STUDY, EVALUATION SCHEME & SYLLABUS

For

B. VOC.
INTERIOR DESIGN (ID)

Based on
AICTE MODEL CURRICULUM

(EFFECTIVE FROM THE SESSION: 2020-21)
B. Voc. Interior Design (ID)

INTRODUCTION

Interior Design addresses the importance of human habitat and the built environment that supports human activities and values. It generates order to the space occupied by people, by making one aware of how the space influences our identity, productivity and wellness. As an interior designer one has the vital task to create intentional spatial interactions that can have a positive effect on human beings in whichever space they may inhabit – working, living or recreational.

COURSE OBJECTIVES

- To provide vertical & horizontal mobility to students passed 10+2 with vocation subjects.
- To blend appropriate technical knowledge and skills, personal and professional skills and substantive ‘hands-on’ and field / site experience required in the trade.
- To integrate NSQF level in order to enhance employability of the graduates and meet industry requirements. Such graduates apart from meeting the needs of local and national industry are also expected to be equipped to become part of the global work force.
- To train the students in representative skills through regular studios and a team of specialized Design Faculty that focus on freehand drawing, technical drawing and model making.

PROGRAM OUTCOMES

- The Interior Design program is built to initiate a thoughtful and reactive design process which facilitates the students to understand and create human habitation spaces through varied understandings of theory, studio, practical skills, live projects, case studies, field trips and encounters with industries and professionals.
- It also aims at inculcating an environmental awareness within the student for the benefit of human health, well being and productivity.
- The students are trained in representative skills through regular studios and a team of specialized Design Faculty that focus on freehand drawing, technical drawing and model making.
- The program aims at promoting a holistic approach to the designing process by simultaneously involving inputs from theory, allied subjects and electives into design.
- The program enables the student to become an independent and effective learner and opens up a range of prospects on completion of the course which offers opportunities in large set ups of architecture, interior design, kitchen design and exhibition design practices.
- Graduates are equipped to begin their own practice or further their education by applying to study in post-graduate programs ranging from furniture, exhibition, product and interaction design to craft & technology and Energy efficiency & green design.
# Evaluation Scheme
## B. VOC- Interior Design

### NSQF Level 5 Semester-I

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Objective & Pre-requisite:
- The objective of this subject are to ensure that students whatever their mathematical background, they must acquire the knowledge which help them in calculation in Design, Construction, Estimation & Budgeting.

Module- 1
Trigonometry: Measurement of angles in degree and radian and their conversion. Trigonometrical ratios and their relations, ratios of allied angles (without proof), sum and differences formulae and their applications, product formulae, from product to sum difference and vice versa, multiple and sub multiple angles (2A,A/2).
Matrices: Definition and types of matrices, addition, subtraction, and multiplication of matrices, inverse of a 3 x 3 matrix by adjoin matrix method, solution of linear equations containing upto 3 unknown only.

Module- 2
Co-ordinate Geometry:
1. Point- Cartesian and polar co-ordinates and their conversion, distance b/w two points, internal and external division formula, co-ordinates of centroid, in centre and circum-centre, conditions of co-linearity of points.
2. Straight line- Equation of a straight line in various standard forms, angle b/w straight lines, perpendicular distance formulae.
3. Circle- Equation of circle in standard and general form, finding the equation of circle when its centre and radius are given & when any 3 points on it are given.
4. Conics – Definition of conics, parabola, ellipse and hyperbola and their standard equation. Finding the equation of parabola when its focus and directrix or focus and vertices are given, finding the equation of an ellipse or hyperbola when focus, directrix and eccentricity are given. Given the standard equation of conic to find its focus, directrix, vertex, axis, eccentricity and the length of latus rectums.

Module- 3
Centre of Gravity: Definition, Calculation of CG of plane figures, like I, T, L,C, O hallow and Box sections.
Moment of Inertia (MOI): Definition, calculation of CG & MOI of plane figures about the principal axes e.g. rectangle, triangle & circle. Parallel axes theorem, Perpendicular axes theorem.

Module- 4
Algebra: Menstruation - Area of plane figure:-
- Triangle - Rectangle
- Circle - Parallelogram
Calculation of volume and surface area of a right rectangular prism:
- Pyramid - Cylinder
- Cone - Sphere and area of irregular figures.
Arithmetic and Geometrical Progression – Definition and simple problems.

REFERENCE BOOKS
1. Applied Mathematics by R.D. Sharma
2. Plane Trigonometry by S.L. Loney
3. Applied Maths – Dr. Niraj Pant, King India Publication
Objective & Pre-requisite:
- To familiarize the students with the historical interior and furniture in contemporary. Objective of his course is to make the aware of historical backgrounds of World Interiors to derive designs and Patterns based on it for contemporary and Modern Interiors.

Module- 1
Introduction: Pre-Historic:
Indus Valley Civilization: Methods of planning decorative features figures and forms used Cultural features and life styles.

Module- 2
Indian Handicrafts and Handlooms. Analysis of Hindu, Buddhist, Indo-Islamic interiors with special emphasis on decoration, ornamentation and motifs.

