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**BENGALURU CITY UNIVERSITY**

**REGULATIONS AND SYLLABUS FOR  
MASTER OF SCIENCE  
(Interior Design and Decoration)**

**(SEMESTER SCHEME)**

**2021-22 onwards**

## BENGALURU CITY UNIVERSITY

Proceedings of the Board of Studies meeting in Apparel Technology (PG), held on 18<sup>th</sup> October 2021 at 11.00 AM in the Department of Apparel Technology & Management, Bengaluru City University, Bangalore.

The Chairperson welcomed the members and the agenda was taken up for discussion.

**1. Approval of revised scheme and syllabus of M.Sc. (Fashion and Apparel Design) from the year 2021-22 onwards.**

The members deliberated on the revised scheme and syllabus of I, II, III and IV Semesters M.Sc. (Fashion & Apparel Design) course. After thorough discussion and after incorporating the necessary changes the Board unanimously approved the revised scheme and syllabus of all the four semesters to be implemented from the academic year 2021-22.

**2. Approval of panel of Examiners for the year 2021-22**

The panel of examiners for M.Sc. (Fashion & Apparel Design) for the year 2021-22 was placed for consideration and after deliberations the same was approved.

**3. Consideration of the regulation, scheme and syllabus of the new course M.Sc. (Interior Design & Decoration).**

The draft regulation, scheme and syllabus for the new course M.Sc. (Interior Design & Decoration) proposed by NITTE Institute of Fashion Technology & Interior Design was placed for consideration. The Board after deliberations resolved to recommend for institution of the course M.Sc. (Interior Design & Decoration) as it would help the students graduating with B.Sc. (Interior Design & Decoration) for pursuing post-graduation in the same discipline. After deliberations the Board resolved to approve the regulations, scheme and syllabus of I, II, III & IV Semesters M.Sc. (Interior Design & Decoration) programme.

The meeting concluded with the Chairman thanking all the members for their co-operation.

**Members Present**

Dr. Jayashree Venkatesh

Jayashree Venkatesh 18/10/2021

Smt. Vidhya R

Vidhya R  
18/10/21

Dr. HS Hanumantha Naik

HS Hanumantha Naik 18/10/2021

Dr. Naveen V Padaki

Naveen V Padaki  
18/10/21

Dr. Yashodha Kumari

Approval taken online

Mr. Venu Nataraj (Co-opt Member)

Venu Nataraj  
18/10/21

Mrs. Sneha Manjunath (Co-opt Member)

Sneha Manjunath  
18/10/21

Dr. R. Sudhakar (Chairperson)

R. Sudhakar  
18/10/2021



Scheme & Syllabus for  
**M.Sc. (Interior Design and Decoration)**

(I TO IV SEMESTERS)

**REGULATIONS GOVERNING THE CHOICE BASED CREDIT SYSTEM FOR THE TWO YEARS (FOUR SEMESTERS) MASTERS DEGREE PROGRAMME M.Sc. (INTERIOR DESIGN & DECORATION)**

TITLE OF THE PROGRAMME: M.Sc. (Interior Design & Decoration)

DURATION OF THE PROGRAMME: The duration of the programme shall extend over 4 semesters (two academic years) of 16 weeks or more each with a minimum of 90 actual working days of instruction in each semester.

ELIGIBILITY FOR ADMISSION: Candidates who have passed the three-year Bachelor's degree examination in Interior Design & Decoration of Bangalore University or any other University considered as equivalent thereto, are eligible for admission to the programme provided they have secured a minimum of 50% marks in the cognate subject

MEDIUM OF INSTRUCTION: The medium of instruction shall be English.

ATTENDANCE: Each course (theory/practical) shall be treated as an independent unit for the purpose of attendance. A student shall attend a minimum of 75% of the total instruction hours in a course (theory/practical) in each semester. A student who fails to secure 75% attendance in a course shall be required to repeat that semester.

THE SCHEME OF EXAMINATION:

**M.Sc. (INTERIOR DESIGN & DECORATION) SCHEME**

Semester I								
CODE	Subjects	Paper Theory/ Practical	Instruction Hrs/week	Duration of Exam (Hrs)	Marks			Credits
					IA	Exam	Total	
MID 1.1	CONCEPTS AND SPACE PLANNING IN INTERIOR DESIGN	Theory	4	3	30	70	100	4
MID 1.2	INTERIOR MATERIALS & FINISHES-I	Theory	4	3	30	70	100	4
MID 1.3	ADVANCE BUILDING SERVICES	Theory	4	3	30	70	100	4
MID 1.4	RESEARCH METHODOLOGY IN INTERIOR DESIGN	Theory	4	3	30	70	100	4
MID 1.5	CONCEPTS AND SPACE PLANNING IN INTERIOR DESIGN	Practical	4	4	15	35	50	2
MID 1.6	INTERIOR MATERIALS & FINISHES-I	Practical	4	4	15	35	50	2
MID 1.7	ADVANCE BUILDING SERVICES	Practical	4	4	15	35	50	2
MID 1.8	INTERIOR DESIGN STUDIO - I	Practical	4	4	15	35	50	2
MID 1.9 (SC)	DESIGN RESEARCH STRATEGIES	Theory	3	3	30	70	100	2
							<b>700</b>	<b>26</b>

Semester II								
CODE	Subjects	Paper Theory/ Practical	Instruction Hrs/week	Duration of Exam (Hrs)	Marks			Credits
					IA	Exam	Total	
MID 2.1	HUMAN FACTORS IN INTERIOR DESIGN	Theory	4	3	30	70	100	4
MID 2.2	PROJECT MANAGEMENT IN INTERIORS	Theory	4	3	30	70	100	4
MID 2.3	INTERIOR MATERIALS & FINISHES- II	Theory	4	3	30	70	100	4
MID 2.4	FURNITURE & LIGHTING DESIGN IN INTERIORS	Theory	4	3	30	70	100	4
MID 2.5	PROJECT MANAGEMENT IN INTERIORS	Practical	4	4	15	35	50	2
MID 2.6	INTERIOR MATERIALS & FINISHES- II	Practical	4	4	15	35	50	2
MID 2.7	FURNITURE & LIGHTING DESIGN IN INTERIORS	Practical	4	4	15	35	50	2
MID 2.8	INTERIOR DESIGN STUDIO – II	Practical	4	4	15	35	50	2
MID 2.9 (SC)	VAASTU SCIENCE IN INTERIORS	Theory	3	3	30	70	100	2
							<b>700</b>	<b>26</b>

Semester III								
CODE	Subjects	Paper Theory/ Practical	Instruction Hrs/week	Duration of Exam (Hrs)	Marks			Credits
					IA	Exam	Total	
MID 3.1	TEXTILES FOR HOME AND HOTEL INTERIORS	Theory	4	3	30	70	100	4
MID 3.2	WORKING DRAWING IN INTERIOR DESIGN	Theory	4	3	30	70	100	4
MID 3.3	ADVANCED LANDSCAPE IN INTERIORS	Theory	4	3	30	70	100	4
MID 3.4	TEXTILES FOR HOME AND HOTEL INTERIORS	Practical	4	4	15	35	50	2
MID 3.5	WORKING DRAWING IN INTERIOR DESIGN	Practical	4	4	15	35	50	2
MID 3.6	ADVANCED LANDSCAPE IN INTERIORS	Practical	4	4	15	35	50	2
MID 3.7	INTERIOR DESIGN STUDIO – III	Practical	4	4	15	35	50	2
MID 3.8	HOME DÉCOR (Open Elective)	Theory	4	3	30	70	100	4
							<b>600</b>	<b>24</b>

Semester IV								
CODE	Subjects	Paper Theory/ Practical	Instruction Hrs/week	Duration of Exam (Hrs)	Marks			Credits
					IA	Exam	Total	
MID 4.1	SUSTAINABLE INTERIORS	Theory	4	3	30	70	100	4
MID 4.2	ENTREPRENEURSHIP AND ACCOUNTING	Theory	4	3	30	70	100	4
MID 4.3	1. ACCESSORIES IN INTERIOR DESIGN (OR) 2. INTERIOR DOCUMENTATION (OR) 3. GREEN INTERIORS	Practical	8	4	30	70	100	4
MID 4.4	1. INTERIOR DESIGN JOURNALISM (OR) 2. PRODUCT DESIGN (OR) 3. FURNITURE DESIGN	Practical	8	4	30	70	100	4
MID 4.5	PORTFOLIO DEVELOPMENT	Practical	4	4	15	35	50	2
MID 4.6	INTERIOR DESIGN STUDIO - IV	Practical	4	4	15	35	50	2
MID 4.7	PROJECT WORK	-	-	-	30 Viva voce	70 Report Evaluation	100	4
							<b>600</b>	<b>24</b>

#### INTERNAL ASSESSMENT:

The outline for continuous assessment activities for Component-I (C1) and Component-II (C2) of a course shall be as under.

