

# IKG PUNJAB TECHNICAL UNIVERSITY

BACHELOR OF VOCATIONAL-(B.VOC)

INTERIOR DESIGN

2022 SCHEME

## 1<sup>ST</sup> Semester Study Scheme

TOTAL CREDIT – 22  
TOTAL CONTACT HOURS- 24

Course Code	Course Name	Component	Contact Hours			Total Marks		Credits	Univ. Exam (Hours)
			L	T	P/S	internal	external		
BVID101-22	Interior Design-I	Skill	1	0	3	60	40	4	04 +Ext Viva Voce
BVID102-22	Technical Drawing-I	Skill	1	0	2	100	-	3	No Exam
BVID103-22	Graphics-I	Skill	1	0	1	60	40	2	03
BVID104-22	Workshop-I	Skill	1	0	1	100	-	2	No Exam
BVID105-22	Construction & Material Lab- I	Skill	1	0	3	60	40	4	03
BTHU101-18	Communicative English-I	Generic	2	0	0	40	60	2	03
BTHU102-18	Communicative Skill Lab-I	Skill	0	0	2	60	40	1	03
HSMC122-18	Human Value and Professional Ethics	Generic	1	1	0	40	60	2	03
BVID106-22	Computer Application-I	Skill	1	0	2	60	40	2	No Exam
TOTAL			9	1	14			22	

27<sup>th</sup> Dec 2022

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ.Exam (Hours)
		L	S	INT.	EXT.		
<b>BVID 101-22</b>	<b>Interior Design-I</b>	<b>1</b>	<b>3</b>	<b>60</b>	<b>40</b>	<b>4</b>	<b>04+Ext Viva</b>
<b>Course Objective:</b> <ul style="list-style-type: none"> <li>To get the students interested in and to familiarize them with the basic concepts of Design.</li> <li>To develop the ability to translate principle of design into Design solution.</li> </ul>							
<b>Syllabus:</b> <p>Introduction, Objectives, Elements, Principles, Scale and proportion in basic design  2D and 3D compositions with basic geometric shapes and forms, color, texture and pattern.  Anthropometrics, scale and proportions, followed by exercises- residential spaces with furniture layout.</p>							
<b>Course Outcomes:</b> <p>Understand &amp; will gain a fundamental knowledge of design and its basic principles.  Understand the skill required to interpret a work of design and to evaluate, identify and analyze artistic expression of forms.  Understand the relationship between human activities and Space.</p>							
<b>Teaching Methodology</b> <p>Design faculty should encourage and motivate the students for live projects/ case studies of their immediate surroundings. (Identifying design principles and Anthropometrics).  Evaluation self Study and Continuous assessment of sessional work in form of sketches, scaled drawings, study models in various materials etc.</p>							
<b>Guidelines for Paper Setter</b> <p>The examiner will set two questions and students are required to attempt any one question. Composition based on internal space planning such as Individual rooms (Living/ Dining not less than 25.00 Sq.mts &amp; Kitchen not less than 12.00 Sq.mts.) of an apartment and is expected to present the study through detailed measured drawings and sketches.</p>							
<b>Evaluation Methodology</b> <p>The evaluation is to be done through Viva - voce conducted at the institute level by Internal / External jury members appointed in consultation with the university from the appointed panel list of examiners.  The answer sheet shall be retained at the institute after the exam for the viva voce.</p>							
<b>References:</b> <ol style="list-style-type: none"> <li>1. V.S.Pramar, Design Fundamentals in Architecture, Somaiya Publications Private Ltd., New Delhi, 1973.</li> <li>2. Francis D.K.Ching, Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York, 1979.</li> <li>3. Structure in Nature- Strategy for Design – Peter Pearce</li> <li>4. Patterns in Nature- Peter Streens</li> </ol>							

	Course Name	Contact Hours		Total Marks		Credits	Univ. Exam (Hours)
		L	S	INT	EXT.		
<b>BVID102-22</b>	<b>Technical Drawing - I</b>	<b>1</b>	<b>2</b>	<b>100</b>	<b>-</b>	<b>3</b>	No exam Internal Viva on portfolio

**Course Objective:** The objective is to make the students familiarize with good drafting and lettering techniques use in making drawings. To gain the basic knowledge for preparing the design drawings by learning about the orthographic projections of simple geometric forms and representation of 3-D & 2-D forms.

### Syllabus:

#### Part-A

- Drafting instrument and their uses. Sheet layout
- Drafting – Technique & its principles
- Line - Types of Lines and Dimensioning of line
- Lettering - free hand & block lettering
- Scales – Different types of scale and its uses in the Technical Drawing.

#### Part -B

Orthographic Projections - Point, Lines, Plane and Solid in simple positions in the First Quadrant. Section of Solids of simple forms-Cube, Cuboid, Pyramid and Cylinder and cone.

#### Part-C

- Introduction to Isometric projection,
- Introduction to Perspective (On Point and Two Point)

### Course Outcomes:

- Gain the comprehensive understanding of the fundamental techniques of technical drawing and its representation.
- Attain the knowledge to visualize the geometrical forms through plans, elevations and sections.

### Teaching Methodology

Emphasis should be laid on understanding the concepts through 3D demonstrations of geometrical shapes and forms.

### Guidelines for Paper Setter

No Exam. In the end of the semester internal jury Viva-voce to be conducted (the jury comprises of the subject in charge and the HOD nominee)

### References:

1. Engineering Drawing – N.D. Bhatt
2. Engineering Graphics – K.R. Mohan
3. Engineering Drawing – R.K. Dhawan

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ.Exam (Hours)
		L	S	INT.	EXT.		
<b>BVID103-22</b>	<b>Graphics-I</b>	<b>1</b>	<b>1</b>	<b>60</b>	<b>40</b>	<b>2</b>	<b>03</b>
<b>Course Objective:</b> The objective is to make the students familiar with visual arts and its basic principles and to explore the potential of Pencil of different grades and Colors as a powerful tool of Graphic Communication.							
<b>Syllabus:</b>							
<p><b>(Pencil as tool of drawing)</b></p> <ul style="list-style-type: none"> <li>• Free hand line-work with different strokes/grades in pencil.</li> <li>• Effect of light and shade on simple geometrical solids and staircase, etc.</li> <li>• Freehand (proportionate) sketching of human figures, different types of vegetation, different transport modes and buildings etc.</li> <li>• Sketching with pen and ink of various scenes showing textures of different materials (such as bricks, stones, grass, glass, timber, marble, digital surface, fabric etc.)</li> </ul> <p><b>(Rendering with color)</b></p> <ul style="list-style-type: none"> <li>• Color Rendering of various scenes such as Mall entrance Scene, Hotel Lobby, café scene, etc.</li> <li>• Live sketching – indoor and outdoor area</li> </ul>							
<b>Course Outcomes:</b> <ul style="list-style-type: none"> <li>• Gain a fundamental knowledge of perspective and proportions of different elements in interior design.</li> <li>• Understanding the principles of Graphics.</li> </ul> Achieve a comprehensive understanding of presentation techniques.							
<b>Teaching Methodology</b>							
Workshops related to pencil rendering will also be organized, highlighting its technique and style. The students must be encouraged to appreciate the natural/man- made landscape and to understand the interrelationship between them.							
<b>Guidelines for Paper Setter</b>							
Total five questions are to be set and students are required to attempt three questions.							
<b>References:</b>							
1. <b>Graphic Illustrations in Black and White</b> by Jaccueline, Design Press, New York, 1991 2. <b>Architectural Rendering</b> , Crowe Philip- Rofovision S.A.Switzerland, 1991 3. <b>Rendering with Pen &amp; Ink</b> , Robert W. Gill, Thames & Hudson London, 2008.							

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ. Exam (Hours)
		L	P	INT.	EXT.		
<b>BVID104-22</b>	<b>Workshop - I</b>	<b>1</b>	<b>1</b>	<b>100</b>	<b>0</b>	<b>2</b>	<b>No exam – Internal Viva</b>
<b>Course Objective:</b> The students will gain basic hands-on experience and fundamental knowledge in carpentry and model making.							
<b>Syllabus:</b> <ul style="list-style-type: none"> <li>Types of timber, characteristics and sizes.</li> <li>Introduction to different tools for carpentry.</li> <li>Carpentry –Introducing the techniques of planning, chiseling &amp; different types of timber joints Hotel Lobby, café scene, etc.</li> <li>Preparation of wooden base for model making</li> <li>Prepare a Working block model and use different furniture with card board/mount board/sun board etc. to complete the same (practice minimum 3 scales and different materials)</li> <li>Form Work - Use of Clay, Brick and Soap for creating three dimensional forms in space.</li> <li>Brick Masonry – Small brick masonry construction models for understanding of various bonds, jallies etc.</li> </ul>							
<b>Course Outcomes:</b> <ul style="list-style-type: none"> <li>Gain the basics knowledge of the carpentry tools and its joints.</li> <li>Attain skill to work with different materials for making model.</li> </ul>							
<b>Teaching Methodology</b> The faculty is required to give a complete demonstration of using carpentry tools and making timber joints and cutting techniques of different boards for model making.							
<b>Guidelines for Paper Setter</b> In the end of the semester internal jury Viva-voce to be conducted (the jury comprises of the subject in charge and the HOD nominee)							
<b>References:</b>							
Building construction		W.B. McKay vol. 1 to 4					
Construction of buildings.		R.Barry vol. 1 to 4					
Construction technology		Chudley vol. 1 to 4					
Building Construction illustrated		Ching Francis D.K.					