Module- 3
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, Panelling, Ceiling, Cornice frieze, Dado, Stone inlay and architectural decoration.

Module- 4
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.

REFERENCE BOOKS
1. History of Fine Arts in India and West by Edith Tomary
2. History of World Architecture by Sir Banister Flecher
3. Indian Architecture by Satish Kumar
4. Interior Design by Ahemad Kasu
**B.VOC SEMESTER-I**  
**FUNDAMENTALS OF INTERIOR GRAPHICS**

**Objective & Pre-requisite:**
- To make students improve their sketching skills & drawing abilities.
- To develop the skills in drawings of different interior schemes and enable the Students to read the drawings & techniques of various methods of drawings.

**Module- 1**  
**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.

**Module- 2**  
**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.

**Module- 3**  
**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.

**Module- 4**  
**Measured Lettering**
1. Presentation techniques and standards adopted, pen, pencils and brush.
2. Understanding of Architectural graphic symbol
3. 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

**REFERENCE BOOKS**
2. Geometrical drawing for art students, 2nd revised edition- I.H.Morris, Orient Longman,
B.VOC SEMESTER-I
FURNITURE DESIGN-I

Objective & Pre-requisite:
- To familiarize the students about the knowledge of furniture design and various aspects involved in the design of furniture for various spaces. Objective of this course is to develop competency to design and manufacture furniture in relation to human Forms and use it for different types of interiors.

Module- 1
Importance of furniture in relation to Interiors: study of shapes, forms finishes on furniture. Environmental conditions influencing furniture designs: Climatic, social, economic, availability of materials and construction techniques.

Module- 2
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.

Module- 3
Techniques of finishing the Surfaces: Wood and Metal Paints, Polishes and varnishes etc. hand painting, brush painting, roller, spray etc.

Module- 4
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.

REFERENCE BOOKS
Note: The required list of Experiments is provided as under. The example cited here are purely indicative and not exhaustive. Attempt shall be made to perform all experiments. However, at least 8 experiments should be done in the semester. More experiments may be designed by the respective institutes as per their choice.

**List of Exercises:**

1. **Fundamentals of Inter-personal Communication and Building Vocabulary**
   - Self-introduction and introducing others
   - Situational Dialogues: Starting a dialogue and responding relevantly & appropriately
   - Role-Play-Expressions in various situations
   - Social and Professional Etiquette: greetings, apologies, requests etc
   - Telephone Etiquette.

2. **Non-verbal Communication**
   - Gesture, posture and body language
   - Facial Expressions.
   - Paralinguistic Skills
   - Proxemics
   - Eye Gaze.
   - Haptics
   - Appearance.

3. **Reading Comprehension and Listening Exercise**
   - General vs Local Comprehension
   - Skimming, Scanning
   - Inference drawing
   - Critical reading
   - Listening, Hearing

4. **Presentation Skills**
   - Oral presentation
   - Seminar/ conference Paper Presentation
   - PPTs and Written presentation through poster/projects/reports/e-mails/assignments etc
   - Camera ready presentation

5. **Group Discussion**
   - Dynamics of Group Discussion
   - Intervention
   - Summarizing
   - Body Language and Voice, Intonation

6. **Interview Skills**
   - Interview etiquette
   - Body posture and body language
   - Voice, intonation and modulation
   - Fluency and organization of ideas
   - Rubrics for evaluation: Concept and process, pre-interview planning, opening strategies, answering techniques,
   - Interview through tele-conferencing and video-conferencing
   - Mock interview
   - Campus placement interview

7. **Public and Professional Speaking**
   - Extempore
   - Public Speech
   - Professional speech/lecture

8. **Articulation and Management**
   - Time management
- Articulation and expression
- Assertiveness
- Psychometrics
- Stress management
Objective & Pre-requisite:

- The objective of this course is to make students understand the various aspects such as spatial quality, design vocabulary, design principles, and design process related to the design of interiors.
- Moreover, to develop the aesthetics and abilities to Design Residential and Commercial interiors with the help of principles and elements of design. Exercises based on principles and elements of design in the form of charts shall be given to the students.

Module- 1
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
4. Designing of Murals, Paintings and Wall Paintings etc.

Module- 2
Colours:
1. Terminology- Hue, Tints and Shade, Value, Intensity, Chroma
2. Theories of Colors, Color Wheels
3. Different types of Color Schemes
5. Psychological aspects of colour – Warm and Cool
6. Advancing & Receding colors
8. Colour Planning and guidelines for various Interiors.

Module- 3
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 colours
5. Types of Textures and their relationship psychological; impact.
6. Textures in pencils, inks, and colour.

Module- 4
Aesthetics of Interiors:
1. Role of accessories in Interiors
2. Role of Colour, 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:
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

REFERENCE BOOKS

1. Interior Design-Ahmed Kasu
2. Interior Design Principal and Practice-M. Prataprao
3. Basic Design of Anthropometry – Shirish Bapat
5. Interior Design and Decoration, Sherrill Winton, Prentice Hall
Objective & Pre-requisite:
- To provide the students' knowledge of the Furnishing & Fittings & its implementation in Interior of any Area. Objective of this course is to make the student aware of different types of furnishings and fittings and use of the same for all type of Interiors, by doing market survey for up to date knowledge of different furnishing & Fittings.