Outline for continuous assessment activities for C1 and C2

Activities	C1	C2	Total Marks
Session Test	10% marks	10% marks	20%
Seminars etc	05% marks		05%
Case study / Assignment / Field work / Project work etc		05% Marks	05%
	15% Marks	15% Marks	30%

For practical course of full credits, Seminar shall not be compulsory. In its place, marks shall be awarded for Practical Record Maintenance.

Conduct of Seminar, Case study / Assignment, etc. can be either in C1 or in C2 component at the convenience of the concerned teacher



## **SYLLABUS**

### **I Semester**

#### **CONCEPTS AND SPACE PLANNING IN INTERIOR DESIGN**

##### **MID 1.1**

**No. of teaching hrs: 52**

##### **Objectives:**

- To develop road-map for a design that lead to choices in aesthetics, type of design, colour, and other considerations.
- To satisfy interior design and decoration needs, which will provide them the direction they need to make decision.

##### **Unit 1**

**12 hrs**

Concept Development - Introduction, definition, importance, factors & considerations, interior design concept statement, principles and vocabulary of design, issues as ordering mechanisms of space, material, form, colour & light, literature and case study.

##### **Unit 2**

**10 hrs**

Interior design concept inspiration - Introduction, importance, considerations, photography- introduction, application, advantages, techniques and development of digital photography, interior design process -introduction, defining the problem/goal- client, collecting information – survey - types, data collection - types, SWOT analysis, brainstorming.

##### **Unit 3**

**10 hrs**

Developing solutions and strategies, presentation - Methods, techniques, technologies - virtual reality and design concept improvisation, concept representation - introduction, means of representation of concept, application of hand sketching and computer aided designing tools, graphic designing and its tools.

##### **Unit 4**

**06 hrs**

Interior design concept presentation- Introduction, development of mood-boards based on concept, theme and materials.

##### **Unit 5**

**6 hrs**

Introduction to space planning, terms and intent, necessity of space planning, synthesis of space planning, introduction to space design with use of computer, synthesis - zonal and block diagram, bubble diagram, adjacency matrix, stacking plans, circulation, execution, feedback, evaluation, literature study, case study, proto typical plan sketches, relationship diagram.

## **Unit 6**

**08 hrs**

Introduction to types of consultants - Acoustical consultant, lighting consultant, plumbing consultant, AC consultant, special consultant based on project needs, rainwater harvesting, solar, green building, landscaping, terrace gardening. Time schedule planning.

## **References**

1. Laurel, Brenda. Design research, Methods and perspectives, MIT press, 2003.
2. Martin DeChiara, Joseph; Panero, Julius; Zelnik, Time-Saver Standards for Interior Design and SpacePlanning, McGraw-Hill Professional, January 1, 2001
3. Maureen Mitton, Residential Interior Design: A Guide to Planning Spaces, Wiley, 3rd Edition, April 2016.
4. Mc Millian, J, Research in Education: A Conceptual Introduction, Harpers Collins College Publishers, NY, 1997.
5. San off, Henry, Visual Research Methods in Design, John Wiley & Sons, 1991.
6. Snyder, James C, Architectural Research, Van Nostr and Reinhold Company, Vol. 6, 1984.

## I Semester

### INTERIOR MATERIALS & FINISHES- I

#### MID 1.2

No. of teaching hrs: 52

#### Objectives:

- To impart the knowledge of materials and their properties
- To familiarize the students with price and market analysis of the products

#### **Unit 1**

**10 hrs**

Introduction to building materials and finish – core materials – cement, concrete, brick, stone and wood – definitions, their types, properties, advantages and disadvantages and their application. Finished surfaces – laminates, veneers, paints, woods, tiles, vinyl and carpets - definitions, their types, properties, advantages and disadvantages and their application.

#### **Unit 2**

**09 hrs**

Core materials – cement, concrete, brick, stone and wood – physical and chemical properties, uses in interiors, advantages and disadvantages, thermal properties, psychological properties, application methodology, labour skill requirement, costing and rate analysis.

#### **Unit 3**

**09 hrs**

Finished surfaces – laminates, veneers, paints, woods, tiles, vinyl and carpets – physical and chemical properties, uses in interiors, advantages and disadvantages, thermal properties, psychological properties, application methodology, labour skill requirement, costing and rate analysis.

#### **Unit 4**

**10 hrs**

Visual properties of materials (surface finishes – laminates, veneers, paints, woods, tiles, vinyl and carpets) used in interior design – Visual characteristics- Types of Finishes, Textures- visual and tactile, thermal properties, application process, advantages and disadvantages.

#### **Unit 5**

**08 hrs**

Product specific materials – types of materials used in interior accessories, furniture, light fixtures, finishes, physical, chemical and psychological properties of each. Physical, behavioral and visual properties of the following materials and their use in the construction of floor, walls, ceilings, doors, windows, staircase, built in furniture and other components of interior architecture. (Wood, glass, metals, cement, brick, POP, stone, paint, plaster, tiles).

## Unit 6

06 hrs

Considerations and Procedures to estimate collect sample and procure material of core and finished materials- Market survey of materials and rate analysis of interior design materials (cement, concrete, brick, stone, laminates, veneers, paints, woods, tiles, vinyl and carpets).

## References

1. Binggeli, Corky. Materials for Interior Environments, John Wiley & Sons, 2008.
2. Godsey, Lisa. Interior Design Materials and Specifications, A & C Black, 2012.
3. Herzog, Thomas, et.al., Timber construction manual, Walterde Gruyter, 2004.
4. Mehta, Madan, Building Construction: Principles, Materials, and Systems, Pearson Prentice Hall, 2008.
5. William R. Hall, Contract Interior Finishes, "A Handbook of Materials, Products and Applications", Watson-Guptill, 1993.

## I Semester

### ADVANCE BUILDING SERVICES

#### **MID 1.3**

**No. of teaching hrs: 52**

#### **Objectives:**

- To provide exposure for planning, design and execution aspects of building services for effective co-ordination.
- To apply the elements and principles of different building services for residential and commercial buildings.

#### **Unit 1**

**10 hrs**

Water Supply - Introduction, terminologies, symbols, plumbing codes - Government agency, by-laws, health requirements for plumbing, water pressure, piping materials, design and construction of rainwater harvesting unit's for residential and commercial complexes.

#### **Unit 2**

**10 hrs**

Electrical services - Introduction, terminologies, symbols, Government agency, by-laws, electrical power- AC and DC, electrical load and electrical distribution in building, UPS- standby and alternate power, electrical power monitoring, solar power installations for residential and commercial complexes.

#### **Unit 3**

**08 hrs**

HVAC design - Introduction, terminologies, ventilation, process and types of air conditioning systems, air conditioning under Indian climatic conditions, active cooling and passive cooling design strategies.

#### **Unit 4**

**08 hrs**

Thermal insulation - Definition & purpose of insulation, general principles of thermal insulation, study of heat insulation materials, coefficient of thermal conductivity of different materials, method of thermal insulation for roofs, exposed walls, window, doors ventilators etc.

#### **Unit 5**

**08 hrs**

Vertical transportation - Introduction, terminologies, elevators and escalators - types and assembly, electrical and hydraulic elevators, and elevator lobby area, elevators for differently abled Users.

#### **Unit 6**

**08 hrs**

Building automation - Introduction, terminologies, building and home automation components, security and office automation, concept of intelligent buildings.

## References

1. Chaitra J D and Calender J H, Time Save Standards for Buildings, Mc GrawHill, New York, 1980.
2. Chudley A, ConstructionTechnology, Volume1-5. 1985.
3. Klaus Daniels, Advanced Building Systems: A Technical Guide for Architects and Engineers, Birkhauser, 2003.
4. Raja, Y.N and Subraminium Y.N, Planning and Designing of Residential buildings, StandardPublishers and Distributors, New Delhi, 2015.
5. Rao, Pratap M, Interior Design Principles and Practices, Standard Publishers and Distributors,New Delhi, 2012.

## I Semester

### RESEARCH METHODOLOGY IN INTERIOR DESIGN

#### **MID 1.4**

**No. of teaching hrs: 52**

#### **Objectives:**

- To develop the fundamental knowledge of research methodology and to initiate thesis writing.
- To enable the students to understand research process in a professional design project.

#### **Unit 1**

**10 hrs**

Research & research design - Introduction, definition, types, characteristics, scope and classifications of research. Research design - meaning, types, factors affecting, basic purpose, and principles.

#### **Unit 2**

**06 hrs**

Data collection - Meaning, need, and main terminologies used in data collection. Types of data, sources of data, methods of data collection.

#### **Unit 3**

**06 hrs**

Interpretation - Data analysis, meaning, need, classification, define and understand, tabulation, array, range, and frequency distribution. Presentation of data-graphic, histogram, polygon, correlation and regression analysis of two variables. Report writing - Meaning, significance, steps, types, findings, suggestions and conclusion.