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ.Exam (Hours)
		L	S	INT.	EXT.		
<b>BVID105-22</b>	<b>Construction and material lab-I</b>	<b>1</b>	<b>3</b>	<b>60</b>	<b>40</b>	<b>4</b>	<b>03</b>

**Course Objective:** The objective is to introduce the elementary building materials and their applications. To familiarize students with construction details of various components of construction

### **Syllabus:**

#### **Part-A**

##### **Introduction to bricks**

- Brief introduction to mud, sand, clay, surkhi, aggregates, lime and cement etc.
- Different types of mortar like mud mortar, lime mortar, cement mortar etc.- their properties and uses
- Classification & types, uses, sizes and properties of bricks
- Introduction to various components of a building (sub-structure to super-structure), their structural and functional roles.
- Brick masonry –Plan and elevation of English bond (1 brick Th. wall)
- Brick jalli-design and construction details

#### **Part-B**

##### **Introduction to stones**

- Classification & types, uses, sizes and properties of Stone available in India
- Stone – dressing, and deterioration and preservation measures.
- Application properties and visual check for different types of stone.
- Properties and uses of artificial stone.
- Stone masonry of various types
- Lintels and skill level details
- Coping and threshold details.
- Arches-Flat, Segmental and Semi-circular

#### **Course Outcomes:**

- Understand the properties, types, uses and application of various building materials i.e., brick, lime, cement, mortar, sand, stones etc.
- Gain the fundamental knowledge of building Construction especially in brick and stone.

#### **Teaching Methodology**

The assigned Faculty is advised to undertake 2-3 site visits for better understanding of Brick/Stone bonds, Brick Jalli and conducting market survey for providing practical exposure.

#### **Guidelines for Paper Setter**

Total eight questions are to be set, 05 question from part-A and 03 question from Part-B & students are required to attempt total four Questions in all, 03 from Part -A and 01 from part B.

#### **References:**

Building construction	W.B. McKay vol. 1 to 4
Construction of buildings.	R. Barry vol. 1 to 4
Construction technology	Chudley vol. 1 to 4
Building Construction illustrated	Ching Francis D.K.
Elementary building Construction	Michell
Engineering materials	Rangwala
National Building Code	

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ. Exam (Hours)
		L	P	INT.	EXT.		
<b>BTHU101-18</b>	<b>Communicative English</b>	<b>2</b>	<b>0</b>	40	60	2	03

**Course Objective:** • The student will gain basic hands-on experience and fundamental knowledge English and become the independent users of English Language.

**Syllabus:**

**Vocabulary Building & Basic Writing Skills**

- The concept of Word Formation
- Root words from foreign languages and their use in English
- Acquaintance with prefixes and suffixes from foreign languages in English to
- Form derivatives.
- Synonyms, antonyms, and standard abbreviations.
- Sentence Structures
- Use of phrases and clauses in sentences
- Importance of proper punctuation
- Creating coherence
- Organizing principles of paragraphs in documents
- Techniques for writing precisely

**Identifying Common Errors in Writing**

- Subject-verb agreement
- Noun-pronoun agreement
- Misplaced modifiers
- Articles
- Prepositions
- Redundancies
- Clichés

**Mechanics of Writing**

- Writing introduction and conclusion
- Describing
- Defining
- Classifying
- Providing examples or evidence

**Writing Practices**

- Comprehension
- Précis Writing
- Essay Writing
- Business Writing-Business letters, Business Emails, Report Writing, Resume/CV, Architectural Report Writing



<b>Course Outcomes:</b> <ul style="list-style-type: none"> <li>• Have proficiency in reading &amp; listening, comprehension, writing and speaking skills.</li> <li>• Understand spoken and written English language, particularly the language of their chosen technical field.</li> <li>• Converse fluently.</li> <li>• Produce clear and coherent texts on their own.</li> </ul>
<b>Guidelines for Paper Setter</b>
<p>One objective type compulsory question to be set covering the entire syllabus in addition to eight others. The students are required attempting total 05 questions</p>
<b>References:</b>
<b>Suggested Readings:</b> <ul style="list-style-type: none"> <li>(i) Fundamentals of Technical Communication ,Meenakshi Raman &amp; Sangeeta Sharma,Oxford university Press.</li> <li>(ii) Effective business Communication,Asha Kaul, Prentice Hall of India.</li> <li>(iii) Communication Skills For Engineers, Sunita Mishra &amp; C. Mualikrishna, Pearson Education.</li> <li>(iv) Effective Technical Communication, M. Ashraf Rizvi, McGraw Hill</li> <li>(v) Remedial English Grammar. F.T. Wood. Macmillan.2007</li> <li>(vi) On Writing Well. William Zinsser. Harper Resource Book. 2001</li> <li>(vii) Study Writing. Liz Hamp-Lyons and Ben Heasley. Cambridge University Press. 2006</li> <li>(Viii) Communication Skills. Sanjay Kumar and PushpLata. Oxford University Press. 2011.</li> </ul>

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ. Exam (Hours)
		L	P	INT.	EXT.		
<b>BTHU102-18</b>	<b>Communicative Skill Laboratory</b>	<b>0</b>	<b>2</b>	<b>60</b>	<b>40</b>	<b>2</b>	No exam

**Course Objective:** The objective of the course is to help the students become the independent users of English language.

### **Syllabus:**

#### **Interactive Practice session in Language Lab**

- Listening Comprehension
- Self-Introduction, Group Discussion and Role Play
- Common Everyday Situations: Conversations and Dialogues
- Communication at Workplace
- Interviews
- Formal Presentations

#### **Course Outcomes:**

- Students will acquire basic proficiency in listening and speaking skills.
- Students will be able to understand spoken English language, particularly the language of their chosen technical field.
- They will be able to converse fluently
- They will be able to produce on their own clear and coherent texts.

#### **References:**

##### **Suggested Readings/Books**

- Practical English Usage. Michael Swan. OUP. 1995.
- Handbook of Practical Communication. Chrissie Wright. Jaico Publishers.
- Effective Technical Communication, M.Ashraf Rizvi Tata McGraw Hills.
- Spoken English , R.K. Bansal & J.B. Harrison Orient Longman.
- A Practical Course in English Pronunciation, J.Sethi, Kamlesh Sadanand & D. V. Jindal , Prentice Hall of India Pvt. Ltd. New Delhi.
- A Text book Of English Phonetics for Indian Students T. Balasubramaniam, Macmillan
- English Pronouncing Dictionary ,Daniel Jones, Current Edition with CD
- Exercises in Spoken English. Parts. I-III. CIEFL, Hyderabad. Oxford University Press

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ.Exam (Hours)
		L	T	INT.	EXT.		
<b>HSMC122-18</b>	<b>Human Values and Professional Ethics</b>	<b>1</b>	<b>1</b>	<b>40</b>	<b>60</b>	<b>2</b>	<b>03</b>

**Course Objective:** The objective is to make the students familiar with visual arts and its basic principles and to explore the potential of Pencil of different grades and Colored pencils as a powerful tool of Graphic Communication.

### Syllabus:

#### Course introduction-Need, Basic guidelines, Content for value education

- Self exploration- What is it?- Its content and process: Natural Acceptance and Experiential validation – as the process for self exploration.
- Continuous happiness and prosperity- a look at basic human aspirations
- Right understanding, relationship and physical facility- the basic requirements for fulfillment of aspirations of every human being with their priority.
- Understanding happiness and prosperity correctly.

Method to fulfill the above human aspirations: understanding and living in harmony at various levels.

#### Understanding Harmony in the Human Being - Harmony in Myself!

- Understanding human being as a co-existence of the sentient 'I' and the material 'Body'
- Understanding the needs of Self('I') and 'Body' - happiness and physical facility
- Understanding the Body as an instrument of 'I' (I being the doer, seer and enjoyer)
- Understanding the characteristics and activities of 'I' and harmony in 'I'
- Understanding the harmony of I with the Body: Sanyam and Health; correct appraisal of Physical needs, meaning of Prosperity in detail
- Programs to ensure sanyam and Health.
- Include practice sessions to discuss the role others have played in making material goods available to me. Identifying from one's own life. Differentiate between prosperity and accumulation. Discuss program for ensuring health vs. dealing with disease.

Include practice sessions to discuss natural acceptance in human being as the acceptance for living with responsibility (living in relationship, harmony and co- existence) rather than as arbitrariness in choice based on liking-disliking.

#### Understanding Harmony in the Family and Society- Harmony in Human-Human Relationship

- Understanding values in human-human relationship; meaning of Justice (nine universal values in relationships) and program for its fulfillment to ensure mutual happiness; Trust and Respect as the foundational values of relationship.
- Understanding the meaning of Trust; Difference between intention and competence
- Understanding the meaning of Respect, Difference between respect and differentiation; the other salient values in relationship.

- .Understanding the harmony in the society (society being an extension of family): Resolution, Prosperity, fearlessness (trust) and co-existence as comprehensive Human Goals.
- Visualizing universal harmonious order in society-Undivided Society Universal Order- from family to world family.

Include practice sessions to reflect on relationships in family, hostel and institute

Extended family, real life examples, teacher-student relationship, goal of education as etc. Gratitude as a universal value in relationships. Discuss with scenarios. Elicit examples from students' lives

### **Understanding Harmony in the Nature and Existence – Whole Existence as Coexistence**

Holistic perception of harmony at all levels of existence.