Module- 1

Module- 2
Floor Coverings:
1. Types of Carpets & Rugs
2. Natural fibres and Man – made fibre
3. Handmade Carpets & Lying of Carpets.
4. Machine made Carpets

Module- 3
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 curtains and blinds.

Module- 4
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.

REFERENCE BOOKS
1. Interior Design Illustrated, Francis D.K. Ching
3. Window Fashion, Charles TIRANDALL
Objective & Pre-requisite:

- Objective of this subject is to develop the awareness in students while designing any interior who have knowledge of environment which relates to physics.

Module- 1
1. Units of measurement in SI system Dimensions and use of dimensional analysis.
2. Force and Motion – Newton’s Law, Conservation of momentum, work and energy, Forms of energy, conservation of energy, stress, strain, elastic modulus.
3. Spring mass system, Vibration of bodies: amplitude, frequency and energy of Vibrations, free and forced vibrations, resonance, vibration of structural members.

Module- 2
1. Temperature and its measurement. Liquid in glass thermometer.
3. Acoustics of building and simple calculation of reverberation time, principles of acoustical modelling, Sources of sound.

Module- 3
1. Electrical nature of matter, molecular forces- cohesive and adhesive forces-Cohesive and adhesive forces, application to water proofing.
2. Electromagnetic waves, infrared and ultraviolet rays, coated glasses and their Characteristics.
3. Light as waves, solar energy, solar cells and green house effects, colour primary colours, colour mixing, Radiant light flux, luminous intensity, illumination, light efficiencies, standards of illumination.

Module- 4
1. Introduction to Statics: Forces, their definition, characteristics & types, composition and resolution of Forces, moment and couple, Concepts of resultant and equilibrium of forces: Parallelogram and polygon, laws of forces, conditions of equilibrium, Lami’s Theorem.
2. Stress & Strain Hooke’s Law: Concept of direct forces (compression & tension), Elasticity, Plasticity etc., Hooke’s Law, modulus of Elasticity, Elastic limit stress/ strain curve for mild steel under Constant tension. Problem on Hooke’s Law and introduction to temperature stresses.

REFERENCE BOOKS
2. Basic Applied Physics, R.K.Gaur, Dhanpant Rai and Son’s, New Delhi
B.VOC SEMESTER-II
HISTORY OF INTERIOR FURNITURE-II

Objective & Pre-requisite:

- To familiarize the students about the historical interior and furniture and use in today’s time.
  The aim of this subject is to develop a sense of appreciation for History of Interior with Furniture in relation to Interior Planning.

Module- 1
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 characteristic 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.

Module- 2
Study of period furniture and motifs:
1. European Furniture – (Renaissance onwards)
2. Italian, Spanish, French
4. English, 15-18 Century (from Tudor to Victorian) style of furniture & decoration.

Module- 3
English, 15th - 18th Century (from Tudor to Victorian) style of furniture & decoration.
American Colonial period furniture and Ornamentation 19th century.

Module- 4
ORIENTAL
19th and 20th century – French, English and American Styles.
  o Difference in basic shapes, form & motifs of East and West.
  o Wood & other materials used, familiarity with methods of gilding, embossing, moulding, Stencilling
  o 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.

REFERENCE BOOKS
1. English Furniture Style (1500 – 18) by Ralph E
Objective & Pre-requisite:
- To familiarize the students of Interior Design on material and construction methodology. Designing of Steel & R.C.C. Structure. Understanding the basic components of the buildings envelope for small buildings.

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

Module-2
Openings:
1. Types of Arches & Lintels
2. Types of Doors & Windows
3. Types of Roofs.

Module-3
Introduction to Structure:
1. RCC, Structural Elements
2. RCC Beams
3. Reinforced Beams
4. Slabs
5. Columns

Module-4
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. Drawings sheets should be prepared on each topic mentioned above

REFERENCE BOOKS
1. Sushil Kumar, “Building Construction”
3. W.B. Meckay, “Building Construction”, Vol. 1, 2, 3, 4
Objective & Pre-requisite:
- Students should acquire knowledge of the various drawings, which effectively communicate their designs. To train the students in the field of Interior perspective drawing and sciography Presentation skills. Techniques for Construction as a tool towards effective Visualization and presentation.

Module- 1
Measured Drawings:
1. Techniques in skilled drafting and perspectives
2. Knowledge of standardized drawings, importance, various architectural symbols and usage in drawing.
3. Drafting of Simple Room layout plan, elevations, and sections with dimensions, showing levels, and specifications writing.

Module- 2
Drafting of Simple Room layout plan, elevations, and sections with dimensions, showing levels, and specifications writing.

Module- 3
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.

Module- 4
Sciography: Sciography in plan, elevation and basic sciography use in orthographic projections of 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

REFERENCE BOOKS
2. Engineering Drawing, M.S. Kumar, D.D. Publications, Chennai
Objective & Pre-requisite:
- Students should have studied General English up to secondary level and the subject aims at developing communication skills in writing, speaking as well as body language.