#### **Unit 4**

**06 hrs**

Research procedures - Recognize philosophical implications and formalize research, literature reviews and identifying and defining the problem. Select appropriate research methodology. Understanding of research design parameters, procedures to collect, analyze, interpret the data, present information through a report.

#### **Unit 5**

**06 hrs**

Design Phases - Research, design specifications, sketch ideas and concepts and develop detailed design, produce a digital design presentation file for the final design, make an oral presentation on design.

#### **Unit 6**

**06 hrs**

Research presentation techniques - Interrelated components - research report presentation: dissertation components, writing styles, typography appropriate to research design, style manuals, & ethical considerations. Design presentation - Design journal, digital design presentation, oral presentation.

**Unit 7****06 hrs**

Measures of central tendency, measures of variation, measures of dispersion and skewness, test of randomness, hypothesis testing, null and alternative hypothesis, level of significance, one and two sample tests, statistical packages - SPSS.

**Unit 8****06 hrs**

Report writing, types of reports, objectives and function of report - formal and informal, report writing process, target audience, pre-research proposals, progress reports, final reports, guidelines for effective writing, research report format, presentation of a report, persuasive nature for effective writing, reports for decision making, technical proposal.

**References**

1. Gupta S P and Gupta M P, Business statistics, Sultan Chand & Sons, 2010.
2. Kothari C R, Research methodology: Methods and Techniques, New Age International, 2004.
3. Laurel, Brenda. Design research: Methods and perspectives, MIT press, 2003.
4. Mc Millian J, Research in Education: A Conceptual Introduction, Harpers, Collins College Publishers, NY, 1997.
5. Sanoff, Henry, Visual Research Methods in Design. John Wiley & Sons, 1991.
6. Snyder, James C, Architectural research, Van Nostrand Reinhold Company, Vol.6, 1984.



**I Semester**

**CONCEPTS AND SPACE PLANNING IN INTERIOR DESIGN**

**(Practical)**

**MID 1.5**

**16 Practical of 4 Hrs. Each**

**Unit 1**

**3**

Concept development - Concept visualization through block model making exercise, complete design process of playschool/residential/showroom.

**Unit 2**

**3**

Interior design concept inspiration - Site visit and documentation of places designed with concept consideration, photography.

**Unit 3**

**5**

Model making through computer aided design tools like Photoshop, InDesign, Sketch Up, 3DS Max or similar software.

**Unit 4**

**5**

Market study and analysis for development of mood boards - Design and material.

**I Semester**  
**INTERIOR MATERIALS & FINISHES- I**  
**(Practical)**

**MID 1.6**

**16 Practical of 4 Hrs. Each**

**Unit 1** **4**

Identify and sketch materials used in interiors - cement, concrete, brick and stone. Finishes - laminates, veneers, paints, woods, tiles, vinyl and carpets.

**Unit 2** **4**

Collect and study various paintings and photographs to understand the visual & psychological impact of colours.

**Unit 3** **4**

Visit and document an experience center to understand the manufacturing and use of various materials for furniture/light fixtures/accessories in interior design

**Unit 4** **4**

Market survey of materials – to collect samples and do a rate analysis of interior design materials, visit a leading paint manufacturing company to understand tints and tones of colors and their affect in creating interior ambience of a space

**I Semester**  
**ADVANCE BUILDING SERVICES**  
**(Practical)**

**MID 1.7**

**16 Practical of 4 Hrs. Each**

**Unit 1** **4**

Plan and design the plumbing layout for a commercial/residential building with rain water harvesting units and fire safety systems

**Unit 2** **4**

Plan and design the electrical layout for a commercial/residential building with solar power installations.

**Unit 3** **4**

Design the air conditioning layout for commercial/residential building.

**Unit 4** **4**

Plan and design the areas around vertical transportation and automated services for commercial/residential building with facilities for differently abled users.

**I Semester**  
**INTERIOR DESIGN STUDIO - I**

**(Practical)**

**MID 1.8**

**16 Practical of 4 Hrs. Each**

**Unit 1** **3**

Advanced CAD software - Introduction, advantages and disadvantages, types - AutoCAD, Revit, 3DS Max, Photoshop, Sketch Up, Home Styler, V-Ray, VR Technology.

**Unit 2** **3**

Application of cameras and lights on the created models. Introduction to lights - standard lights - omni target spot and free spot target direct, sky light, place highlight photometric light - target point, free point, target linear, free linear, target area, free area. Cameras - Target, free-multi pass effect, depth of field and navigation.

**Unit 3** **5**

Minor project - Complete design process - Literature study, case study, site analysis, governing bylaws, area calculation, bubble and circulation diagram, block diagram adjacency matrix for a Cafe/LIG housing.

**Unit 4** **5**

Development of a concept, plan, section, elevation, working drawing, services and 3D Model for a Cafe/LIG housing.

## I Semester

### DESIGN RESEARCH STRATEGIES

#### **MID 1.9**

**No. of teaching hrs: 39**

#### **Objectives:**

- It gives a deep insight of importance of documentation in interior design
- To acquaint students with systematic approach in collecting and documenting the data for future reference

#### **Unit 1**

**05 Hrs**

Documentation – Introduction, types, methodology, application, data collection, photographs, sketches etc.  
Government norms and zoning regulations related to the project.

#### **Unit 2**

**06 Hrs**

Analysis – analyzing the data collected, drawing conclusions and listing of strategies, literature study report  
– Compilation of all the data collected, analyzed and probable strategies put into report format, digital media

#### **Unit 3**

**05 Hrs**

Elements of strategic quality management – definition, types, factors, advantages and disadvantages,  
integrating quality into strategic management- types, process, developing strategies

#### **Unit 4**

**05 Hrs**

Developing strategies, development of goals, competitive benchmarking, deployment of goals, provide  
executive leadership to implement the strategies, implanting total quality.

#### **Unit 5**

**04 Hrs**

Developing quality culture – Technology and culture, theories of motivation, corporate culture, quality  
culture, provide for self-development and empowerment.

#### **Unit 6**

**04 Hrs**

Basic concepts of statistics and probability – Statistical tools in quality the concept of statistical variation,  
quality.

#### **Unit 7**

**06 Hrs**

Designing for quality – opportunities for improvement in product design, design and development as a process,  
phases of product development, designing for time oriented performance, designing for basic functional  
requirements, designing for safety, designing for manufacturability, cost and product performance, design  
review.

#### **Unit 8**

**04 Hrs**

Supply chain management – supplier relations, scope of activities for supplier quality, specification of quality  
requirements for suppliers, assessment of supplier, supply chain quality, planning, control and improvement.

## References

1. Frank M Gryna, Quality Planning and Analysis.
2. Laurel, Brenda. Design research: Methods and perspectives, MIT press, 2003
3. Mc Millian, J, Research in education: A Conceptual Introduction, Harpers Collins College Publishers, NY, 1997.
4. San off, Henry, Visual research methods in design, John Wiley & Sons, 1991.

## II Semester

### HUMAN FACTORS IN INTERIOR DESIGN

#### **MID 2.1**

**No. of teaching hrs: 52**

#### **Objectives:**

- It helps in understanding the importance of human factors in designing.
- It helps students to understand the aesthetics and functional stimulation of the design or the abled and differently abled users.

#### **Unit 1**

**08 hrs**

Introduction to human factors - Role of psychology, physiology in interaction design. Human factors in work station and work environment design, cognitive psychology of design - Sensation and perception. Human information processing and execution. Elements of learning, learning theories of behaviorism, cognitivism and constructivism. Piaget's development theory.

#### **Unit 2**

**08 hrs**

Design for Health, safety, and comfort - occupational health and safety management, human error and human reliability analysis, managing low-back disorder risk in the workplace, use of personal protective equipment in the workplace, human space flight. design for individual differences - design for people with functional limitations. Design for aging, designing for children, design for all - computer-assisted design of user interface adaptation.

#### **Unit 3**

**06 hrs**

Housing environments for physically handicapped, old aged people, destitute, orphan, deaf and dumb mentally retarded.

#### **Unit 4**

**06 hrs**

Ergonomics in interiors – Introduction to ergonomics, evolution of platforms that influence the outcome related to anthropometrics data, circulation, work surfaces for different functions arrangement and clearances, door width, kitchen counter height, counter width, Furniture suggested, postures and their detail.

#### **Unit 5**

**06 hrs**

Mental demands, physical demands, task demands and surrounding environment in a design and its impact on each factor. Study of existing problems- some reflection of the problems, scope and objectives and ways to overcome through designing, different research institutes and their function.

**Unit 6****08 hrs**

Standard dimensions and notations. Designing context sensitive interactions and friction free experience for commercial, residential and institutional projects, facilities provided for the differently abled in recreational areas, public areas, health centers, cinema halls, ramp/slope, parking areas, circulation areas, lift.

**Unit 7****08 hrs**

Design requirements and facilities provided for the differently-abled in recreational areas, public areas, health centers, cinema halls, ramp/slope, parking areas, circulation areas, lift.