Include practice sessions to discuss human being as cause of imbalance in nature (film “Home” can be used), pollution, depletion of resources and role of technology etc.

### **Implications of the above Holistic Understanding of Harmony on Professional Ethics**

- Competence in professional ethics: a. Ability to utilize the professional competence for augmenting universal human order b. Ability to identify the scope and characteristics of people friendly and eco -friendly production systems, c. Ability to identify and develop appropriate technologies and management patterns for above production systems.
- Case studies of typical holistic technologies, management models and production systems.
- Strategy for transition from the present state to Universal Human Order: a. At the level of individual: as socially and ecologically responsible engineers, technologists and managers b. At the level of society: as mutually enriching institutions and organizations. Sum up.

Include practice Exercises and Case Studies will be taken up in Practice (tutorial) Sessions eg. To discuss the conduct as an engineer or scientist etc.

### **Course Outcomes:**

By the end of the course, students are expected to become more aware of themselves, and their surroundings (family, society, nature): they would become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind. They would have better critical ability. They would also become sensitive to their commitment towards what they have understood (human values, human relationship and human society)

### **References:**

1. Human Values and Professional Ethics by R R Gaur, R Sangal, G P Bagaria, Excel Books, New Delhi, 2010.
2. The Story of Stuff (Book).
3. The Story of My Experiments with Truth - by Mohandas Karamchand Gandhi

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ.Exam (Hours)
		L	P	INT.	EXT.		
<b>BVID106-22</b>	<b>Computer Application-I</b>	<b>1</b>	<b>2</b>	<b>60</b>	<b>40</b>	<b>2</b>	<b>No Exam-Internal Viva Voce</b>
<b>Course Objective:</b> To make students aware of the role and importance of Computers in the field of Interior Design.							
<b>Syllabus:</b>							
<ul style="list-style-type: none"> <li>• Introduction of computers and Operating Systems, Brief historical background of computer development Introduction to hardware and general idea of their use, Basics of handling and operating computers, familiarizing the use of scanners, printers plotters etc .Familiarizing with data storage and retrieval creation of directory and files</li> <li>• Introduction to MS Office tools (PowerPoint presentation, word file/excel etc.)-basic templates for creating text documents, editing, formatting, dictionary and thesaurus, page layout, fonts, inserting tables and images and annotation in MS Office software</li> <li>• Image processing: basic image sourcing, editing and insertion for desktop publishing in Adobe Photoshop or similar software.</li> </ul>							
<b>Course Outcomes:</b>							
At the end of the course, the students will be able to understand basics of Computers Software, operating systems and operative languages.							
<b>Teaching Methodology</b>							
Emphasis should be laid on developing the skill of using MS Office in detail.							
<b>Guidelines for Paper Setter</b>							
In the end of the semester internal jury Viva-voce to be conducted (the jury comprises of the subject in charge and the HOD nominee)							
<b>References:</b>							

# IKG PUNJAB TECHNICAL UNIVERSITY

## BACHELOR OF VOCATIONAL-(B.VOC) INTERIOR DESIGN

### 2022 SCHEME

#### 2<sup>nd</sup> Semester Study Scheme

TOTAL CREDIT – 18

TOTAL CONTACT HOURS- 22

Course Code	Course Title	Content	Load Allocations				Marks %	Credits	Duration of Univ. Exam/ Viva-Voce
			L	T	P/S	Total			
BVID- 201-22	Interior Design – II	Skill	1	-	4	05	60:40	5	04 + External Viva Voce
BVID- 202-22	Interior Construction and material lab-II	Skill	1	-	3	03	60:40	4	03
BVID- 203-22	History of Interior Design - I	Skill	1	1	-	02	40:60	2	03
BVID- 204-22	Workshop – II	Skill	-	-	2	02	60:40	1	Int. Viva-Voce
BVID- 205-22	Environmental Science	Generic	1	1	-	02	40:60	2	03
BVID- 206-22	Computer Application-II	Skill	1	-	2	03	60:40	2	Int. Viva-Voce
BVID- 207-22	Furnishing & Fitting	Skill	1	1	-	02	40:60	2	03
BVID- 208-22	Mentoring & Professional Development - I	Generic	-	-	2	02	S/NS	Non-credit	Int. Viva-Voce
	<b>Total</b>		6	3	13	22		18	

**Subject Code: BVID- 201-22**  
**Subject Name: Interior Design – II**

<b>Programme:</b> B.Voc Interior Design	<b>L: 1 T: 0 S: 4</b>
<b>Semester:</b> 2	<b>Teaching Hours: 13(L)+52(S)</b>
<b>Theory/Practical:</b> Practical	<b>Credits: 5</b>
<b>Internal Marks:</b> 60	<b>Percentage of Numerical/Design Problems: NA</b>
<b>External Marks:</b> 40	<b>Duration of End Semester Exam(ESE): 4hours</b>
<b>Total Marks:</b> 100	<b>Elective Status: NA</b>

**Prerequisites:** Basics of Interior Design theory

Additional Material Allowed in ESE: NA (Viva will be based on the design submission)

**The end semester examination answer/drawing sheets shall be retained at the examination center for external Viva-voce Examination.**

**On Completion of the course, the student will have the ability to:**

<b>CO#</b>	<b>Course Outcomes</b>
1	Understand & will gain a fundamental knowledge of design and its basic principles. <b>5+12(S)</b>
2	Understand the skill required to interpret a work of design and to evaluate, identify and analyze artistic expression of forms. <b>4 +20 (P)</b>
3	Understand the relationship between human activities and Space. <b>4 +20 (S)</b>

**Detailed Contents:**

- Plan and explore the interior design solution with thrust on thematic interior planning, levels, circulation, color scheme, natural and artificial light, display, exposure and implementation of latest technology in interiors
- Studio apartment for artist/architect/model maker/interior designer/sculptor
- Farm house/ Villa design

**References:**

- 1 V.S.Pramar, Design Fundamentals in Architecture, Somaiya Publications Private Ltd., New Delhi, 1973.
2. Francis D.K.Ching, Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York, 1979.
- 3 Structure in Nature- Strategy for Design – Peter Pearce

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject .

**Subject Code:** BVID- 202-22  
**Subject Name:** Interior Construction and material lab-II

<b>Programme:</b> B.Voc	<b>L: 1 T: 0 S: 3</b>
<b>Semester:</b> 2	<b>Teaching Hours:</b>
<b>Theory/Practical:</b> Practical	<b>Credits:</b> 4
<b>Internal Marks:</b> 60	<b>Percentage of Numerical/Design Problems:</b> NA
<b>External Marks:</b> 40	<b>Duration of End Semester Exam(ESE):</b> 3 hours
<b>Total Marks:</b> 100	<b>Elective Status:</b> NA

**Prerequisites:** Basics of Building Construction and materials

**Additional Material Allowed in ESE:** NIL

**On Completion of the course, the student will have the ability to:**

<b>CO#</b>	<b>Course Outcomes</b>
1.	Understand the properties, types, uses and application of various building materials
2.	Gain the fundamental knowledge of Constructing doors, windows and partitions

**Detailed Contents:**

**Timber -Doors, Windows & Partitions**

- Timber: Sources, its classification, characteristics, defects, Preservation, treatment measures and Uses of Timber in building construction.
- Industrial timber products and their applications- plywood, particleboard, laminated board, block board and battenboard etc.
- Design and construction details of different type of timber Doors and windows (considering its Joints and Joinery details)
- Design and construction details of different type of timber partitions ( fixed, sliding and sliding and folding)

**Waterproofing and Surface finishes**

- Water proofing materials (liquid, semi liquid and solid) – Composition, Properties, Applications.
- Surface finishes: White wash, Distemper, Paints and Varnishes- Types, Applications, Suitability, Advantages and Disadvantages.

**Vertical Transportation**

- Staircase, Lifts, Escalators, Ramps and Vertical conveyors

**References:**

Building construction W.B. McKay vol. 1 to 4 Construction of buildings. R.Barry vol. 1 to 4 Construction technology Chudley vol. 1 to 4 Building Construction illustrated Ching Francis D.K. Elementary building Construction Michell Engineering materials Rangwala  
National Building Code

**Note :** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.



**Subject Code: BVID- 203**  
**Subject Name: History of Interior Design - I**

<b>Programme:</b> B.Voc	<b>L: 1 T:1 P:0</b>
<b>Semester:</b> 2	<b>Teaching Hours:26(L)</b>
<b>Theory/Practical:</b> Theory	<b>Credits: 2</b>
<b>Internal Marks:</b> 40	<b>Percentage of Numerical/Design Problems: NA</b>
<b>External Marks:</b> 60	<b>Duration of End Semester Exam(ESE): 3hours</b>
<b>Total Marks:</b> 100	<b>Elective Status: NA</b>

**Prerequisites:** Basics of History

**Additional Material Allowed in ESE:** NIL

**On Completion of the course, the student will have the ability to:**

<b>CO#</b>	<b>Course Outcomes</b>
1.	Develop a holistic approach to interior design.
2.	To help the student understand the designs from Prehistoric Period to the Middle Ages.
3.	To know more on the Modern Movements in Interior design from the beginnings of 20th century.