Learning Outcomes:
- The students should be able to communicate effectively to his/her superiors as well as juniors at work place in his/her professional field.

Module- 1

Module- 2
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.

Module- 3
Soft Skills: Empathy (Understanding of someone else point of view), Intrapersonal skills, Interpersonal skills, Negotiation skills, Cultural Aspects of Communication.

Module- 4

REFERENCE BOOKS
2. Harbinger Publications
## Objective & Pre-requisite:
- To familiarize the students about the different types of furniture and use in today’s time.
- To teach furniture design by applying joinery for furniture manufacturing in relation to specific interiors. Designing of different furniture pieces based on the different types of Interiors.

### Module- 1
**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.

### Module- 2
**Metals:** Mild steel, aluminium, 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.

### Module- 3
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

### Module- 4
**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.

### REFERENCE BOOKS
1. Butter Harry, “Do It Yourself Furniture”.
B.VOC SEMESTER-II
ENVIRONMENTAL SCIENCE LAB/ FIELD WORK

List of Experiments

1. Determination of pH, conductivity and turbidity in drinking water sample.
2. Determination of pH and conductivity of soil/sludge samples.
3. Determination of moisture content of soil sample.
4. Determination of Total Dissolved Solids (TDS) of water sample.
5. Determination of dissolved oxygen (DO) in the water sample.
6. Determination of Biological oxygen demand (BOD) in the water sample.
7. Determination of Chemical oxygen demand (COD) in the water sample.
8. Determination of Residual Chlorine in the water sample.
10. Determination of carbon dioxide in the water sample.
11. Determination of nitrate ions or sulphate ions in water using spectrophotometer.
13. Base catalysed aldol condensation by Green Methodology.
15. To determine the concentration of particulate matter in the ambient air using High Volume Sampler.

P.S.: For better understanding of various aspects of environment visits to local areas, depending upon easy access and importance may be planned to any nearby river, forest, grassland, hills and students should write a report based on their observations.

SUGGESTED BOOKS

2. dst.gov.in/green-chem.pdf (monograph of green chemistry laboratory experiments).

Note: Any 10-12 Experiments out of the list may be chosen.
Objective & Pre-requisite:
- This course is designed to expose the students to fundamental concepts of management, its processes and behavioural dynamics in organizations.

Learning Outcomes:
- The students will be in a position to understand the concepts of Management and apply the same at the time of managing the organization in globally competitive world.

Module- 1

Module- 2

Module- 3

Module- 4

REFERENCE BOOKS
3. Principles & Practice Of Management (Paper Back), Author: T.N.Chhabra, Publisher: Dhanpat Rai & Co (P) Ltd, Delhi
Objective & Pre-requisite:
- This course aims at imparting knowledge in the area of interior services and their application like Water supply, lighting etc.

Module-1
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

Module- 2
Drainage
a) Principles of Drainage
b) Materials 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

Module- 3
Lighting
(a) Different systems of lighting – (i) natural (ii) artificial
(b) Units for measuring light

Module- 4
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

REFERENCE BOOKS
1. Building Construction by B.C.Punmia
2. Building Construction by Sushil Kumar
3. Materials by RANGWALA
4. Sanitary engineering by RS DESHPANDEY
5. Water supply and sanitation by CHARANJIT SHAH
6. A-Z of practical building constructions & its management By SANDEEP MANTRI
7. Electrical engineering by O.P. SHUKLA
8. Water supply and sanitation engineering by P.K. UPADHYAY
9. Sanitary Engineering by R.S. Deshpande
10. Water supply & Drainage Gurcharan Singh
Objective & Pre-requisite:
Subject is used for understanding the structure to support Renovation/ Refurnishing / Designing of any Interior

Module- 1
FLOORS
(a) Ground and upper floor
(b) Different types of flooring materials, laying details

Module- 2
ROOFS
a) Pitched – different types,  
b) Trusses – types and parts in sketches

Module- 3
Doors – (with mechanical devised)
a) Aluminium 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

Module- 4
Windows
a) Aluminium and steel windows
b) Different types - Bay, Bow, Corner, Dormer, Sky light, Louvered (French), Casement, clerestory, Pivoted, Sliding, Ventilators.

REFERENCE BOOKS
1. Building Construction by B.C.Punmia
2. Building Construction by Sushil Kumar
3. Building Construction by W.B. Mckay
Objective & Pre-requisite:
The objective of AutoCAD is to enable students to create 2D and 3D drawing in AutoCAD.

Module- 1
- 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

Module- 2
- Introduction to AutoCAD
- Advantages of CAD
- Business applications for CAD
- Building Information Modelling, wrapping it up
- Benefits of CAD Design
- What is AutoCAD?
- Starting AutoCAD
- World Coordinate System
- AutoCAD Basics
- Basic Terminology
- Interior designing using AutoCAD

Module- 3
- A prototype CAD drawing
- Limit setups for drawings
- Understanding scale concept and limits in AutoCAD
- Drawing tools, modify tools

Module- 4
Colours and line types
- Line type, line type scale, line weights
- How to create a custom simple line type
- AutoCAD command list

REFERENCE BOOKS
1. Mastering AutoCAD by George Omura (BPB Publications)
2. Joseph A. Fiorello, CAD for interior basics, John Wiley & Sons
3. Timothy J. Barnes, Electronic CAD frame works, Springer
4. Schoon Maker, Ebook Corporation, Marcel Dekker
Objective & Pre-requisite:
Use of Interior and Exterior Spaces awareness of Different types of plants – Indoor & Outdoor Plants. Designing of different Interior spaces.

