral, helical) inn different materials like Timber, Metal, Stone, Brick, RCC etc.

UNIT-IV CLADDING & CEILING MATERIALS & FINISHES & its APPLICATION -

- Define Cladding
- Stone, Timber, Weather Board, Fiber Cement, Brick
- RCC, Vinyl, Metal, etc.

TYPES OF FALSE CEILING:

- Gypsum, Plaster of Paris, Wooden, Glass, Metal,
- Synthetic Leather or Cloth Ceiling.

Text Book(s):

[T1] The Construction of Buildings - Barry
[T2] Building Construction VOL. 1, 2, 3, 4 BY W.B. Meckay
[T3] Interior Construction & Detailing - David Kent Ballast.

Reference Book(s):

[R1] Building Construction by B.C. Punmia
[R2] Building Construction By SanjayMahajan

Course Code: DID-5007 **Breakup: 1 – 0 – 8 - 5**
Course Name: Interior Project-IV (Minor Project)

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Designing a Project which can be undertaken (anyone) is Bank, Library or Airlines office. First, they must study the existing office by the visiting and understanding the work of the project, minimum space requirement and division of workstations.
CO2	Detailed Drawings and views.
CO3	Preparing Sample chart 1) wall finishes like paint or any other finish 2) floor finish samples, ceiling finishes with samples.
CO4	Designing a Project which can be undertaken (anyone) is Bank, Library or Airlines office. First, they must study the existing office by the visiting and understanding the work of the project, minimum space requirement and division of workstations.

Course Details

Project which can be (any one) is Bank, Library or Airlines office.
First, they must study the existing office by the visiting and understanding the work of the project, minimum space requirement and division of workstations.
Submit a report of their visit with some existing areas. Drawings requires in the form of sketches.Give a presentation on the same in the class.

The project will be given by the teacher.

Drawing required:

- Number of people working
- Workstations
- Furniture layout plan with amenities required
- Finishes: wall, floor and ceiling
- Light/ electric plan
- Elevation of all existing areas
- 3D views with color
- Sample chart-

1) wall finishes like paint or any other finish
2) floor finish samples, ceiling finishes with samples
3) Furnishing samples with all rates and fixing expenditure, etc. which would give the approx. expenditure to be incurred in the project. VIVA on the project with internal and external exams to be held after the submission of theproject using AutoCAD.

Text Book(s):

[T1] Color dictionary by Brasi & Workman
[T2] Indian history by Goyal
[T3] Floor design by Sareen
[T4] Ideal home book of kitchen
[T5] Great interiors by Grant
[T6] Interior design principles by M. Pratap Rao

Reference Book(s):

[R1] Interior design by Ahmed A. Kasu

[R2] Encyclopedia for color theory

[R3] Illustrated history of Interior Decoration by Praz

Course Code: DID-6001 **Breakup: 3 – 1 – 0- 4**

Course Name: Entrepreneurship & Project Management

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Understand project characteristics and various stages of a project.
CO2	Understand the conceptual clarity about project organization and feasibility analyses.
CO3	Market, Technical, Financial and Economic. Analyse the learning and understand techniques for Project planning, scheduling, and Execution Control.
CO4	Apply the risk management plan and analyse the role of stakeholders.
CO5	Understand the contract management, Project Procurement, Service level
CO6	Agreements and productivity.
CO7	Understand the How Subcontract Administration and Control are practiced in the industry.

Course Details

UNIT-I ENTREPRENEUR

- Concept and nature, scope, and philosophy of entrepreneurship
- Distinction between self-employment and entrepreneurship
- Importance of entrepreneurship and self-employment in our country
- Entrepreneurial traits
- Different forms of business organizations (sole proprietorship, partnership, co-operative societies, public and private undertakings

UNIT-II ENTREPRENEURIAL SUPPORT SYSTEM

- Introduction
- Sources of information
- Market survey and opportunity identification

UNIT-III ELEMENTS OF MANAGEMENT

- Principles of management and managerial functions like planning, organizing, staffing, directing, and controlling, industrial management
- Value of human relations in management

UNIT-IV PROJECT MANAGEMENT

- Introduction to project management
- Time of progress chart, bar chart, Gantt chart, CPM & PERT
- Planning of activities
- Allocation of time to various activities
- Personal management and industrial relations- recruitments, selection, training, wageand salary administration related to small industries
- Costing- methods and techniques of minimizing cost
- Marketing- concept and functions, marketing mix, product planning, salesmanship and its principles
- Sources of finance
- Setting up of small scale industry with proper knowledge of Government Policies for

financial resources (like banks and other financial bodies.