**Unit 8****08 hrs**

Interactive design: Introduction to interactive designs, design methodology for complex products – types, services, events, advantages and disadvantages. Devices used in public spaces like gardens and playground for differently abled.

**References**

1. Forman, George E, The Child's Construction of Knowledge: Piaget for Teaching Children; National Association for the Education of You, 1983.
2. Furth, Hans G, Wachs, Harry, Thinking Goes to School: Piaget's Theory in Practice, Oxford University Press, 1982.
3. Gagne, Robert M, Wager, Walter W, Golas, Katharine; Keller, John M.; Principles of Instructional Design; Wadsworth Publishing, 5<sup>th</sup> Edition, 2004.
4. Goldstein E, Cognitive psychology: Connecting mind, research and everyday experience, Cengage Learning, 2010.
5. Kolko, Jon, Thoughts on Interaction Design, Morgan Kaufmann, 2010.
6. Leonard, David C, Learning Theories, A to Z, Greenwood Publishing Group, 2002.
7. Levitin, Daniel J. Foundations of Cognitive Psychology: Core Readings, MIT press, 2002.
8. Ratner, Julie, Human Factors and Web Development, CRC Press, 2002.
9. Reigeluth, Charles M, Instructional-Design Theories and Models: A New Paradigm of Instructional Theory (Instructional Design Theories & Models); Lea 1999.
10. Sanders M S, McCormick, Ernest J, Human Factors in Engineering and Design, McGraw Hill, 1993.
11. Saffer, Dan. Designing for Interaction: Creating Innovative Applications and Devices, New Riders, 2009.
12. Zunse, Leonard, Visual perception of form, Academic Press 1990.



## II Semester

### PROJECT MANAGEMENT IN INTERIORS

#### MID 2.2

No. of teaching hrs: 52

#### Objectives:

- To impart the knowledge of project management in planning and scheduling
- It helps the students to understand, organize and formulate strategies to achieve goals

#### **Unit 1**

**10 hrs**

Project management- Introduction, significance, objectives and functions of construction management, types of construction, resources for construction, stages in construction. Construction team, perception of client, consultants and contractors, project feasibility- turnkey operation

#### **Unit 2**

**10 hrs**

Planning and scheduling- objectives, principles, work breakdown structure, stages of planning for construction projects. pre-tender stage, contract stage scheduling- necessity of scheduling, scheduling by bar charts, preparation of construction schedule for labour, material, machine and finance, authority and limitations of interior designers

#### **Unit 3**

**08 hrs**

Organizing construction project- objectives, principles of organization, communication, leadership and human relations, types of organizations- line organization, line and staff organization, functional organization- merits and demerits, role of project manager, job layout.

#### **Unit 4**

**08 hrs**

Inspection and quality control- need for inspection and quality control objectives, principles of inspection, enforcement of specifications, stages of inspection and quality control, technical services and inspection team, testing of structures, statistical analysis.

#### **Unit 5**

**08 hrs**

Safety in construction- Importance of safety, procedures and types of check lists safety meetings, safety measures for storage, Safety in fabrication and erection, safety measures for demolition, fire safety, snag lists, NOC for completed projects, SOPs.

#### **Unit 6**

**08 hrs**

Estimation & costing - Introduction to writing of specification, purpose and definition of specification, guidelines for writing specifications, coordination with the construction drawings, furniture specification, checklist for construction drawing and specification, specification for walls, floors, wardrobes, ceiling,

painting Materials management – functions – material planning and budgeting – Value Analysis - purchase functions and procedure - inventory control – types of inventory – safety stock – order point – service level – inventory control systems – perpetual – periodic – JIT – KANBAN.

## **References**

1. Dhir BM, Gahlot P S, Construction planning and Management, New Age International (p) Ltd. Publishers.
2. Chitkara, Construction Project Management, Mc GrawHill Publications.
3. Khanka SS, Construction management; S. Chand Publishers.
4. Sanga Reddy S, Construction Management, Kumaran Publications, Coimbatore.

## II Semester

### INTERIOR MATERIALS & FINISHES- II

#### MID 2.3

No. of teaching hrs: 52

#### Objectives:

- It aims at exploration of different materials and finishes used in interior design
- It helps in developing skills in selecting materials for specific end use

#### **Unit 1**

**10 hrs**

Building construction and its types, types of walls, windows, doors, and chajjas. Wall plastering and materials used for plaster.

#### **Unit 2**

**09 hrs**

Types of partition walls in buildings, materials used for partition walls, types of finishes for partition walls, advantages and disadvantages, application.

#### **Unit 3**

**09 hrs**

Types of wall finishes - Artificial and natural – plasters, claddings, wall papers, laminates, veneers, exposed material walls. Their advantages and disadvantages and areas of application, market survey – considerations and procedures for showroom and industry visit.

#### **Unit 4**

**08 hrs**

Paints – Introduction, properties of paints, composition and types of paints, distempers, colour combination techniques and principles and procedure of painting a surface, market survey – considerations and procedures for showroom and industry visit.

#### **Unit 5**

**08 hrs**

Floor and ceiling finishes and materials used for acoustical and thermal insulation. Uses and types available. Application procedure. Advantages and disadvantages, Market survey – considerations and procedures for showroom and industry visit.

#### **Unit 6**

**08 hrs**

Glass - Introduction, Uses and types available. Application procedure. Advantages and disadvantages, Market survey –Considerations and procedures for showroom and industry visit.

## References

1. Binggeli, Corky, *Materials for Interior Environments*, John Wiley & Sons, 2008.
2. Godsey, Lisa, *Interior Design Materials and Specifications*, A & C Black, 2012.
3. Herzog, Thomas, et al. *Timber Construction Manual*, WalterdeGruyter, 2004.
4. Heinz Krewinkel, *Glass Buildings: Material, Structure and Detail*, 1998.
5. Mehta, Madan, *Building Construction Principles, Materials and Systems*, Pearson Prentice Hall, 2008.

## II Semester

### FURNITURE & LIGHTING DESIGN IN INTERIORS

#### MID 2.4

No. of teaching hrs: 52

#### Objectives:

- To learn the dimensions in designs used for furniture for specific end use
- It helps in design light fixtures with specifications for various spaces

#### **Unit 1**

**10 hrs**

Furniture design - Introduction, types, materials, history of furniture design, exploration of the idea of furniture- furniture categories, design approaches in furniture design, measured drawing of a piece of furniture, simple objects, rooms, openings etc. and their to scale plan, elevation, and construction details.

#### **Unit 2**

**08 hrs**

Introduction to various manufacturing processes - Injection Molding, Investment, costing, sheet metal work, die casting, blow- molding, vacuum – forming.

#### **Unit 3**

**08 hrs**

Seating design - Introduction, concept, different types of seating based on functionality, aesthetic, style, human factors and ergonomics, construction drawings and specification, material and cost of the designed furniture piece.

#### **Unit 4**

**08 hrs**

Storage unit design - Functional analysis of storage systems, deriving types of cabinets needed for interiorspaces, kitchen cabinets, wardrobes closets, book cases, show case display systems etc.

#### **Unit 5**

**08 hrs**

Lighting design - Introduction, types, lighting components, aspects of lighting- physical, psychological, economical aspects, colour of light, colour rendition, daylight, artificial light, brightness. Methods of lighting, principles of lighting, lighting wiring systems, lighting automation.

#### **Unit 6**

**10 hrs**

Light distribution, Intensity and diffusion, light and visual effect, lighting and conservation, lighting as a system, lamping, beam spread, color effects, meaning of illumination and light manipulation. Design of lighting for various spaces like restaurants, hotel lobbies, institutes, halls, offices and transit facilities.

## References

1. Bradley Quinn, *Mid-Century Modern: Interiors, Furniture, Design Details*, Conran Octopus Interiors, 2006.
2. Jim Postell, *Furniture Design*, Wiley Publishers, 2007.
3. Robbie. G. Blakemore, *History of Interior Design and Furniture: From Ancient Egypt to Nineteenth CenturyEurope*, Wiley Publishers, 2005.
4. Robbins CL, *Day lighting Design and Analysis* - Van Nostrand Reinhold Co., 1986.
5. Jankowski Wanda *Lighting*, PCB International, New York, 1993.
6. Wilhide Elizabeth; *Lighting*, Ryland Peters and small London, 1998.

## II Semester

### PROJECT MANAGEMENT IN INTERIORS

(Practical)

**MID 2.5**

**16 Practical of 4 Hrs. Each**

#### **Unit 1**

**4**

Visit any nearby construction site & interact with the construction team regarding type of structure and its organization structure, interact with contractor about the tendering process (e-tendering) and awarding of contract, prepare a planning schedule of the visited project with the help of available open source project management software.

#### **Unit 2**

**4**

Collection of tender notices published in newspapers for various items of projects (at least 5) write salient features of them, collect quality management standards pertaining to ISO 9001, ISO 14001 and OHSAS18001 and prepare a report, collect the details required for getting a consultant license from a corporation and prepare a report for it. Collect safety procedures, (Do's and Don'ts) of each and every construction activities, collect or prepare the various stages of inspection and quality control for construction activities. Make a case study on valuation of an existing building.