**Detailed Contents:**

- Introduction to History and its significance in Interior Design.
- Ancient Egyptian interior elements and its characteristics and materials.
- Greek characteristics, influence, its importance and types.
- Roman interior elements, Romanesque furniture, Gothic style of early medieval period.
- Renaissance period - Baroque characteristics and types of furniture, interior details and neoclassical, characteristics.
- Interior design development in England - Classification of English furniture indoor, early street, early Georgian, age of Greek designers, Victorian style, the arts and craft movement and designs.

**References:**

Fletcher, Banister., "A History of Architecture", University of London, The Antholone Press, 1986.  
Fergusson, James., Willey, John, "A History of Architecture", Low Price Publication, 2012.

**Note:** The assigned Faculty is required to emphasis on understanding the influences of history in interiors with proper illustrations and provide updated references/E-resources related to the content of the subject.

**Subject Code:** BVID- 204-22  
**Subject Name:** Workshop – II

<b>Programme:</b> B.Voc	<b>L: 1 T:0 P:2</b>
<b>Semester:</b> 2	<b>Teaching Hours:26(P)</b>
<b>Theory/Practical:</b> Practical	<b>Credits:</b> 2
<b>Internal Marks:</b> 60	<b>Percentage of Numerical/Design Problems:</b> NA
<b>External Marks:</b> 40	<b>Duration of End Semester Exam(ESE):</b> Internal Viva-Voce
<b>Total Marks:</b> 100	<b>Elective Status:</b> NA

**Prerequisites:** Knowledge of different materials and tools to be used in model making

**Additional Material Allowed in ESE:** NIL

**On Completion of the course, the student will have the ability to:**

<b>CO#</b>	<b>Course Outcomes</b>
1.	Proficiency in handling various types of materials.
2.	Acquire skills in different types of model making

**Detailed Contents:**

- Working Product Design/ Sculptures with concept derivation using scrap, cloth, wire, paper, boards, ~~Plaster~~ of Paris, Wood,
- Preparation of wooden base for model making
- Prepare detail working model of the design project introduced in the semester detailing furniture, interior elements, landscaping elements etc. with card board/mount board/sun board etc.

**References:**

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code:** BVID- 205-22  
**Subject Name:** Environmental Science

<b>Programme:</b> B.Voc	<b>L: 1 T:1 P:0</b>
<b>Semester:</b> 2	<b>Teaching Hours:</b> 26(L)
<b>Theory/Practical:</b> Theory	<b>Credits:</b> 2
<b>Internal Marks:</b> 40	<b>Percentage of Numerical/Design Problems:</b> NA
<b>External Marks:</b> 60	<b>Duration of End Semester Exam(ESE):</b> 3hours
<b>Total Marks:</b> 100	<b>Elective Status:</b> NA

**Prerequisites:** General awareness

**Additional Material Allowed in ESE:** NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1	The students will apply interdisciplinary approach to understand key environmental issues and critically analyze them to explore the possibilities to mitigate these problems.
2	The students will gain practical knowledge by visiting wildlife areas, environmental institutes and various personalities who have done practical work on various environmental Issues.

**Detailed Contents:**

**Introduction**

- Introduction of Environment and related area (ecosystem, biodiversity, resources) Importance, Classification and Characteristics.
- Definition, scope, importance of various terminology (Environment, Ecosystem, Energy flow in ecosystem, ecological pyramids, ecological succession etc.)
- Understanding of major Ecosystem, - Forest, Grassland, Desert, Aquatic, Hill Area. Understanding of Biodiversity (importance, issues & types of biodiversity)
- Resources - Forest, Water, Mineral, Energy, Land (Role & Importance of each resource as well as associated problems)

**Environmental Pollution & Social Issues**

- Types, Causes, Effects & Control of Air, Water, Soil & Noise Pollution Nuclear hazards and accidents & Health risks Global Climate Change: Global warming, Ozone depletion, Acid rain, Melting of Glaciers & Ice caps, Rising sea levels Environmental disasters: Earthquakes, Floods, Cyclones, Landslides

**Biodiversity & its conservation**

- Types of Biodiversity: Species, Genetic & Ecosystem India as a mega biodiversity nation, Biodiversity hot spots and biogeographic regions of India Examples of Endangered & Endemic species of India, Red data book

**Field Work**

- Visit to a National Park, Biosphere Reserve, Wildlife Sanctuary Documentation & preparation of a Biodiversity (flora & fauna) register of campus/river/forest Visit to a local polluted site: Urban/Rural/Industrial/Agricultural Identification & Photography of resident or migratory birds, insects (butterflies) Public hearing on environmental issues in a village

**References:**

1. Bharucha, E. Text Book for Environmental Studies. University Grants Commission, New Delhi.
2. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.
3. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad – 380 013, India, Email: mapin@icenet.net (R)

4. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p
5. Clark R.S., Marine Pollution, Clarendon Press Oxford (TB)
6. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumbai, 1196p

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code:** BVID- 206-22  
**Subject Name:** Computer Application-II

<b>Programme:</b> B.Voc	<b>L: 1 T:0 P:2</b>
<b>Semester:</b> 2	<b>Teaching Hours:</b> 13(L)+26(P)
<b>Theory/Practical:</b> Practical	<b>Credits:</b> 2
<b>Internal Marks:</b> 60	<b>Percentage of Numerical/Design Problems:</b> NA
<b>External Marks:</b> 40	<b>Duration of End Semester Exam(ESE):</b> Internal viva voce
<b>Total Marks:</b> 100	<b>Elective Status:</b> NA

**Prerequisites:** Knowledge of MS-Office and role of softwares in interior designing

**Additional Material Allowed in ESE:** NIL

**On Completion of the course, the student will have the ability to:**

<b>CO#</b>	<b>Course Outcomes</b>
1.	Make 2D &3D presentations and interior drawings.

**Detailed Contents:**

- Introduction to Auto Cad, Basic commands like copy, paste, stretch, offset, move fillet, extend, trim and other 2D commands. Basic Text writing and dimensioning of the Plans
- Understanding of unit settings, scale, limits, line type, line weight, layers, colors, and print commands.
- Simple exercises of drawing/editing objects, text, dimensioning, making and inserting blocks and interior plans.
- Introduction to Google sketch-up and all the commands and developing the view of any project done in interior design subject.

**References:**

1. AutoCAD 2023 Instructor, Shawna Lockart 2023
2. AutoCAD 2024 for the Interior Designer, AutoCAD for Mac and PC, By [Dean Muccio](#)

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code:** BVID- 207-22  
**Subject Name:** Furnishing & Fitting

<b>Programme:</b> B.Voc	<b>L: 1 T:1 P:0</b>
<b>Semester:</b> 2	<b>Teaching Hours:</b> 13(L)+13(T)
<b>Theory/Practical:</b> Theory	<b>Credits:</b> 2
<b>Internal Marks:</b> 40	<b>Percentage of Numerical/Design Problems:</b> NA
<b>External Marks:</b> 60	<b>Duration of End Semester Exam(ESE):</b> 3hours
<b>Total Marks:</b> 100	<b>Elective Status:</b> NA

**Prerequisites:** Meaning of furnishing and process of conducting market surveys

**Additional Material Allowed in ESE:** NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Understand the practical application of different furnishings
2.	Select lighting fixtures and color schemes in different areas

**Detailed Contents:**

- **Soft furnishings-** Meaning and importance, Types of furnishings- carpets, rugs, cushion cover, slip cover. Window treatments- curtains, draperies, blinds and shades.
- **Accessories-** meaning, definition, need, types of accessories- functional, decorative, both functional and decorative.
- **Interior Lighting & its effects:** Concept, significance and Effect of color in the interiors and exteriors. Application of color harmonies and psychology in the interiors and exteriors.  
Importance of lighting, Sources — Natural and Artificial lighting, Types — based on material, reflection, architectural elements and uses. Economy in lighting, Psychological aspects of light, Glare - its types, causes and prevention.  
Lighting accessories — Selection of lamps and lighting fixtures, lighting for various areas and specific activities, modern features in lighting design. Principles of lighting.
- Study and Survey of rates, estimates and varieties of: Wood Finishes  
Laminates  
Paints  
Accessories and hardware  
Furnishings and Floor coverings (Soft) by visiting exclusive showrooms.

**References:**

1. Anne Marie Soto, "Quick and Easy Sewing for the Home Table Toppers", Rodale Press Inc., 1995. Diane Patrice, Tap Scott, "Curtains, Draperies and Shades", Lane, Menlo Park, California, 2000.
2. Katrin Cargill, "Cushions", Ryland Peters and Small, 1996.
3. Mary Neal, "Custom Draperies in Interior Design", Elsevier Science Ltd., 1982.
4. Sydney A Sykes, "Decorating English Country Styles", Webb and Bower, 1990

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code:** BVID- 208-22  
**Subject Name:** Mentoring & Professional Development - I

<b>Programme:</b> B.Voc	<b>L: 0 T:0 P:2</b>
<b>Semester:</b> 2	<b>Teaching Hours:26(P)</b>
<b>Theory/Practical:</b> Practical	<b>Credits:</b> Non-credit
<b>Internal Marks:</b> 50	<b>Percentage of Numerical/Design Problems:</b> NA
<b>External Marks:</b> NA	<b>Duration of End Semester Exam(ESE):</b> Internal viva voce
<b>Total Marks:</b> 50	<b>Elective Status:</b> NA

**Prerequisites:** Not Applicable

**Additional Material Allowed in ESE:** NIL

**The objective of mentoring will be development of:**

- Overall Personality
- Aptitude (Technical and General)
- General Awareness (Current Affairs and GK)
- Communication Skills
- Presentation Skills

The course shall be split in two sections i.e. outdoor activities and class activities.  
For achieving the above, suggestive list of activities to be conducted are:

**Part – A**  
**(Class Activities)**

1. Expert and video lectures
2. Aptitude Test
3. Group Discussion
4. Quiz (General/Technical)
5. Presentations by the students
6. Team building Exercises

**Part – B**  
**(Outdoor Activities)**

1. Sports/NSS/NCC
2. Society Activities of various students chapter i.e. ISTE, SCIE, SAE, CSI, Cultural Club, etc.

**Note:**

- Evaluation shall be based on rubrics for Part – A & B
- Mentors/Faculty incharges shall maintain proper record student wise of each activity conducted and the same shall be submitted to the department.