Module- 1
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.

Module- 2
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.

Module- 3
For landscape
  o Relation between Outdoor and Indoor Spaces.
  o How to relate interior & Exterior Spaces.
  o Type of land escape – Hard and soft landscape & its use in Interiors.
  o Use of materials – Constriction, Ground modeling, Ground cover, laying of grass, stone path ways.

Module- 4
  o 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.
  o 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

REFERENCE BOOKS
1. Indoor Plants by Xania Field
2. World Architecture (With Introduction to landscape Architecture) by G.K. Hiraskar
3. World of house plants by Johans
4. Indoor garden by Hunter
5. Indoor gardening by Reader Digest Association (London)
6. Japanese homes and gardens by Marcus G. Sims
7. Interior Decoration by Satish Chandra Agarwala
Objective & Pre-requisite:
To familiarize the student about the knowledge of furniture design and various aspects of furniture for different spaces. Objective of this course is to develop competency to design and manufacture furniture in relation to human forms and use it for different types of Interiors.

Module- 1
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

Module- 2
History of Furniture in
- Middle Age early mediaeval 500-1000
- Romomanesque, Gothic – 1200-1300,
- Furniture Development in Italy – Pre – Renaissance (1100-140)
- Quattrocento (1400-1500)
- Cinquecento (1500-1600)
- Baroque (1560 – 1700), Classical Revival (1750 – 1800)
- Italian Directoire (1795 – 1799),Italian Empire (1800 – 1815)
- Furniture Development In France –
- Early Renaissance – (1515 – 1547), High Rennaissance (1560-1610), Baroque (1643-1745)
- Rococo (1725-1774)

Module- 3
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)

Module- 4
- 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

REFERENCE BOOKS:
1. Interior Design – Ahmed Kasu
2. World Furniture Edited by Helena Hayward
3. English Furniture Styles (1500 – 18) by Ralph ET
4. Antique Furniture by David P. Lindquist and Carlone C. Warren
Objective & Pre-requisite:
To provide the students knowledge of the Display of Commercial Interiors & its implementation. Objective of his course is to make the student learn the scope of Display and Sales Promotion with the help of Different types of Displays used in Commercial areas.

Module- 1
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.
Conceptualization: Thematic Message, Seasonal Festival, State & Country oriented Display.

Module- 2
Display Props and Display Media:
Use of Props, Publicity Media, Newspaper Ads, T.V., Hoardings, Posters, Banners, Billboards, Flyer, Panels, Logo, Trademarks.
  o Window Display for sales promotion of different types of products/ commodities
  o Use of different devices like blocks, stands, panels.
  o Use of different types of lights and colours.
  o For shops like Gift Gallery, Leather Goods like Bags, Shoes, Pottery and Kitchenware, Apparel for kids, ladies and gents(Branded Stores)

Module- 3
Importance of Devices: Lettering, Colour, Lights and different types of Lights to be used for Display, Mechanical Devices used.
Devises used for Display: Panels, Stands, Blocks.
Use of lettering and designing of logo and trade mark as an exercise on paper.

Module- 4
Planning designing and 3D views in colour using props for expressing ‘Theme’ or ‘Message’ in display
COUNTER DISPLAYS
  o Types and use of counters in store display
  o Importance of Counter Display
  o Planning and designing the counter display for Jewellery, spectacles/ shades, cosmetic goods and precious goods like Ivory items, precious stones, and sandal wood items using theme for display.
  o All of the above to be carried out in lecture studio class
  o Visits to various stores, malls and exhibitions

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.
Practical: Sketching existing display and making sketch files on various topics.

REFERENCE BOOKS
B.V.OC SEMESTER-IV
INTERIOR SERVICES-II

Objective & Pre-requisite:
This course aims at imparting knowledge in the area of interior series and their application like Air Conditioning, Sound insulation.

Module-1
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

Module-2
FIRE SAFETY SYSTEMS
- Causes of fire
- Fire proof (Resistant) material
- Application of fire proof (Resistant) material
- Survey – Fire fighting equipments

Module-3
VENTILATION
- Ventilation (i) Natural (ii) Artificial or Mechanical
- Requirement of ventilations system
- Artificial (mechanical) Ventilation systems – Extraction, Plenum, Extraction-Plenum, Air Conditioning

Module-4
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.

REFERENCE BOOKS
11. Building Construction by B.C.Punmia
12. Building Construction by Sushil Kumar
13. Materials by RANGWALA
14. Sanitary engineering by RS DESHPANDEY
15. Water supply and sanitation by CHARANJIT SHAH
16. A-Z of practical building constructions & its management By SANDEEP MANTRI
17. Electrical engineering by O.P. SHUKLA
18. Water supply and sanitation engineering by P.K. UPADHYAY
19. Sanitary Engineering by R.S. Deshpandey
Objective & Pre-requisite:
The objective of AutoCAD is to enable students to create 2D and 3D drawing in AutoCAD.