Text Book(s):

[T1] Entrepreneurship development and management by R. K. Singhal
[T2] Strategic Entrepreneurship by P. K. Gupta

Reference Book(s):

[R1] Construction management and accounts by V. N. Vazirani & S. P. Chandola
[R2] Principles of management by Y. K. Bhushan

Course Code: DID-6002 **Breakup: 1 – 0 – 4- 3**

Course Name: Interior Design-II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Apply design principles and methodology in practice under project work;
CO2	Apply skill in designing, working details, materials, use of technology in the project work;
CO3	Describe the experience in the project work as a design professional.

Course Details

UNIT-I

- Introduction to Climatology, Climate & Role of Interior Designer.
- Design for Hot, Dry & Humid Climate. Implementing different Designs.
- Surveying - Definition, Objective & its types.

UNIT-II

Coffee bar with book magazines and gift stalls, a special souvenir walls of their brand **Drawings required:**

- Plan, elevations, light/ electric plan, special effect of walls, ceiling and exclusive furniture3D views with vibrant color schemes.
- Coffee shop 24 hrs. at 5-star hotel with Breakfast Island, lunch buffet, at night sweet &salad bar for minimum covers of 80-100.

Drawings required:

- Plan, elevations, light/ electric plan, special effects of different display of meals (breakfast,lunch dinner, etc.), 3Dviews in color creating an ambience to attract all age groups.

UNIT-III

- Unisex beauty parlor with chai/ coffee bar area with listed eats, The parlour must have latest equipment's.

Drawings required:

- Layout plan, special light required for treatment, 3Dviews with color and special furniture required for parlor.

UNIT-IV

- Apparel and accessories studio for all (kids, men and women) all age group with special brand like ZARA, BENETTON, etc. with window display in front of the shop. Special display counter for display of apparel and racks for stacking

Drawings required:

- Plan, elevation with special wall treatment, 3D views in color and highlight the display areas.

Text Book(s):

[T1] Color dictionary by Brasi & Workman
[T2] Indian history by Goyal
[T3] Floor design by Sareen
[T4] Ideal home book of kitchen
[T5] Encyclopedia for color theory
[T6] Illustrated history of Interior Decoration by Praz

Reference Book(s):

[R1] Great interiors by Grant
[R2] Interior design by Ahmed A. Kasu

Course Code: DID-6003 **Breakup: 1 – 1 – 4- 4**
Course Name: Visual Merchandising -II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Designing Exhibition private (of an individual) & Group of artists to participate under one roof.
CO2	Interior designer, furniture designer, accessories designer, light designer new material introduction Ex- Planning and 3D views in colour.

Course Details

UNIT-I

- Design a mela/carnival
- Difference between the two, importance of exhibition Ex- project on mela (Suraj Kund or Diwali mela)

UNIT-II

- EX- Carnival in school or colonies
- Christmas or new year
- Design with accessories and props- the project planning and 3Dviews in color

UNIT-III

- Exhibition private (of an individual)
- Group of artists to participate under one roof.
- Interior designer, furniture designer, accessories designer, light designer newmaterial introduction Ex- Planning and 3D views in color.

UNIT-IV

Exhibition like trade fair, weekend one-day show of different states and countries, studioproject with planning and colored views as presentation.

Note(s):

- Students must visit exhibition at trade fair ground and at various malls, etc.
- Students after learning the designing of exhibition can work as visual merchandise designer and can take up independent projects.

Text Book(s):

[T1] Image India by Dhamij a
[T2] Indian folk art and craft by Dhamija
[T3] Indian cultures through the ages by Vidyarthi

Reference Book(s):

[R1] International shop design by Kasper
[R2] Indian architecture according to silpsastra by Acharya

Course Code: DID-6004 **Breakup: 1 – 1 – 4- 4**
Course Name: Product Design -II

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Prepare block models, preliminary models and finished models by using metal, plaster of Paris.
CO2	Use tools and develop hands on skills to use materials for preparing models.
CO3	Demonstrate/apply the principle of surface forming, texture, and forms. Wind chimes, decorative balance, flowers with cloth, ribbon, and wool, etc. All designs to be made on drawing sheets

Course Details

UNIT I:
Design and make any one product in metal sheet foil or out of waste cans or bottles (glass, plastic, tin) which can be easily cut with scissors or cutters.