**IKG PUNJAB TECHNICAL UNIVERSITY**  
**BACHELOR OF VOCATIONAL-(B.VOC) INTERIOR DESIGN**  
**2022 SCHEME**

**3<sup>rd</sup> Semester Study Scheme**

**TOTAL CREDIT – 23**

**TOTAL CONTACT HOURS- 26**

Course Code	Course Title	Content	Load Allocations				Marks %	Credits	Duration of Univ. Exam/ Viva-Voce
			L	T	P/S	Total			
BVID- 301-22	Design Studio - III	Skill	1	0	4	05	60:40	<b>5</b>	04 + External Viva Voce
BVID- 302-22	Interior Building Construction & Materials-III	Skill	1	0	3	04	60:40	<b>4</b>	03
BVID- 303-22	History of Interior Design- II	Skill	2	1	0	03	40:60	<b>3</b>	03
BVID- 304-22	Interior Services	Skill	2	1	0	03	40:60	<b>3</b>	03
BVID- 305-22	Climate Responsive Indoor Environment control	Skill	2	1	0	03	40:60	<b>3</b>	03
BVID- 306-22	Computer Application-III	Skill	1	0	2	03	60:40	<b>2</b>	Int. Viva-Voce
BVID- 307A/B-22	Elective -I (Product/Furniture Design)	Skill	2	1	0	03	40:60	<b>3</b>	03
BVID- 308-22	Mentoring & Professional Development - II	Generic	-	-	2	02	S/NS	<b>Non-credit</b>	Int. Viva-Voce
	<b>Total</b>		<b>11</b>	<b>4</b>	<b>11</b>	<b>26</b>		<b>23</b>	



**Subject Code: BVID- 301-22**  
**Subject Name: Interior Design – III**

<b>Programme:</b> B.Voc Interior Design	L: 1 T: 0 S: 4
Semester: 3	Teaching Hours: 13(L)+52(S)
Theory/Practical: Studio	Credits: 5
Internal Marks: 60	Percentage of Numerical/Design Problems: NA
External Marks: 40	Duration of End Semester Exam(ESE): 4hours
Total Marks: 100	Elective Status: NA

**Prerequisites: Basics of Interior Design theory**

**Additional Material Allowed in ESE: NA (Viva will be based on the design submission)**

On Completion of the course, the student will have the ability to:

CO#	Course Outcomes
1.	Understand and gain a fundamental knowledge of small-scale retail, commercial projects and workplace / office design. An ability to engage and combine the elements of design in spontaneous as well as intentional ways in order to create desired qualities and effects.
2.	analyze the pre data to introduce design solutions using a creative approach.
3.	Development of required skills – observation / analysis / abstractions / interpretation / representations / expressions through models and drawings.
4.	describe an understanding that is both in representation and verbally present the same.

**Detailed Contents:**

**SHOPS & COMMERCIAL SPACES**

Planning for retail activity – anthropometrics – different types of shop layouts alongwith modular units. Design of varying types of display units in shops / showrooms while incorporating concepts of modern day retail interiors with focus on different themes, furniture layout, materials & finishes, color, texture & pattern. Product display designing and detailing – window displays / under-counter displays / shelf displays / hierarchy of product display / power of visual communication / graphics. Coloring commercial spaces – visual communication, backdrops.

**The list of suggested topics to be covered as design problems:** boutiques, showrooms, small cafeteria/ice-cream parlor, jewelry showroom/shop, furniture showroom, departmental store, specialty store, factory outlet, etc

**Project: 1** Interior designing of small retail spaces like shops, boutiques, salons, restaurants etc.(Duration: Around 4 Weeks).

**Project: 2** Interior designing of large retail spaces/commercial spaces with specific product-dealing large showrooms, large retail stores dealing in: furnishings, grocery, garment stores, etc. (like Big Bazaar, Pantaloons, Lifestyle. etc) (Duration: Around 8 Weeks).

**OFFICE SPACES**

Design problems involving simple space organization. Special emphasis to be laid on the study of space standards and anthropometrics related to office / workplace design; design of Interior Layouts for an Office - planning aspects, color schemes, services, design details, furniture layout and design, etc. Exercises shall include spaces such as: Manager's office, Principal's Office, HoD Office, Branch Head's Office, etc. (Duration: Time Problem / MST).

**Presentation of design:** Presentation of rendered drawings with sectional elevations, design developments, conceptual sketches, detailed model with mood board.

**Evaluation Criteria for Examination/ Question Paper Setting:**

One compulsory question is to be set from the entire syllabus. The answer sheet shall be retained at the institute after the exam for conduct of the viva voce which will be conducted at the institute level by Internal / External jury members appointed in consultation with the university from the approved panel list of examiners.

**References:**

- Time Savers Standards for Interiors by J D, J P & MZ ISBN-10: 0071346163
- Neuferts Architects Data by Neuferts ISBN 10: 1405192534
- Ching, Frank (Francis D.K.), “Architecture: Form, Space & Order, Publisher John Wiley, Hoboken 2007.

**Note:** At least two major exercises and two minor design/time problems should be given and the assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 302-22**

**Subject Name: Interior Construction and material lab-III**

Programme: B.Voc	L: 1 T: 0 S: 3
Semester: 3	Teaching Hours: 13(L)+39(S)
Theory/Practical: Studio	Credits: 4
Internal Marks: 60	Percentage of Numerical/Design Problems: NA
External Marks: 40	Duration of End Semester Exam(ESE): 3 hours
Total Marks: 100	Elective Status: NA

**Prerequisites:** Basics of Building Construction and materials

Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Familiarize the students of Interior Design on material and construction methodology.
2.	Understand the various components of interior space as doors, windows, partitions, staircases, etc.

### **Detailed Contents:**

#### **PART A: Building Materials**

Different types of ferrous and non-ferrous metals, their properties, sizes and forms available in market

Aluminium as a building material

Steel as a building material

Manufacturing process of glass

Different types of glass and their properties

Uses of glass as a building material

#### **PART B: Detailing of Doors, Windows & Partitions in Aluminium and Steel**

Different types of doors- swing doors, sliding doors, panelled doors, glazed doors in aluminium and steel frames along with their joinery details.

Details of sliding and openable windows in aluminium and steel frames with glazed panels.

Details of partitions with steel and aluminium frames & panels in materials like glass, particle board, MDF, gypsum board, plywood, etc.

#### **Evaluation Criteria for Examination/ Question Paper Setting:**

Total SIX questions are to be set, three from each part & students are required to attempt a total of four questions i.e. two from each part. The distribution of marks for Part A: Part B (drawing based) is 16: 24 marks.

#### **References:**

- S.C Rangwala – Engineering Materials – Charotar Publishing, Anand 1982
- W.B McKay, Building Construction, Volume 1-4, Longmans, U.K. 1981
- CPWD Manual on Door and Window Details for Residential Buildings Volume-1, Central Public Works Department, Govt. of India 2006
- Chudley & Greeno, Building Construction Handbook Sixth edition, Butterworth-Heinemann publications 2006

**Note :** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 303-22**  
**Subject Name: History of Interior Design - II**

Programme: B.Voc	L:2 T:1 P:0
Semester: 3	Teaching Hours:39(L)
Theory/Practical: Theory	Credits: 3
Internal Marks: 40	Percentage of Numerical/Design Problems: NA
External Marks: 60	Duration of End Semester Exam(ESE): 3hours
Total Marks: 100	Elective Status: NA

**Prerequisites:** History of Interior Design- I

Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Understand and appreciate movements and traditions in interior design, architecture, furniture and decorative arts.
2.	Identify the components, features and materials of different eras.
3.	Analyse and utilize the learning in present day context to comprehend the changes in design style with respect to change in society.
4.	Analyse the key historical and theoretical developments in interior design practices and learning will be on to make the students aware of spatial design and inhabitation, along with an investigation of different types of spaces and their connectivity

**Detailed Contents:**

**UNIT I – Rococo :** Regency to rococo, rococo to neoclassicism

**UNIT II – Colonial and federal America :** colonial styles in Latin America, colonial styles in north America

**UNIT III – The regency and revivals :** Nash, Saone, Regency furniture, Greek revival, Gothic revival

**UNIT IV – The industrial revolution :** early industrialization and inventions, industry and interiors, iron and glass

**UNIT V – The aesthetic movements :** the aesthetic movements - Britain: Ruskin, Morris, Webb and other British designers, spread of the aesthetic movement across Europe

**UNIT VI – Art nouveau movement :** art nouveau- roots and characteristics and spread across Europe, The Vienna, Secession- in Austria & United States, furniture and other interior furnishings

**Evaluation Criteria for Exam / Question Paper Setting: -**

The examiner is required to set twelve questions with two questions from each unit. Students are required to attempt six questions with minimum one question from each unit.