#### **Unit 3**

**4**

Visit any nearby architect/PWD/KHB office or any construction company, collect the documents (BOQ, MB, Tender, and SR) related to any project and prepare report on it.

#### **Unit 4**

**4**

Prepare a detailed schedule and estimate for a residential or a commercial interior design project.

**II Semester**  
**INTERIOR MATERIALS & FINISHES- II**  
**(Practical)**

**MID 2.6**

**16 Practical of 4 Hrs. Each**

**Unit 1**

**3**

Study and document different types of doors, windows, ventilators, openings etc. in a residence/retail store.

**Unit 2**

**3**

Study and sketch different types of partition walls. Design a partition wall for a seminar hall/convention center.

**Unit 3**

**5**

Market survey and rate analysis of different types of claddings, laminates and veneers, collect colour cards for different paint manufacturing companies. Design the interiors of a master bedroom and kid's bedroom with colour scheme.

**Unit 4**

**5**

Design and render interiors of a 2BHK residence/play school with color scheme and specifications



## II Semester

### FURNITURE & LIGHTING DESIGN IN INTERIORS

(Practical)

**MID 2.7**

**16 Practical of 4 Hrs. Each**

**Unit 1**

**3**

To design and make a model of a transforming furniture with concept and construction details.

**Unit 2**

**3**

Visit and document furniture and lighting experience center to understand costing, design and technical specifications.

**Unit 3**

**5**

To design a lighting layout and a lighting fixture for residential/commercial building with material, construction details and specifications.

**Unit 4**

**5**

To design furniture layout and working drawings for restaurant/ hotel lobbies/institutes/halls/offices with material, construction details and specifications.

**II Semester**  
**INTERIOR DESIGN STUDIO II**  
**(Practical)**

**MID 2.8**

**16 Practical of 4 Hrs. Each**

**Unit 1**

**3**

Minor project - Complete design process - literature study, case study, site analysis, governing bylaws, area calculation, bubble and circulation diagram, block diagram adjacency matrix for a play school/clinic.

**Unit 2**

**5**

Development of a Concept, Plan, Section, elevation, working drawing, Services and 3D Model for a play school/clinic.

**Unit 3**

**3**

Major project - Complete design process - Literature study, case study, site analysis, governing bylaws, area calculation, bubble and circulation diagram, block diagram adjacency matrix for a UG college/hospital.

**Unit 4**

**5**

Development of a concept, plan, section, elevation, working drawing, services and 3D Model for a UG college/hospital.

## II Semester

### VAASTU SCIENCE IN INTERIORS

(Theory)

MID 2.9

No. of teaching hrs.: 39

#### Objectives:

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

#### **Unit1**

**06 hrs**

Vaastu- Introduction, importance, history and significance of vaastu on scientific basis, vaastu pursha mandala-introduction, importance, relation to living spaces, 5 elements in vaastu shastra- introduction, importance, cycle of creation and destruction, balancing of 5 elements, 16 cardinal directions in vaastu-introduction, characteristics, importance, understanding life force energy, vehicular.

#### **Unit2**

**05 hrs**

Use of Magnetic compass and google earth for identification of north, 4 step analysis in vaastu, significance of color in vaastu shastra - Introduction, importance, relation to 5 elements, relation to 16 directions, application in interiors, treatment (without reconstruction), cuts and extends - Introduction, advantages and disadvantages treatment for cuts and extends.

#### **Unit3**

**05 hrs**

Importance of to scale plan in vaastu shastra, analysis of vaastu defects in residential/commercial establishments using 16 cardinal directions of vaastu, selection of plot/land - introduction, considerations, plot geography- type of soil, shape, water sources, surroundings, instruments and techniques used for plots election.

#### **Unit4**

**06 hrs**

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

#### **Unit5**

**04 hrs**

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

<b>Unit6</b>	<b>04 hrs</b>
Fengshui - Introduction, Principles-YINYANG, Qi, natural elements and Baguio and their application inInterior design.	
<b>Unit7</b>	<b>04 hrs</b>
Fengshui as decorative accessories for building, use of green house, open structure, water statues and sculptures, ornaments mirrors and glass.	
<b>Unit8</b>	<b>05 hrs</b>
Design of interiors for residential and commercial establishment suing complete vaastu principles and considerations.	

### References:

1. Beverly L. Kirkpatrick BFA NCIDQ Adjunct Faculty and James M. Kirkpatrick; Auto CAD for InteriorDesign and space planning using Auto CAD 2005, Peachpit Press, 2004.
2. Talavane Krishna M.D, The Vaastu Workbook: Using the Subtle Energies of the Indian Art of Placementto Enhance Health, Prosperity, and Happiness in Your Home Kindle Edition, Destiny Books, 2001.
3. Jayshree om SMIDharth Borad; Ancient Science of Vastu: The Vishwakarma Prakash Retold; KindleEdition; 2020.

### III Semester

#### TEXTILES FOR HOME AND HOTEL INTERIORS

##### MID 3.1

No. of teaching hrs. 52

##### Objectives:

- Helps to understand the various materials used in Home and Hotel industry for better choice of fabric
- To Learn about various materials used in designing furnishings, upholstery, bed linens, Kitchen linens, Bathroom linens

##### **Unit 1**

**12 hrs**

Introduction to home textiles, definition, types of home textiles, factors influencing selection of home textiles, recent trends in home textiles. Introduction to sustainable textiles – definition, uses, advantages and disadvantages.

##### **Unit 2**

**10 hrs**

Floor and wall coverings - definition, types of floor covering – hard, soft and resilient floor coverings and uses and care and maintenance of floor coverings, new floor covering materials and manufacturing process, advantages and disadvantages. Wall covering – definition, uses, care and maintenance of wall coverings, new floor covering materials and manufacturing process, advantages and disadvantages.

##### **Unit 3**

**08 hrs**

Door and window treatments – definition and parts of door and windows, curtains and draperies – definition and materials used for curtains and draperies. Types of curtains – draw, tailored, pleated, café, three tier curtains. Types of Draperies – Swags. Accessories- rods hook, rails, racks, curtain tape pins.

##### **Unit 4**

**08 hrs**

Soft furnishings for living and bed linen. Introduction to living and bedroom linens, types - sofa, sofa covers, wall hangings, cushions, cushion covers, upholsteries, bolster and bolster covers, bed sheets, covers, blankets, blankets covers, comfort and comfort covers, bed spreads, mattress and mattress covers, pillow covers, pads, uses and care.

##### **Unit 5**

**08 hrs**

Soft furnishings for kitchen and dining, types of kitchen linens – kitchen towel. Aprons, dish clothes, fridge, grinder and mixer covers, mittens, fridge holders – their uses and care. Types of dining table mat, dish/pot holders, cutlery holders, fruit baskets, hand towels- uses and care. Bathroom linens – types, uses and care.

##### **Unit 6**

**06 hrs**

Interior and textiles care and maintenance- Introduction, types, materials, stain removal of upholstery, sofas, cushions, carpets, table linen, bedroom and bathroom linen.

## References

1. Levine M, Living Rooms, Rock Port Publishers, USA, 1998.
2. Mullick P, Textbook of Home Science, Kalyani Publishers, New Delhi, 2000.
3. Ramesh Babu V and Sundaresan S, Home Furnishing, WPI Publishing, 2018.
4. Stepat D D, Introduction to Home Furnishing, Mac Millan Co., New York, 1971.
5. Wilhide, Eand Copestick, Contemporary Decorating, Conronoctopus Ltd., London, 2000.

### III Semester

#### WORKING DRAWING IN INTERIOR DESIGN

##### MID 3.2

No. of teaching hrs: 52

##### Objectives:

- To learn the importance of detailed drawing for interior design execution.
- To learn CAD based techniques for producing working drawings for residential and commercial projects and understand their processes.

##### **Unit 1**

**10 hrs**

Working drawing - Introduction, concept of working drawings its needs and importance and types of working drawing. Details of all drawings, lettering, dimension, abbreviations & symbols, furniture symbols, schedule of openings, title block, notes and description, approval drawings.

##### **Unit 2**

**08 hrs**

Considerations for drawing and drafting of plan, development of elevation/ sectional elevation, blown-up/ construction details, revisions etc. Detail and installation drawings of interior design product and finishes.

##### **Unit 3**

**08 hrs**

Development of working drawings using CAD - introduction, types and its tools- advantages and disadvantages.

##### **Unit 4**

**08 hrs**

Introduction to plumbing drawings - Plumbing layout considerations, details, symbols and abbreviations. Representation of different toilet and bathroom accessories and fixtures with details for the same. Preparation of drawing for 2BHK resident and any commercial establishment.