UNIT II:
Material- clay/ terracotta/ tiles Design, draw and create masks, door handles, knobs ofclay hand work. Terracotta- tiles and work on them with ethnic motives create wall murals, tabletops, planters, etc.

UNIT III:
Design on sheets different types of furniture items like different types of tables,chairs, beds and some small items like racks, shelves, bench, planters, etc.

UNIT IV: One furniture (with joinery details) to be constructed in workshop, polish, painting,for the purpose of learning the finishes on furniture.

Text Book(s):
[T1] Wood bonding handbook by Stevens & Turner
[T2] Indian decorative design by Aryan
[T3] Furniture in color by Synge
[T4] How to make your own furniture

Reference Book(s):
[R1] Furniture making by Collisehon
[R2] Furniture face lifts by Wagstaff & Thurgood

Course Code: DID-6005 **Breakup: 1 – 0 – 4- 3**
Course Name: Interior Budgeting and Estimation

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Apply different methods for estimating and costing of material.
CO2	Prepare estimate for interior design scheme.
CO3	Estimate single and multiple items of the design.

Course Details

UNIT-I Estimate:

- Different Types
- General Principles of approx. methods of costing for various interior works for all typesof old & new works.

UNIT-II Specification:

- Definition.
- Principles of specification
- Types of specification
- Partition
- Partitional walls commercial Plywood, block board Laminated Sheet, glass etc.
- Plastering with cement mortar.
- Flooring -Cement conc., marble, mosaic
- Distempering & Colours washing.
- Wood work: - Doors, window, partition, cabinet sets, false ceiling, furniture wallPartitions, wall paneling, table, chair etc.
- Water supply & Sanitary Fitting etc.

UNIT-III Taking out Quantities:

- Units of measurement -cubic meter, square meter, running meter.
- General rules for measurements.
- Quantity Survey: Spot item
    - Prime cost
    - Provisional sums
    - Costing of work

UNIT IV

- Data collection & keeping information of market prices of materials
- Exercises on preparation & calling of Tenders.
- Estimation & Schedule of Quantities for furniture pieces
- Estimation of one complete project of interior
- Preparation of above estimates using computer software

Textbook(s):

[T1] A Textbook of Estimation, Costing and Valuation by Gurcharan Singh andJagdish Singh

[T2] Budgeting & Estimation by B. N. Dutta

Reference Book(s):

[R1] Civil Estimating & Costing by Amarjit Agarwal and A. K. Upadhya

Course Code: DID-6006 **Breakup: 0 – 0 – 1- 6**
Course Name: Interior Project-V (Major Project)

Course outcomes (CO): At the end of the course, the student will be able to:

CO1	Apply design principles and methodology in practice under project work.
CO2	Apply skill in designing, working details, materials, use of technology in the project work.
CO3	Describe the experience in the project work as a design professional.

Course Details

Projects: Mall, Medical interior (nursing home, poly clinic, E.N.T. or dental clinic)
The student must study any one given project by visiting the existing sites; understand the working and requirement of the existing interior of the same.
An independent presentation by the student in class Then the project will be given by teacher to students.
Drawing required: Layout plan & electric plan, special furniture requirements creating proper ambience to make thearea comply with bylaws.
The standards and norms, elevations of existing areas with all types of finishes, 3D views in colorand all interior Drawings to be made in AutoCAD & 3Ds MAX.
After completing the project students must submit the necessary drawings, documentation and presentation of high professional standards and the entire design process and methodology must be meticulously documented.

Text Book(s):

[T1] Color dictionary by Brasi & Workman
[T2] Indian history by Goyal
[T3] Floor design by Sareen
[T4] Ideal home book of kitchen
[T5] Great interiors by Grant
[T6] Interior design principles by M. Pratap Rao

Reference Book(s):

[R1] Interior design by Ahmed A. Kasu
[R2] Encyclopedia for color theory
[R3] Illustrated history of Interior Decoration by Praz