**References:**

- A History of Interior design by John pile, Laurence King Publishing
- Banister Fletcher's a history of architecture by Dan Cruickshank, sir banister Fletcher, Andrew saint, Kenneth Frampton, peter blundell Jones, Rutledge
- Fletcher, Banister. "A History of Architecture", University of London, The Antholone Press, 1986.
- Fergusson, James. Willey, John, "A History of Architecture", Low Price Publication, 2012.

**Note:** The assigned Faculty is required to emphasis on understanding the influences of history in interiors with proper illustrations and provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 304-22**  
**Subject Name: Interior Services**

Programme: B. Voc	L:2 T:1 P:0
Semester: 3	Teaching Hours:39(L)
Theory/Practical: Theory	Credits: 3
Internal Marks: 40	Percentage of Numerical/Design Problems: NA
External Marks: 60	Duration of End Semester Exam (ESE): 3hours
Total Marks: 100	Elective Status: NA

**Prerequisites:** Types of services in a building

Additional Material Allowed in ESE: NA

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Understand the terminology and basic principles of water supply and sanitation.
2.	Understand water requirements in various types of buildings, types of water storage and distribution systems, sanitary & drainage system requirements.
3.	Understand the basics of HVAC
4.	Understand the terminology and application of materials in acoustics
5.	Importance of Fire Fighting in various buildings.

**Detailed Contents:**

**UNIT I – Water Supply:** Introduction, Types of water supply systems-application and its benefits.

**Unit II – Sanitation:** Role, importance, types of drainage system, different types of traps, sanitary fittings, Septic tank, Treatment plants, Manholes, Chambers- Purpose, Location, Structure and Ventilation

**UNIT III- HVAC:** Air conditioning-Role, Importance and Principles governing Air conditioning, Methods of Cooling and Heating, Types of Air Conditioning Systems-Unit and Central, Standards and location of various parts- Plant, Ductwork, Fan, Filters, Outlets, Dampers, etc, Natural and Artificial Ventilation

**UNIT IV – Acoustics:** Objectives, terminology, sound in interiors, Acoustic Materials-application, advantages and disadvantages and Design considerations for various buildings.

**UNIT V – Fire Fighting:** Fire-cause, spread, safety norms, equipments and Design considerations for various buildings.

**Evaluation Criteria for Exam / Question Paper Setting: -**

The examiner is required to set ten questions with minimum two from each unit. Students are required to attempt six questions with a minimum one from each unit.

**References:**

- Duggal, K.N., “Public Health Service”, Chand, 1967.
- Birdi, G.S, “Water Supply And Sanitation”, Dhanpat Rai, 2010.
- Barry, R., “Building Services, John Wiley and Sons Ltd 1998
- Garg, S. K., “Water Supply Engineering”, Khanna, 2010.
- Golany, Gideon S., “Design for Arid Regions”, Van Nostrand Reinhold, 1983.
- Givoni, B., “Man, Climate & Architecture”, Von Nostrand Reinhold Company, 1981.

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 305-22**

**Subject Name: Climate responsive indoor environment control**

Programme: B.Voc	L: 2 T:1 P:0
Semester: 3	Teaching Hours:39(L)
Theory/Practical: Theory	Credits: 3
Internal Marks: 40	Percentage of Numerical/Design Problems: NA
External Marks: 60	Duration of End Semester Exam(ESE): 3hours
Total Marks: 100	Elective Status: NA

Prerequisites: NIL

Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Become aware of the various climates related to environment
2.	Communicate effectively in introducing shelter with respect to different climatic zone
3.	Infer the impact of climatic forces on built structures and their interiors
4.	Understand the designing of spaces as per the particular climatic conditions

### **Detailed Contents:**

#### **UNIT I – Introduction to basic concepts**

- Introduction to the concept and need for environmental control in Interior Design.
- Definition of weather, climate, elements of climate, global climatic zones and change of seasons.
- Climatic zones in India, Impact and issues in interior spaces.

#### **UNIT II – Thermal and visual comfort**

- Introduction to thermal and visual comfort. Relationship of climatic elements with both.
- Heat exchange between building and environment (qualitative aspect only), thermal properties of materials, thermal properties of building elements, solar gain factor, sol-air temperature.
- Understanding the movement of sun across the sky, optimum orientation and shading devices (without calculations).
- Natural lighting, daylight factor, size of opening with reference to daylight, lighting criteria in interior spaces. Introduction and objectives of Solar Passive Design
- Use of building materials with respect to climate such as Concrete, Brick, Glass, Plastics, Stone, Insulating material etc.

#### **UNIT III – Indoor Air Quality (IAQ)**

- Factors that affecting IAQ. Like Noise pollution & Air pollution. Sources of noise pollution & its effects and controls, transmission of noise in the building. Methods to improve IAQ and use of landscape elements for micro climate control.

#### **UNIT IV – Acoustics**

- Introduction to the study of acoustics – nature of sound, basic terminology – frequency, pitch, tone, sound pressure, sound intensity, decibel scale, loudness, threshold of audibility and pain, masking, sound and distance – inverse square law.
- Sound absorbing materials and their market forms Porous materials, panel absorbers, cavity resonators, space absorbers, different variable absorbers, absorption by openings
- Acoustical design requirements for different types of the enclosed and open spaces in brief. Open air theatre, Auditorium, Cinema theatre, Halls for diff. Uses seminar halls, studios (Radio / T.V.)

**Evaluation Criteria for Exam / Question Paper Setting: -**

The examiner is required to set eight questions with minimum two from each unit. Students are required to attempt six questions with a minimum one from each unit.

**References:**

- Koensberger, Ingersoll, Mayhew, Szokolay , “Manual of Tropical Housing & Building, March 1974
- C.P. Kukreja, “Tropical Architecture, Tata McGraw-Hill Publishing Company, 1978.
- Martin Evans, “Housing, Climate & Comfort, Architectural Press, 1980.
- Lippsmeier, Georg, “Building in the Tropics, Callwey Verlag, Munchen, 1980

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 306-22**  
**Subject Name: Computer Application-III**

Programme: B.Voc	L: 1 T:0 P:2
Semester: 3	Teaching Hours:13(L)+26(P)
Theory/Practical: Practical	Credits: 2
Internal Marks: 60	Percentage of Numerical/Design Problems: NA
External Marks: 40	Duration of End Semester Exam(ESE): Internal viva voce
Total Marks: 100	Elective Status: NA

**Prerequisites:** Computer Application-II

Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Represent an Interior Design concept in a 3-dimensional visual computer environment.
2.	Create a 3D model of a floor plan and design the interior of a room in the model.

**Detailed Contents:**

- The Sketch Up Modeling Environment, Using the Interface – The Drafting Tools, Creating 3-dimensional Geometry, Modeling Furniture, Cabinetry, and Accessories, Using the Trimble 3D Warehouse, Drafting and Modeling a Floor Plan, Adding Color and Textures – Photo-Matching, Presenting the Model.
- Photorealistic renders: Making models photorealistic using materials, lighting, textures, background etc.
- Rendering of the View on any of the following Software
- Photoshop,
- V-ray
- Any other Software.

**Evaluation Criteria for Exam**

The evaluation of students shall be based on practical conducted based on a specific problem given to know the student's understanding of the computers in the field of Architecture.

**References:**

- Adobe Photoshop Classroom in a Book. By Andrew Faulkner, Conrad Chavez.
- Sketch Up to Layout: The essential guide to creating construction documents with Sketch Up Pro & Layout by Matt Donley

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.



**Subject Code: BVID- 307A-22**  
**Subject Name: Product Design-I**

Programme: B.Voc	L: 2 T:1 P:0
Semester: 3	Teaching Hours:26(L)+13(T)
Theory/Practical: Theory	Credits: 3
Internal Marks: 40	Percentage of Numerical/Design Problems: NA
External Marks: 60	Duration of End Semester Exam(ESE): 3hours
Total Marks: 100	Elective Status: NA

Prerequisites: nil

Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	appreciate the design principles in product segment
2.	learn the design methods and techniques of product designing.

**Detailed Contents:**

**UNIT-I: Introduction**

Introduction to Product Design, Development of product design concepts - a historic review.

**UNIT-II: Ergonomics in Product Design**

Design of ergonomic model for specific user-problem. Usability study of product form.

**UNIT-III: Product Design Exercise**

Different techniques to study different user group, Understand the context of use. Understand the user problems through various methods.

**UNIT-IV: Product Design Exercise**

Application & properties of various types of materials for various aspects of product design. Different types of model making techniques

**Evaluation Criteria for Exam / Question Paper Setting: -**

The examiner is required to set eight questions with minimum two from each unit. Students are required to attempt six questions with a minimum one from each unit.