Module- 1
- Introduction to working in AutoCAD and layers
- Introduction: the x, y co-ordinate system
- AutoCAD basics
- Layers
- Layer, text and dimensioning
- Working with layers

Module- 2
- Drawing insertion, object snap, zooming and panning
- Insert a graphic file into an existing Visio drawing
- Insert command
- Building Information Modelling, wrapping it up
- Benefits of CAD Design
- What is AutoCAD?
- Starting AutoCAD
- Insert to AutoCAD
- Object snap
- Snap in AutoCAD
- Zooming and panning, freehand sketch, editing and drawing

Module- 3
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

Module- 4
ENHANCED 3-D
- Extruding and lofting
- Revolving objects
- AutoCAD 3-D modelling -3D views

REFERENCE BOOKS
1. Mastering AutoCAD by George Omura (BPB Publications)
2. Joseph A. Fiorello, CAD for interior basics, John Wiley & Sons
3. Timothy J. Barnes, Electronic CAD frame works, Springer
4. Schoon Maker, Ebook Corporation, Marcel Dekker
Objective & Pre-requisite:
The objective is to refurnish different types of interior.

Module- 1
- Design and fixing details of panelling,
- Materials used for panelling in interior
- Panelling in plywood

Module- 2
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

Module- 3
FALSE CEILING (TIMBER)
- Purpose
- Materials used for fixing and finishing.
- Design and details of false ceiling in timber.

Module- 4
FALSE CEILING (OTHER MATERIALS)
- Role of glass, gypsum, POP in false ceiling
- Fixing of Plaster of Paris in false ceiling

REFERENCE BOOKS
1. Building Construction by Sushil Kumar
2. Building Constructions by W. B. Mckay, V.P. Sikka, B.C. Punmia, ARORA AND BINDRA
Objective & Pre-requisite:
To make Interior schemes of different types of interiors and use of landscape in interior & exterior

Module- 1
Preparing Interior Scheme for
a. Office Area for Architects or Interior Designers, Any Office
b. Office Private individual office

Module- 2
Commercials office containing Reception Area chairman’s chamber, Directors Room, Staff area with open cubicles, pantry & Toilet /Washroom area, conference hall & common staff area and drawing required as layout plans, elevation and perspective Views of different area in color with use of proper accessories, plants and flower arrangement for various areas of office

Module- 3
Fast Food Restaurant:- Existing Restaurant in neighborhood with layout plan and perspective view in the form of free hand sketches.

Module- 4
Public Park of your own colony/ area or specified park. 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 of plants and sculptures.

REFERENCE BOOKS
1. Indoor Plants by Xania Field
2. World Architecture (With Introduction to landscape Architecture) by G.K. Hiraskar
3. World of house plants by Johans
4. Indoor garden by Hunter
5. Indoor gardening by Reader Digest Association (London)
6. Japanese homes and gardens by Marcus G. Sims
7. Interior Decoration by Satish Chandra Agarwala
Objective & Pre-requisite:
To teach furniture design, joinery for furniture manufacturing in relation to specific interiors, drawing of different furniture pieces based on the above.

Module- 1
Introduction & Study of the space saving furniture. Residential & Commercial area

Module- 2
Different material used for making furniture like cane, Bamboo, Wood, Glam, Metal, PVC.

Module- 3
Concept of folding & Knock Down furniture, Movable, Modular furniture

Module- 4
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.
2. Visit to various furniture workshop exhibitions and showrooms for demonstrations and information from time to time

REFERENCE BOOKS:
3. Portable Furniture by Vicki Brooks
4. Shelves and Cabinets by Alexandria, Virgina
Objective & Pre-requisite:
To acquaint the students with role of an interior designer in society, scale of Charges conduct in the practice.

Module- 1
Introduction - Contract Document
- Contract and conditions of engagement of interior projects
- Responsibilities, liabilities and duties of interior designer
- Terms and conditions for entering into Contact, Scale of charges and mode of payment 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.

Module- 2
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.

Module- 3
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, size of name plate etc.
- Conditions of agreements and terms of contracts alternatives agreements, out of pocket expenses, stages of payment, settlement of disputes and arbitration

Module- 4
Job Procedures
- Regulations & restrictions on various types of new & old work, Local by-laws pertaining to interiors & renovation of buildings, Storage & maintenance of plants & materials, Liabilities, Local tradesmen working conditions & practices.

REFERENCE BOOKS
1. Professional Practice by Dr. Roshan H. Namavati
2. Metric Handbook (Planning & Design Data) 2nd Ed. Edited By, David Adler
3. Professional Practice by Krishnamurthy K.G
4. The Construction of Building by R. Barry
Objective & Pre-requisite:
Students must learn the techniques of design the product first and production of the same in any medium, they select.

Module- 1
- Section of material, understand the properties of material
- 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.

Module- 2
Material: - mount board, choksi board
Products: - Photo frame, table calendar, wall clock, wall hanging, etc.
With proper design and drawing on sheet with details.