##### **Unit 5**

**10 hrs**

Introduction to electrical drawings - Electrical layout considerations, details, symbols and abbreviations. Representation of different electrical and lighting accessories and fixtures with details for the same. Preparation of electrical drawings for 2BHK residence.

##### **Unit 6**

**08 hrs**

Development of Interior design Documentation for 2 BHK and commercial establishment - Detailed working drawings section, elevation and preparation of check-lists.

## References

1. Andrew Brody, "Electronic Workflow for interior Designers and Architects", Bloomsbury, 2009.
2. Drew Plunkett, "Drawing for Interior Design", Laurence King, 2nd edition, 2014.
3. Francis D K Ching & Steven P Jurozek, "Design Drawing", Wiley India Pvt. Ltd., 2012.
4. Maureen Mitton & Courtney Nystuen, "Residential Interior Design - A Guide to Planning Spaces", Wiley Publication, 3rd edition, 2016.
5. Rosemary Kilmer, "Construction Drawings and Details for Interiors", Willey & Sons, 2nd edition, 2016.



### III Semester

#### ADVANCED LANDSCAPE IN INTERIORS

##### MID 3.3

No. of teaching hrs: 52

##### Objectives:

- Helps to impart knowledge about the importance of landscape in interiors
- Helps in understanding the various concepts and principles of designing green environment for better aesthetics

##### **Unit 1**

**10 hrs**

Introduction to landscaping, advantages, elements of landscape, elements and principles of landscape design, landscape design strategies, concept, psychological effects and importance of having plants around us.

##### **Unit 2**

**08 hrs**

Introduction to interior landscaping, advantages and disadvantages, factors to be considered, vertical gardening, example of a residential and commercial interior and exterior landscape design.

##### **Unit 3**

**08 hrs**

Introduction, types of indoor plants, classification, characteristics & maintenance, air purifying plants, medicinal plants.

##### **Unit 4**

**08 hrs**

Introduction, different types of irrigation systems, types of fertilizers, pest control for plants, spacing for plants, psychological disorders in plants.

##### **Unit 5**

**10 hrs**

Artificial and preserved plants, flower arrangement: Introduction, classification, types of flowers different types of arrangement for home, office, hotels and flower container, artificial waterfall/ fountain - introduction, types, benefits, maintenance.

##### **Unit 6**

**08 hrs**

Planters - Introduction, types- based on material, care and maintenance, importance, boxes and construction details

## References

1. Alex R and Sudhadevi, Interior Plant Scaping and Foliage Ornamental Plants, LAP Lambert Academic Publishing, 2013.
2. Bree Claffey, Indoor Green: Living with Plants, Thames and Hudson, 1st edition, 2017.
3. James M Delprince, Interior Plant Scaping, Delmar Cengage Learning, 2012.
4. Michelle Satilla, Gardenista: The Definitive Guide to Stylish Outdoor Spaces, Thomas Allen and Sons.
5. Nelson hammer, Interior landscaping design, Rockport Publishers.
6. Stefano Corbo, Interior Landscapes –A visual Atlas, Images Publishing Dist., 2016.

**III Semester**  
**TEXTILES FOR HOME AND HOTEL INTERIORS**

**(Practical)**

**MID 3.4**

**16 Practical of 4 Hrs. Each**

<b>Unit 1</b>	<b>4</b>
Design and sketch different types of curtains and draperies (any 4)	
<b>Unit 2</b>	<b>4</b>
Design and sketch theme based bedroom linen for a hotel suite.	
<b>Unit 3</b>	<b>4</b>
Design and develop samples of kitchen linen - Gloves, apron, pot holder.	
<b>Unit 4</b>	<b>4</b>
Collection of different types of furnishing and upholstery materials for home and hotel interiors (Any 30 samples)	

**III Semester**

**WORKING DRAWING IN INTERIOR DESIGN**

**(Practical)**

**MID 3.5**

**Practical of 4 Hrs. Each**

**Unit 1**

**4**

Measure drawing/as-built drawing of any given space using necessary measuring equipment and CAD-AutoCAD, sketch up layout, revit.

**Unit 2**

**4**

Detailed working drawing with sectional elevation, construction details, material specification for 2BHK residential and commercial design.

**Unit 3**

**4**

Plumbing and electrical layout for a 2BHK residential/ commercial unit.

**Unit 4**

**4**

Model and construction drawing of any designed furniture.

**III Semester**

**ADVANCED LANDSCAPE IN INTERIORS**

**(Practical)**

**MID 3.6**

**Practical of 4 Hrs. Each**

**Unit 1**

**3**

Site visit to popular landscape and interior landscape project (case study) and visit to nursery.

**Unit 2**

**5**

Landscape design with construction details for interiors of a resort.

**Unit 3**

**3**

Interior landscape design with construction details for a residential / commercial establishment.

**Unit 4**

**5**

Artificial waterfall or fountain design with construction details.

### III Semester

#### INTERIOR DESIGN STUDIO III (Practical)

**MID 3.7**

**Practical of 4 Hrs. Each**

#### **Unit 1**

**3**

**Minor project** - Complete design process - Literature study, Case study, Site Analysis, Governing Bylaws, Area calculation, bubble and circulation diagram, block diagram adjacency matrix for a Conference/Convention hall

#### **Unit 2**

**5**

Development of a Concept, Plan, Section, elevation, Working drawing, Services and 3D Model for a Conference/Convention hall

#### **Unit 3**

**3**

**Major project** - Complete design process - Literature study, Case study, Site Analysis, Governing Bylaws, Area calculation, bubble and circulation diagram, block diagram adjacency matrix for a MNC/Architect office

#### **Unit 4**

**5**

Development of a Concept, Plan, Section, elevation, Working drawing, Services and 3D Model for a MNC/Architect office

**III Semester**  
**(OPEN ELECTIVE)**  
**HOME DECOR**

**MID 3.8**

**No. of teaching hrs : 52**

**Objectives:**

- To impart knowledge regarding interior design and its importance in everyday life
- To learn and understand various components and elements of interior design used in home decoration

**Unit 1**

**08 hrs**

Introduction to basic design, concept- history, types, elements of concept, introduction to bubble diagram, proximity chart and graphical representation, introduction to anthropometrics, application of elements and principles of design.

**Unit 2**

**06 hrs**

Introduction to Interior design, interior decoration, difference between interior design and decoration, basic principles of interior design and elements of design. Introduction to elevation, section and design details and working drawings.

**Unit 3**

**06 hrs**

Introduction to colour concepts in interiors – Colours, colour wheel, complementary colours, contrast colours, split complementary colours, analogue colours tints and tones, colour mixing concept. Introduction to paints – types, composition and its application.

**Unit 4**

**08 hrs**

Introduction to interior accessories – types of interior accessories, materials, wall murals, traditional art forms, wall hangings, light fixtures, lamp shades, sculptures and its application. Introduction to creative art and craft.

**Unit 5**

**08 hrs**

Vastu in interiors – introduction to vastu concepts, importance of vastu, advantages of vastu, disadvantages of vastu, origin, principles, science of vastu and its application.

**Unit 6****06 hrs**

Flooring treatments – introduction, importance, materials, coverings, care and maintenance, advantages disadvantages and its application. Ceiling treatments – introduction, importance, materials, coverings, care and maintenance, advantages disadvantages and its application. Introduction to acoustics in interiors.

**Unit 7****06 hrs**

Introduction to renovation in interior design – Definition, types of renovations, importance of renovation, methods of renovation, materials. Introduction to conservation in interior design – definition, types of conservation, importance of conservation, methods of conservation, materials.

**Unit 8****04 hrs**

Design and apply design concepts in any of the project with floor plan, elevation and design details

- 2BHK residence
- Commercial building
- Retail store
- Café

**References**

1. Gupta S P and Gupta M P, Business Statistics, Sultan Chand & Sons, 2010.
2. Laurel, Brenda. Design Research: Methods and Perspectives, MIT Press, 2003.
3. McMillian J, Research in Education: A Conceptual Introduction, Harpers Collins College Publishers, NY, 1997.
4. Mehta, Madan, Building Construction: Principles, Materials, and Systems, Pearson Prentice Hall, 2008.
5. Rao, Pratap M, Interior Design Principles and Practices, Standard Publishers and Distributors, New Delhi, 2012.
6. Sanoff, Henry, Visual Research Methods in Design, JohnWiley & Sons, 1991.
7. Snyder, James C, Architectural Research, Van Nostrand Reinhold Company, Vol. 6, 1984.



## IV Semester

### SUSTAINABLE INTERIORS

#### MID 4.1

No. of teaching hrs: 52

#### Objectives:

- To enable students understand the use of natural resources keeping sustainability in mind while designing any type of project
- To understand the concept of green building technology and various materials and finishes used in green buildings.

#### **Unit 1**

**10 hrs**

The concept of sustainability - Introduction, definition, meaning and importance, sustainability and the human future, earth and the sustainability crisis, the challenge of sustainability.