**References:**

- Elements of Design by Anderson, Donald M., Holt-Rinehart and Winston, New York (1961)
- Ergonomic for beginners by Jan Dul, B. A. Weerdmeester, -CRC (1993)
- Kathy Baxter and Catherine Courage, Understanding your users: A practical guide to user requirements methods, tools,
- Karen O'Reilly, Ethnographic Methods
- John Chris Jones, Design Methods, Module Contents
- Chris Lefteri, Materials for Design
- Andrew H. Dent and Leslie Sherr, Material Innovation:
- Martha Sutherland, Model Making: A basic guide
- Norman Trudeau, Professional Modelmaking: A handbook of techniques and materials for architects and designers

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 307B-22**  
**Subject Name: Furniture Design-I**

Programme: B.Voc	L: 2 T:1 P:0
Semester: 3	Teaching Hours:26(L)+13(T)
Theory/Practical: Theory	Credits: 3
Internal Marks: 40	Percentage of Numerical/Design Problems: NA
External Marks: 60	Duration of End Semester Exam(ESE): 3hours
Total Marks: 100	Elective Status: NA

Prerequisites:

Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Use of furniture to reinforce interiors and to develop additive interest among students
2.	

**Detailed Contents:**

**UNIT-I: Introduction**

Introduction to Furniture Design styles- antique, traditional, modern, contemporary, classical etc.

**UNIT-II: Trends in Interior Design**

Current trends in furniture design. Types of furniture like built-in (cabinetry etc.), modular, manufactured, custom-made for seating, storage, sleeping, street furniture and office furniture.

**UNIT-III: Materials**

Study of materials in furniture – timber, plywood, bent wood, bamboo/cane, metal, plastics, polyurethane and glass.

**UNIT-IV: Furniture Design**

Understanding selection of furniture, cost and longevity. Design project like furniture layout, relationship to context and design of furniture.

**Evaluation Criteria for Exam / Question Paper Setting: -**

The examiner is required to set eight questions with minimum two from each unit. Students are required to attempt six questions with a minimum one from each unit.

**References:**

- Elements of Design by Anderson, Donald M., Holt-Rinehart and Winston, New York (1961)
- Ergonomic for beginners by Jan Dul, B. A. Weerdmeester, -CRC (1993)
- Kathy Baxter and Catherine Courage, Understanding your users: A practical guide to user requirements methods, tools,
- Karen O'Reilly, Ethnographic Methods
- John Chris Jones, Design Methods, Module Contents

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 308-22**  
**Subject Name: Mentoring & Professional Development - I**

Programme: B.Voc	L: 0 T:0 P:2
Semester: 3	Teaching Hours:26(P)
Theory/Practical: Practical	<b>Credits:</b> Non-credit
Internal Marks: 50	Percentage of Numerical/Design Problems: NA
External Marks: NA	Duration of End Semester Exam(ESE): Internal viva voce
Total Marks: 50	Elective Status: NA

Prerequisites: Not Applicable

Additional Material Allowed in ESE: NIL

**The objective of mentoring will be development of:**

- Overall Personality
- Aptitude (Technical and General)
- General Awareness (Current Affairs and GK)
- Communication Skills
- Presentation Skills

**The course shall be split in two sections i.e. outdoor activities and class activities.**

For achieving the above, suggestive list of activities to be conducted are:

**Part – A Class Activities)**

1. Expert and video lectures
2. Aptitude Test
3. Group Discussion
4. Quiz (General/Technical)
5. Presentations by the students
6. Team building Exercises

**Part – B (Outdoor Activities)**

1. Sports/NSS/NCC
2. Society Activities of various students chapter i.e. ISTE, SCIE, SAE, CSI, Cultural Club, etc.

**Note:**

- Evaluation shall be based on rubrics for Part – A & B
- Mentors/Faculty incharges shall maintain proper record student wise of each activity conducted and the same shall be submitted to the department.

**IKG PUNJAB TECHNICAL UNIVERSITY**  
**BACHELOR OF VOCATIONAL-(B.VOC) INTERIOR DESIGN**  
**2022 SCHEME**

**4<sup>th</sup> Semester Study Scheme**

**TOTAL CREDIT – 25**

**TOTAL CONTACT HOURS- 28**

Course Code	Course Title	Content	Load Allocations				Marks %	Credits	Duration of Univ. Exam/ Viva-Voce
			L	T	P/S	Total			
BVID- 401-22	Design Studio - IV	Skill	1	0	4	05	60:40	<b>5</b>	04 + External Viva Voce
BVID- 402-22	Interior Building Construction & Materials-IV	Skill	1	0	3	04	60:40	<b>4</b>	03
BVID -403-22	Contemporary Interior Design	Skill	2	1	0	03	40:60	<b>3</b>	03
BVID- 404-22	Sustainable Interiors	Skill	2	1	0	03	40:60	<b>3</b>	03
BVID- 405-22	Interior Landscape	Skill	2	1	0	03	40:60	<b>3</b>	03
BVID-406-22	Furniture Design Workshop -I	Skill	2	0	2	04	60:40	<b>3</b>	Int. Viva-Voce
BVID- 407-22	Computer Application -IV	Skill	1	0	2	03	60:40	<b>2</b>	Int. Viva-Voce
BVID- 408-22	Marketing Management	Skill	2	0	0	02	40:60	<b>2</b>	03
	*Educational Tour I/ Summer Training/Vacation Assignment-I	Generic	-	-	2	02	S/NS	<b>Non-credit</b>	Int. Viva-Voce
	<b>Total</b>		<b>13</b>	<b>3</b>	<b>13</b>	<b>28</b>		<b>25</b>	

\* The Educational Tour I/ Summer Training/Vacation Assignment-I will be held during the summer vacation after 4<sup>th</sup> semester examinations and the viva-voce and marking will be done along with end semester examination of 5<sup>th</sup> semester.

**Subject Code: BVID- 401-22**  
**Subject Name: Interior Design – IV**

<b>Programme:</b> B.Voc Interior Design	L: 1 T: 0 S: 4
Semester: 4	Teaching Hours: 13(L)+52(S)
Theory/Practical: Studio	Credits: 5
Internal Marks: 60	Percentage of Numerical/Design Problems: NA
External Marks: 40	Duration of End Semester Exam(ESE): 4hours
Total Marks: 100	Elective Status: NA

**Prerequisites: Interior Design-III**

**Additional Material Allowed in ESE: NA (Viva will be based on the design submission)**

On Completion of the course, the student will have the ability to:

CO#	Course Outcomes
1.	Analyze design ideas and develop strong relevant design concepts.
2.	Use of form, orientation, material, color and light to direct attention towards interaction spaces.
3.	Understand and explore variety of new and sustainable interior materials.

**Detailed Contents:**

Planning for hospitality and meeting spaces – anthropometrics – different types of space layouts, emphasis on audio-visual and lighting design. Introduction to building codes, way finding, signage and graphics. Universal design, furniture and finish selection in sustainable materials. Introduction to construction detailing of interior elements.

The list of suggested topics to be covered as design problems:

**Minor Project:** Interior designing of theatre room/Conference room/Auditorium with knowledge of Acoustics.

(Duration: Around 4 Weeks)

**Major Project:** Interior designing of a 3-star hotel with main emphasis on designing to optimize space utilization.

(Duration: Around 8 Weeks)

**Evaluation Criteria for Examination/ Question Paper Setting:**

One compulsory question is to be set from the entire syllabus. The answer sheet shall be retained at the institute after the exam for conduct of the viva voce which will be conducted at the institute level by Internal / External jury members appointed in consultation with the university from the approved panel list of examiners.

**References:**

- Time Savers Standards for Interiors by J D, J P & MZ ISBN-10: 0071346163
- Neuferts Architects Data by Neuferts ISBN 10: 1405192534
- Ching, Frank (Francis D.K.), “Architecture: Form, Space & Order, Publisher John Wiley, Hoboken 2007.
- Shaping Interior Space, Fairchild Books & Visuals, 2002
- Karlen Mark, Space planning Basics, Van Nostrand Reinhold, New York, 1992
- Worldwide Interiors – International Federation of Interior Architects & Designers, Rikuyo-Sha, Japan, 1987.
- Hotel Design - Richard H. Penner

**Note:** At least two major exercises and two minor design/time problems should be given and all buildings Should have accessibility to the disabled persons as per SC guidelines and the assigned faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 402-22**  
**Subject Name: Interior Construction and Material lab-IV**

Programme: B.Voc	L: 1 T: 0 S: 3
Semester: 4	Teaching Hours: 13(L)+39(S)
Theory/Practical: Studio	Credits: 4
Internal Marks: 60	Percentage of Numerical/Design Problems: NA
External Marks: 40	Duration of End Semester Exam(ESE): 3 hours
Total Marks: 100	Elective Status: NA

**Prerequisites:** Construction and Materials -III  
Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Become well versed with the necessary services details used in different buildings.
2.	Gain the fundamental knowledge of building construction especially wall & ceiling details.
3.	Use different materials in building construction

**Detailed Contents:**

**PART - A**

Kitchen layout and details

- Working drawing of kitchen including interior finishes, services like plumbing and electrical layout plans

Toilet layout and details

- Working drawing of toilet including interior finishes, services like plumbing and electrical layout plans

**PART - B**

Wall details and treatments

- Curtain wall/ Spider glazing details
- Different wall treatments

Ceiling details and treatments

- False ceiling details (plaster, gypsum, PVC, fibre, metal, etc.)
- Reflected ceiling plan layout and fixture details.

**Evaluation Criteria for Examination/ Question Paper Setting:**

Total SIX questions are to be set, three from each part & students are required to attempt a total of four questions i.e. two from each part.