Module- 3
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, Candels, Diyas, Flowers, etc. to orient he theme

Module- 4
Material: - Cloth, wire, ribbon, wool, sutli, etc.
Products: - wind chimes, decorative balance, flowers with cloth, ribbon and wool, etc.
All designs 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.

REFERENCE BOOKS
1. Wood bonding handbook by Stevens & Turner
2. Indian decorative design by Aryan
3. Furniture in color by Synge
4. Furniture making by Collisehon
5. Furniture face lifts by Wagstaff & Thurgood
B.VOC SEMESTER-V
INTERIOR BUDGETING & ESTIMATION

Objective & Pre-requisite:
Basic understanding of quantities, cost & methods to make estimates. The students should be able to make estimate of interior schemes. Proposed for the client.

Module- 1
Estimate:
- Different Types
- General Principles of approx methods of costing for various interior works for all types of old & new works.

Module- 2
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 wall
- Partitions, wall paneling, table, chair etc.
- Water supply & Sanitary Fitting etc.

Module- 3
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

Module- 4
- 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

REFERENCE BOOKS
1. A Text Book of Estimation, Costing and Valuation by Gurcharan Singh and Jagdish Singh
2. Budgeting & Estimation by B. N. Dutta
4. Professional Practice by Dr. Roshan H. Namavati
Objective:
Since the background of Display is there in Visual Merchandising, students are given knowledge of promoting sales of products. Students take up assignments as Display on lists or exhibition designer.

Module- 1
Atrium / Foyer Display
  o  What is atrium or foyer display?
  o  Its importance and how to present the same?
  o  Scope of atrium display
  o  Planning and colored view for approval on sheet/ drawings.

Module- 2
Automobile
  -Car
  -Two Wheeler
Cold drinks or new juice introduction in the atrium

Module- 3
Mobile displays
  o  Its importance and use
  o  Introducing new products with the help of publicity material like placard, hoarding, leaflet/flyers

Module- 4
Exercises on cosmetic display, landscape, plants and landscape accessories display

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

REFERENCE BOOKS:
1.  Image India by Dhamija
2.  Indian folk art and craft by Dhamija
3.  Indian cultures through the ages by Vidyarthi
4.  International shop design by Kasper
5.  Indian architecture according to silpsastra by Acharya
Objective & Pre-requisite:
The objective is to refurnish different types of interior.

Module- 1
TECHNICAL TERMS - e.g. Tread, riser, flight, landing, nosing, Scotia, soffit, newel post, balusters, headroom, handrail, balustrade, etc.

Requirements pf good stairs:
- Location
- Width of stair
- Length of flight
- Pitch of stair
- Headroom
- Balustrade
- Step dimensions
- Material of construction

Module- 2
- Calculation of step size
- Types of steps-
  - Round ended
  - Bull nose step
  - Flier
  - Splayed step
  - Commode step
  - Dancing step

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

Module- 4
CLADDING & CEILING MATERIALS & FINISHES & its APPLICATION –
- Define Cladding
- Stone, Timber, Weather Board, Fibre Cement, Brick
- RCC, Vinyl, Metal, etc.

TYPES OF FALSE CEILING:
- Gypsum, Plaster of Paris, Wooden, Glass, Metal,
- Synthetic Leather or Cloth Ceiling.

REFERENCE BOOKS
1. Building Construction by Sushil Kumar
2. Building Constructions by W. B. Mckay, V.P. Sikka, B.C. Punmia, ARORA AND BINDRA
**B.VOC SEMESTER-V**  
**INTERIOR DESIGN- I**

**Objective & Pre-requisite:**  
Objective of this subject is to develop the ability to design commercial interiors of various types. The exercise base of commercial interiors is this semester must be handled keeping aesthetics in mind and special effects to justify the design.

**Module- 1**  
- Fire Safety – Introduction to fire safety causes of death in fire, Responsibility of Designer’s towards fire safety.  
- Disaster Management - Understanding Disasters, Geological and Mountain Area Disasters, Wind and Water Related Natural Disaster, Man Made Disasters

**Module- 2**  
**Perspective in all mediums**
Eating house: Cuisine based restaurants and fine dining areas. Bead and Breakfast or Guest House Project with dining area which could be used for small events like Birthday Parties, weddings, functions (like Mehendi, Sangeet, etc.) or for exhibitions, etc.

**Module- 3**  
**Wash room – Perspective in all mediums.**  
- Residential area with all latest equipment’s  
- Commercial washroom; Either of 5 Star Hotel or a Mall.

**Module- 4**  
**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 areas of 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.

**REFERENCE BOOKS**
1. Color dictionary by Brasi & Workman  
2. Indian history by Goyal  
3. Building Services, Anthony Rowley  
4. Fire Fightings, S. Shah  
5. Great interi ors by Grant  
7. Interior design by Ahmed A. Kasu  
8. Landscape Detailing Surfaces- Michael Littlewood
Objective:
To develop competencies in the students to setup small scale manufacturing unit related to interiors and interior accessories like furniture and interior product lineage and to encourage the concept of self-employment and to be an employer (job creator).