#### **Unit 2**

**08 hrs**

Sustainable concept in interior designing - The Concept of sustainable interiors, sustainable interiors designing by adopting various policies, principles of sustainable interior design, benefits of green interiors, indoor environment quality (IEQ), and elements associated to IEQ design an accessory for an interior. Role of Interior designer in sustainability.

#### **Unit 3**

**08 hrs**

Green building technology – Meaning, concept, impact of green building on human health and natural environment, need, importance and benefits of green buildings. Materials and finishes used in green buildings - Bamboo, straw, wood, dimension stone, Recycled stone, non-toxic metals, Earth blocks - compressed, rammed, baked; vermiculture, flax, linen, sisal, wood fibers, cork, coconut, polyurethane block.

#### **Unit 4**

**06 hrs**

Green building practices and technologies. Roof, walls, floors – electrical, plumbing, windows, and doors, heating, ventilation and air conditioning (HVAC), insulation, Interior finishes, landscaping.

#### **Unit 5**

**05 hrs**

Renewable energy resources solar energy – meaning and importance, advantages, principles and functions of solar devices – solar room heater, solar lights, solar water heater, solar air conditioner.

#### **Unit 6**

**05 hrs**

Water conservation technologies - Rain water harvesting - importance, requirements of rain water harvesting structure, types of rain water harvesting systems, advantages.

**Unit 7****06 hrs**

Green building design - Designing process, developing successful green team, design integration, site location and selection, no cost measures through building design - building footprint, smart sizing, building shape, daylighting, space utilization strategies, eliminating hallways.

**Unit 8****04 hrs**

Case study (Self-study / Assignment): Conduct a study on concept of green building. Visit any green building; observe the place, design, interior elements, materials and construction techniques. Interview with appropriate persons and make a case study report.

**References**

1. Binggeli, Corky, Materials for Interior Environments, John Wiley & Sons, 2008.
2. Diesendorf, Mark, Greenhouse Solutions with Sustainable Energy, 2007.
3. Faulkner R, and Faulkner S, Inside Today's Home, Rinehart Publishing House, New York, 1987.
4. Gauzin - Mueller, Dominique, and Nicolas Favet, Sustainable Architecture And Urbanism: Concepts, Technologies, Springer Science & Business Media, 2002.
5. Giudice, Fabio, Product Design for the Environment: A Lifecycle Approach. CRC Press, 2006.
6. Rai G D, Solar Energy Utilization, Khanna Publishers, Delhi, 1996.
7. Riggs J R, Materials and components of Interior Design, Regents Hall, New Jersey, 1992.
8. Rao M P, Interior Design, Principles and Practice, Standard Publishers, Delhi, 1998.
9. Martha Maeda, The Complete Guide to Green Building & Remodeling Your Home, Atlantic Pub. Co. 2011.
10. Marten, Gerald G, Human Ecology: Basic Concepts for Sustainable Development, Earth Scan, 2001.
11. Sassi P, Strategies for Sustainable Architecture, , Taylor and Francis, New York, 2006.
12. Spiegel, Ross, Green Building Materials: A Guide to Product Selection and Specification, John Wiley & Sons, 2010.
13. Yudelso, Jerry, The Green Building Revolution, Island Press, 2010.

## IV Semester

### ENTREPRENEURSHIP AND ACCOUNTING

#### MID 4.2

No. of teaching hrs.:52

#### Objectives:

- To impart knowledge about the various processes and importance of project management, project manager and his duties on site
- To help in understanding the importance and procedure of estimating and costing for interior design projects

#### **Unit 1**

**06 hrs**

Entrepreneurship - Entrepreneur, enterprise, definition and concept of entrepreneurship - meaning, need, transition from income generation to self-employment and entrepreneurship, qualities of a good entrepreneur, problems of entrepreneur.

#### **Unit 2**

**08 hrs**

Factors influencing entrepreneur development - Economic, legal, socioeconomic, psychological and environmental factors. agencies supporting entrepreneurial development programme, project identification and classification - meaning of projects, project identification, project classification, internal and external constraints, project objectives, project formulation- concept, need, elements. Project selection, appraisal format, check list for feasibility report, planning commission guidelines.

#### **Unit 3**

**06 hrs**

Designing a competitive business model and building a solid strategic plan, building a competitive advantage, the strategic management process. Conducting a feasibility analysis and crafting a winning business plan, conducting a feasibility analysis, the elements of a business plan, what lenders and investors look for in a business plan.

#### **Unit 4**

**06 hrs**

Accounting and management- introduction, importance, nature, process, function and levels, organizing-meaning, definition, nature benefits, process, principles and limitation of organizing, types of organizing – organization structure, span of control – use of staff units and committees - differences between formal organization and informal organization.

#### **Unit 5**

**06 hrs**

Understanding financial statements- construction and analysis of balance sheet, construction and analysis of profit and loss account, construction and analysis of funds flow and cash flow statements. Cost management- understanding and classifying cost, absorption and marginal costing, cost volume- profit analysis, variance analysis. Material and labour variance – budgeting and preparation of various budgets.

**Unit 6****06 hrs**

Budgetary control: introduction, meaning of a budget, budgetary control, objectives of budgetary control, merits of budgetary control, essential features of budgetary control, steps in budgetary control, types of budgets, cast budget, flexible budget, limitation of budget control.

**Unit 7****08 hrs**

Standard costing - Introduction, definition of standard costing, meaning, difference between standard cost and budgetary control, establishment of standards, variance analysis, material cost variance, material price variance, material usage variance, material mix variance, material yield variance, direct labor variance, labor efficiency variance, labor rate variance, labor mix variance, labor yield variance.

**Unit 8****06 hrs**

Human resource management - Concept and system (reward system, self-renewal system), HRD issues, performance management methods, evaluation of the training, human resource development – introduction to labour legislation - laws on working conditions, wages and labour laws, laws for labour welfare and social security, roles and responsibilities.

**References**

1. Belverd E, Needles and Marian Powers; Financial Accounting, Cengage, 2012.
2. Patil B S, Civil Engineering Contracts and Estimates, Orient Longman Publishers, 2015.
3. Dutta B N, Estimating and Costing in Civil Engineering, UBS Publishers Distributors Pvt. Ltd., New Delhi, 2014
4. Raman B S, Basic Accounting for Students Teachers & Others Desirous of Learning the Finer Points of Accountancy, Sapna Book House, 2016.

## IV Semester

### ELECTIVE 1-ACCESSORIES IN INTERIOR DESIGN

(Practical)

#### MID 4.3

32 Practical of 4Hrs. Each

#### Objectives:

- To understand the various accessories used in interiors and to learn the methods of designing the accessories
- To help in understanding the various types of accessories used in interior designing in various residential and commercial projects

#### **Unit 1**

**8**

Introduction to creative art and craft - Introduction to the art and its applications in interior design – materials used from historic times till date.

#### **Unit 2**

**8**

Traditional crafts of India - Karnataka, Tamil Nādu, Kerala, Andhra Pradesh, Goa, Rajasthan, Gujarat, Kutch, Uttar Pradesh and Orissa. Indian Art Appreciation - A study.

#### **Unit 3**

**8**

Sculpture Art - Introduction, techniques and material used from pre historic times till date.

#### **Unit 4**

**8**

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

#### **References**

1. Ahmed A Kasu, An Introduction to Art, Craft, Technique, Science Profession of Interior Design, Ashish Book Centre, New Delhi, 2012.
2. Caroline Clifton, Color – Design Sources Book Using Fabrics, Paints and Accessories for Successful Decorating, Ryland Peters & Small, 2007.
3. Hellen Ruthberg, The Book of Miniature Furniture & Accessories, Chilton Book Co., 1977.
4. Richard Mishaan, Artfully Modern Interiors, The Monacelli Press, 2014.

**IV Semester**

**ELECTIVE 2 -INTERIOR DOCUMENTATION**

**(Practical)**

**MID 4.3**

**32 Practical of 4Hrs. Each**

**Objectives:**

- To learn and understand the importance of process and documentation in interior design projects
- To help in creating a database for future research and projects is encouraged through practical lessons

**Unit 1**

**8**

Documentation – Introduction, types, methodology, application.

**Unit 2**

**8**

Site selection, data collection, photographs, sketches etc. Government norms and regulations related to the project.

**Unit 3**

**8**

Analysis – analyzing the data collected, drawing conclusions and listing of strategies, literature study.

**Unit 4**

**8**

Report – compilation of all the data collected, analyzed and probable strategies put into report format, digital media.

## IV Semester

### ELECTIVE 3 -GREEN INTERIORS

(Practical)

**MID4.3**

**32 Practical of 4Hrs.Each**

#### **Objectives:**

- To help in understanding the concept of green building technology and various materials and finishes used in green buildings and to learn about sources of renewable energy in interiors
- To design and create awareness and execution of water conservation technologies in interiors.