Module- 1
ENTREPRENEUR
  o Concept and nature, scope and philosophy of entrepreneurship
  o Distinction between self-employment and entrepreneurship
  o Importance of entrepreneurship and self-employment in our country
  o Entrepreneurial traits
  o Different forms of business organizations (sole proprietorship, partnership, co-operative societies, public and private undertakings)

Module- 2
ENTREPRENEURIAL SUPPORT SYSTEM
  o Introduction
  o Sources of information
  o Market survey and opportunity identification

Module- 3
ELEMENTS OF MANAGEMENT
  o Principles of management and managerial functions like planning, organizing, staffing, directing and controlling, industrial management
  o Value of human relations in management

Module- 4
PROJECT MANAGEMENT
  o Introduction to project management
  o Time of progress chart, bar chart, Gantt chart, CPM & PERT
  o Planning of activities
  o Allocation of time to various activities
  o Personal management and industrial relations- recruitments, selection, training, wage and salary administration related to small industries
  o Costing- methods and techniques of minimizing cost
  o Marketing- concept and functions, marketing mix, product planning, salesmanship and its principles
  o Sources of finance
  o Setting up of small scale industry with proper knowledge of Government Policies for financial resources (like banks and other financial bodies.

REFERENCE BOOKS
1. Entrepreneurship development and management by R. K. Singhal
2. Strategic Entrepreneurship by P. K. Gupta
3. Construction management and accounts by V. N. Vazirani & S. P. Chandola
4. Principles of management by Y. K. Bhushan
Objective:
Students to understand the, how to construct the different types of products with different types of materials like metal, wood, clay, plastic, etc.

Module- 1
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.

Module- 2
Material- clay/ terracotta/ tiles
Design, draw and create masks, door handles, knobs of clay hand work.
Terracotta- tiles and work on them with ethnic motives create wall murals, table tops, planters, etc.

Module- 3
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.

Module- 4
One furniture (with joinery details) to be constructed in workshop, polish, painting, for the purpose of learning the finishes on furniture.

REFERENCE BOOKS
1. Wood bonding handbook by Stevens & Turner
2. Indian decorative design by Aryan
3. Furniture in color by Synge
B.VOC SEMESTER-VI
VISUAL MERCHANDISING- II

Objective:
Since the background of Display is there in Visual Merchandising, students are given knowledge of promoting sales of products. Students take up assignments as Display on lists or exhibition designer.

Module- 1
- Design a mela/carnival
- Difference between the two, importance of exhibition
Ex- project on mela (Suraj Kund or Diwali mela)

Module- 2
- Ex- Carnival in school or colonies
- Christmas or new year
- Design with accessories and props- the project planning and 3D views in color

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

Module- 4
Exhibition like trade fair, weekend one day show of different states and countries, studio project with planning and colored views as presentation.

NOTE:
- 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.

REFERENCE BOOKS:
1. Image India by Dhamija
2. Indian folk art and craft by Dhamija
3. Indian cultures through the ages by Vidyarthi
4. International shop design by Kasper
5. Indian architecture according to silpsastra by Acharya
Objective & Pre-requisite:
The objective is to make the students understand and enable them to execute commercial interiors with theme of style. Perspective in all medium.

Module-1
- Introduction to Climatology, Climate & Role of Interior Designer.
- Design for Hot, Dry & Humid Climate. Implementing in different Designs.
- Surveying – Definition, Objective & its types.

Module-2
Coffee bar with book magazines and gift stalls, a special souvenir wall of their brand

Drawings required:
- Plan, elevations, light/electric plan, special effect of walls, ceiling and exclusive furniture 3D 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.), 3D views in color creating an ambience to attract all age groups.

Module-3
Unisex beauty parlour with chai/coffee bar area with listed eats
- The parlour must have latest equipments

Drawings required:
- Layout plan, special light required for treatment
- 3D views with color and special furniture required for parlour

Module-4
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.

In all projects drawings required would be: Plan, light/electrical plan, elevations, 3D views, sketches of special related services and areas too.

REFERENCE BOOKS
1. Color dictionary by Brasi & Workman
2. Indian history by Goyal
3. Floor design by Sareen
4. Ideal home book of kitchen
5. Great interiors by Grant
6. Encyclopedia for color theory
7. Interior design by Ahmed A. Kasu
8. Surveying Vol. I, II and III by Dr. B.C. Punamia
9. Illustrated history of Interior Decoration by Praz
Objective & Pre-requisite:
- Students must be able to handle the complete project and must understand how and from where to require the required material and get the work executed as an independent entrepreneur. Any one project to be taken up and complete with the given time.

Module-1
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 the area comply with bylaws.
The standards and norms, elevations of existing areas with all types of finishes, 3D views in color and 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.

REFERENCE BOOKS
3. Color dictionary by Brasi & Workman
4. Indian history by Goyal
5. Floor design by Sareen
6. Ideal home book of kitchen
7. Great interiors by Grant
8. Interior design principles by M. Pratap Rao
9. Interior design by Ahmed A. Kasu
10. Encyclopedia for color theory
11. Illustrated history of Interior Decoration by Praz.