#### **Unit 1**

**8**

Green building technology – Meaning, concept, impact of green building on human health and natural environment, need, importance and benefits of green buildings. Case study presentation

#### **Unit 2**

**8**

Materials and finishes used in green buildings – Bamboo, straw, wood, dimension stone, Recycled stone, non-toxic metals, Earth blocks-compressed, rammed, baked; vermiculture, flax, linen, sisal, wood fibers, cork, coconut ,polyurethane block. Market survey and documentation.

#### **Unit 3**

**8**

Green building practices and technologies. Roof, walls, floors – electrical, plumbing, windows, and doors, heating, ventilation and air conditioning (HVAC), insulation, Interior finishes, landscaping.

#### **Unit 4**

**8**

Design furniture for residence/commercial building using recycled materials and finishes.

#### **References**

1. DiesenDorf, Mark, Greenhouse Solutions with Sustainable Energy, 2007.
2. Faulkner R, and Faulkner. S, Inside Today’s Home, Rinehart Publishing House, New York, 1987.
3. Rai G D, Solar Energy Utilization, Khanna Publishers, Delhi, 1996.
4. Riggs J R, Materials and Components of Interior Design, Regents Hall, New Jersey, 1992.
5. Rao M P, Interior Design, Principles and Practice, Standard Publishers, Delhi, 1998.

## IV Semester

### ELECTIVE 1 - INTERIOR DESIGN JOURNALISM

(Practical)

**MID 4.4**

**32 Practical of 4 Hrs. Each**

**Objectives:**

- Help in understanding the importance of journalism in interiors for various types of projects
- To learn to write and publish articles on various subjects in interior design or subjects related to interior design

**Unit 1**

**8**

Importance of interior journalism - Meaning and importance, ethics in journalism - Accuracy, independence, impartiality, humanity and accountability. Basic writing and communication skills needed for journalism- objectivity, emphasis on research, audience focus, communication skills, editorial detail, idea formulation and versatility. Understanding writing features- articles of interiors, blogs, architectural coverage, design updates, technology in interiors.

**Unit 2**

**8**

Journalism techniques - Features and editorial writing- audience, lead writing, captions, inverted pyramid, headlines, photographs and illustrations, interviews/research. Page layouts - learning to use illustrations and photographs, captions, headlines and body copy for double page spreads. Case study - requirements of a case study - environment and micro climate, user behavior, space enhancement, form and function, circulation, structural details, building services and design detailing. Analysis of interior design with layouts, aesthetics, concept development – design principles, visual artistic effect, perspective styling and color perspective.

**Unit 3**

**8**

Application of layout, captions, photographs and body copy and prepare a double paged spread for an advertisement using these developed concepts.

**Unit 4**

**8**

Case study on a residential/ commercial interior with support of photographs.

**References**

1. Binggeli, Corky. Materials for Interior Environments, John Wiley & Sons, 2008.
2. Gauzin-Mueller, Dominique, and Nicolas Favet, Sustainable Architecture and Urbanism, Concepts Technologies, Springer Science & Business Media, 2002.
3. Giudice, Fabio, Product design for the Environment: A Life Cycle Approach, CRC Press, 2006.
4. Martha Maeda, The Complete Guide to Green Building & Remodeling Your Home, AtlanticPub. Co. 2011.
5. Sassi P, Strategies for Sustainable Architecture, Taylor and Francis, New York, 2006.
6. Spiegel, Ross, Green Building Materials: A Guide to Product Selection and Specification, John Wiley & Sons, 2010.
7. Yudelso, Jerry. The Green Building Revolution, Island Press, 2010.



## IV Semester

### ELECTIVE 2 - PRODUCT DESIGN

(Practical)

**MID 4.4**

**32 Practical of 4 Hrs. Each**

#### **Objectives:**

- To learn and understand the various aspects of interior product design.
- To help in preparing a product to be used in interior designing using skills and technical knowledge

#### **Unit 1**

**8**

Product design - Introduction, need, importance, elements of product design- functional use of the product, outward appearance, design and quality delivered to customers. Types of design products - accessories, furniture, flooring, lighting, movable walls and wall treatments. Role of interior product designer- educational requirement and scope of work.

#### **Unit 2**

**8**

Product design process - Analysis, concepts and synthesis, factors and considerations affecting product design- cost, ergonomics, materials, customer requirement, company identity, aesthetics, fashion trends, cultural, functional and environmental, appearance, maintenance. Principles of product design - user centric, theme, metaphor, contemporary trends, fabrication and proto typing, techniques, material & processes employed as per industry standards, design for sale and manufacture

#### **Unit 3**

**8**

Case study on interior product design in a commercial establishment, design an accessory for an interior.

#### **Unit 4**

**8**

Plan and design the structure of movable wall/ wall treatments/ lighting and report on latest trends in interior design products.

#### **References**

1. <https://www.logoworks.com/importance-product-design/>
2. <https://www.deniseanne.com/blog/the-3-key-elements-of-product-design>
3. <https://www.theartcareerproject.com/careers/product-design/>
4. <https://www.cadcrowd.com/product-design>

## IV Semester

### ELECTIVE 3 - FURNITURE DESIGN

(Practical)

**MID 4.4**

**32 Practical of 4 Hrs. Each**

#### **Objectives:**

- To learn the importance of furniture design in interiors and their area of application.
- To design and prepared detailed drawing of various furniture used in residential or commercial projects.

<b>Unit 1</b>	<b>8</b>
Designing of furniture- computer table with chair.	
<b>Unit 2</b>	<b>8</b>
Design an accessory for an interior.	
<b>Unit 3</b>	<b>8</b>
Designing of furniture - sofa.	
<b>Unit 4</b>	<b>8</b>
Report on latest trends in furnitures.	

#### **References**

1. Bradley Quinn, Mid-Century Modern, Interiors, Furniture, Design Details, Conran Octopus Interiors, 2006.
2. Jim Postell, Furniture Design, Wiley Publishers, 2007.
3. John.F.Pile, Interior Design, H. N. Abrams, 2<sup>nd</sup> edition, 1995.
4. Robbie. G. Blakemore, History of Interior Design and Furniture: From Ancient Egypt to Nineteenth- CenturyEurope, Wiley publishers, 2005.

**IV Semester**  
**PORTFOLIO DEVELOPMENT**  
**(Practical)**

**MID 4.5**

**16 Practical of 4 Hrs. Each**

**Objectives:**

- To help in creating a portfolio using various techniques and concepts
- To impart knowledge about the importance of portfolio and its elements and also to understand various media to create a portfolio

**Unit 1** **4**

Organizing from concept to process - Inventory, concept sketches, green design, 3D interior space, designing with typography, visualization and layout, road map, concept lead juggling.

**Unit 2** **4**

Digital presentations - Design thinking, capture with purpose, materials, media, lighting, interior setup, strategies, creating digital images, editing, designing the layout, final thoughts.

**Unit 3** **4**

Research and written communication - Resume and cover letter, development of portfolio, design statement, concept boards, transitions and experiences.

**Unit 4** **4**

Portfolio as a tool - Research, initial discussion, process and presentation, development of detailed final portfolio with URL Development of model, materials, techniques and finishing of the model.

**References**

1. Amy Will banks, Nancy Oxford, Dana Miller, Textile for Residential and Commercial Interiors, Fairchild Books, 4th revised edition, 2014.
2. Harold Linton & William Engel, Portfolio Design for Interiors, Bloomsbury Academic, USA, 2017.
3. Maureen Mitton, Portfolio for Interior Designers, John Wiley & Sons, 1st edition, 2010.
4. Maureen Mitton, Residential Interior Design: A guide to planning spaces, Wiley Publishers, 3<sup>rd</sup> edition, 2016.
5. Maureen Mitton, Interior Design Visual Presentation, Wiley Publisher, 5th edition, 2018.

## IV Semester

### INTERIOR DESIGN STUDIO IV

(Practical)

**MID 4.6**

**16 Practical of 4 Hrs. Each**

**Objectives:**

- It helps in understanding the process involved in full-fledged interior projects
- It develops skills and work culture in handling interior design projects

**Unit 1**

**3**

Minor project - Complete design process - literature study, case study, site analysis, governing bylaws, area calculation, bubble and circulation diagram, block diagram adjacency matrix for a conference/convention hall

**Unit 2**

**5**

Development of a concept, plan, section, elevation, working drawing, services and 3D model for a conference/convention hall

**Unit 3**

**3**

Major project - Complete design process - literature study, case study, site analysis, governing bylaws, area calculation, bubble and circulation diagram, block diagram adjacency matrix for a MNC/Architect office.

**Unit 4**

**5**

Development of a concept, plan, section, elevation, working drawing, services and 3D model for a MNC/architect office

**IV Semester**  
**PROJECT WORK**

**MID 4.7**

Students have to undertake projects in the relevant areas of interior design and decoration. At the end of the second semester, students have to submit project proposal for approval. The project work shall be carried out during the III and IV Semesters under the supervision of the approved guide. Two copies of the project reports are to be submitted to the college through the guide before the commencement of IV Semester examination.