**Text Books/References:**

- Working Drawing Manual (P/L custom scoring survey by Fred Stitt
- Architectural Working Drawings by Ralph W. Liebing
- Construction of buildings. R. Barry vol. 1 to 4
- Construction technology Chudley vol. 1 to 4
- Building Construction illustrated Ching Francis D.K.
- Construction Materials And Processes by Don A. Watson
- National Building Code 2016 (NBC)

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 403-22**  
**Subject Name: Contemporary Interior Design**

Programme: B.Voc	L:2 T:1 P:0
Semester: 3	Teaching Hours:39(L)
Theory/Practical: Theory	Credits: 3
Internal Marks: 40	Percentage of Numerical/Design Problems: NA
External Marks: 60	Duration of End Semester Exam(ESE): 3hours
Total Marks: 100	Elective Status: NA

**Prerequisites:** History of Interior Design- II

Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Understand the interior concepts of famous architects and interior designers
2.	Identify the components, features and materials of contemporary era
3.	Analyze and utilize the learning in present day context to comprehend the changes in design style with respect to change in society.

**Detailed Contents:**

**UNIT I – Foreign Architects**

Modernism interiors of Le Corbusier, Frank Lloyd Wright, Louis I Kahn and minimalism interiors of Zaha Hadid and Frank Gehry

**UNIT II – Foreign Interior Designers**

Philosophies, Concept and Work of famous interior designers Kelly Wearstler, Phillippe Starck, Bobby Perk, David Hicks

**UNIT III – Indian Architects**

Contribution of Hafiz Contractor, Ar Rahul Malhotra, Ar Anupama Kundu to the Indian interiors and their famous projects.

**UNIT IV – Indian Interior Designers**

Sustainable approach, Concepts in Interior design Sunita Kohli, Manit Rastogi, Lipika Sud, Taniya Gyani.

**Evaluation Criteria for Exam / Question Paper Setting: -**

The examiner is required to set eight questions with two questions from each unit. Students are required to attempt five questions with minimum one question from each unit.

**References:**

- A History of Interior design by John Pile, Laurence King Publishing
- Banister Fletcher's a history of architecture by Dan Cruickshank, Sir Banister Fletcher, Andrew Saint, Kenneth Frampton, Peter Blundell Jones, Rutledge
- Fletcher, Banister. "A History of Architecture", University of London, The Athlone Press, 1986.
- Fergusson, James. Wiley, John, "A History of Architecture", Low Price Publication, 2012.

**Note:** The assigned Faculty is required to emphasize on understanding the influences of history in interiors with proper illustrations and provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 404-22**  
**Subject Name: Sustainable Interiors**

Programme: B. Voc	L:2 T:1 P:0
Semester: 4	Teaching Hours:39(L)
Theory/Practical: Theory	Credits: 3
Internal Marks: 40	Percentage of Numerical/Design Problems: NA
External Marks: 60	Duration of End Semester Exam (ESE): 3hours
Total Marks: 100	Elective Status: NA

**Prerequisites:** Understanding of sustainability  
Additional Material Allowed in ESE: NA

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Understand the need for environmental design and the various factors involved in design of sustainable buildings.
2.	Explore the sustainable principles, techniques and materials in interiors and its applications and benefits.
3.	Analyse how to use renewable energy resources and create healthy indoor environment in buildings.

**Detailed Contents:**

**UNIT I – Introduction to Basic Concepts**

- Concept of sustainability: Introduction, definitions, need, objectives and scope of sustainable design.
- Man and Environment- role of humans & buildings impact on people and environment.
- Meaning, concepts of green building technology, need, benefits of green buildings.
- Certification systems and certification authority-IGBC, GRIHA, BEE, LEED etc.

**Unit II – Green Interiors**

- Introduction, characteristics & benefits of green interiors and different techniques like -elevated gardens, indoor landscape, bio pools, furniture and accessories, lighting etc.
- Interior eco finishes like Eco-furniture, reclaimed timber wood, eco palm wood, eco bamboo, eco cork, formaldehyde free fibre board & FSC certified fibre board, eco wheat board, strawboard, eco kirei board, rubber wood etc.
- Indoor Environment Quality (IEQ), Elements associated to IEQ (air quality, thermal characteristics, visual characteristics, acoustical quality).

**UNIT III – Energy Efficiency & Water Conservation**

- Renewable energy resources– meaning and importance, solar energy– advantages, principles and functions of solar devices –solar room heater, solar lights, solar water heater, solar air conditioners.
- Water conservation technologies, advantages of water conservation strategies, recharge of ground water, Rain water harvesting- importance, types of rain water harvesting systems.

**UNIT IV – Sustainable Materials**

- Study of sustainable materials available and its application in the interior of buildings For E.g. floor finishes, wall finishes, ceiling finishes etc.
- Design process - Choice and selection of materials, life cycle assessment, embodied energy of interior materials, 6R system.

**Evaluation Criteria for Exam / Question Paper Setting: -**

The examiner is required to set eight questions with minimum two from each unit. Students are required to attempt five questions with a minimum one from each unit.

**References:**

- Sustainability in Interior Design by Sian Moxon, Lawrence King Publishing, 2012



- Sustainable Design for Interior Environments, second Edition, Susan M. Winchip, 2007
- Environmentally Responsible Design: Green and Sustainable Design for Interior Designers. Jones, Louise, John Wiley & Sons, 2008.
- Materials and Components of Interior Design, J.R. Riggs, 1992
- Solar Energy Utilization, Khanna Publishers, G.D Rai, 1996

**Note:** The assigned faculty is required to provide updated references/ E-resources related to content of the subject and can also provide case studies of various green interior certified buildings as class assignments..

**Subject Code: BVID- 405-22**  
**Subject Name: Interior Landscape**

Programme: B.Voc	L: 2 T:1 P:0
Semester: 4	Teaching Hours:39(L)
Theory/Practical: Theory	Credits: 3
Internal Marks: 40	Percentage of Numerical/Design Problems: NA
External Marks: 60	Duration of End Semester Exam(ESE): 3hours
Total Marks: 100	Elective Status: NA

Prerequisites: NIL

Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1	Understand the basic concepts of landscape design and different environmental controls
2	Analyze the various indoor plant species, their characteristics, diseases and maintenance.
3	Create the designs for different interior design landscape projects.

**Detailed Contents:**

**UNIT I – Introduction to Interior Landscaping**

- Definition, importance and historical development of Interior and Exterior Landscaping
- Types of interior landscapes and their benefits
- Concepts of interior landscape design
- Relation between indoor and outdoor landscape

**UNIT II – Plant Selection and Care**

- Criteria for selecting Indoor Plants
- Common Indoor Plants and their characteristics, propagation, soil, water, manure, their placement in the interiors
- Plant maintenance, plant disease and pest management practices
- Techniques of potting, repotting, pinching, training, pruning, cleaning etc.

**UNIT III – Design elements and planning**

- Elements of design in Interior Landscaping (Color, Form, Texture, Scale)
- Spatial planning, layout design and Integrating plants with furniture and built environment
- Use of containers, planters, bowl or dish garden or terrarium making and other accessories
- Case studies of interior landscaping projects.

**UNIT IV – Practical Application and Projects**

- Creating a Design Proposal for an Interior Landscape Project
- Budgeting and Cost Estimation
- Installation techniques and challenges, sustainable practices, garden implements

**Evaluation Criteria for Exam / Question Paper Setting: -**

The examiner is required to set eight questions with minimum two from each unit. Students are required to attempt six questions with a minimum one from each unit.

**References:**

- The Houseplant Encyclopedia by: Ingrid Jantra and Ursula Kruger
- Bose T K and Mukerjee D 1987, Gardening in India, Oxford Book House
- Randhawa M S, “Flowering Trees and Shrubs of India”
- Jurenka, N. A. and R. J. Blass. Cultivating a Child’s Imagination Through Gardening. 1966. Teachers Ideas Press. Englewood, CO.

**Note:** The assigned faculty is required to conduct live and online case studies for interior landscape projects and one assignment must be based on a project where students will design an interior landscape for any real/ hypothetical space preparing a detailed plan and presentation.

**Subject Code: BVID- 406-22**  
**Subject Name: Furniture Design Workshop -I**

Programme: B.Voc	L: 2 T: 0 P: 2
Semester: 4	Teaching Hours: 26(L)+26(P)
Theory/Practical: Studio	Credits: 3
Internal Marks: 60	Percentage of Numerical/Design Problems: NA
External Marks: 40	Duration of End Semester Exam(ESE): Int. viva-voce
Total Marks: 100	Elective Status: NA

**Prerequisites: NA**

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Understand materials and techniques used in furniture design.
2.	Develop skills to create functional and aesthetic furniture layouts.
3.	Evaluate furniture for design, durability, and user suitability.

**Detailed Contents:**

**PART - A**

**Design Development**

- **Activity-Specific Furniture Design:**
  - Designing furniture for specific activities:
    - **Seating:** Sofas, chairs, loungers, benches.
    - **Dining:** Dining tables, chairs, bar stools.
    - **Sleeping:** Beds, futons, bunk beds.
    - **Storage:** Cabinets, shelves, wardrobes.
    - **Work/Study:** Desks, ergonomic chairs, modular workstations.

**PART - B**

**Furniture Templates and Layouts**

- **Creating Templates:**
  - Developing standard templates for:
    - Sofas, beds, dining tables, wardrobes, study desks, etc.
- **Room Layout Planning:**
  - Arranging furniture layouts for:
    - **Living Room:** Comfortable seating, entertainment area placement.
    - **Bedroom:** Optimal bed placement, storage solutions, and circulation space.
    - **Dining Room:** Efficient arrangement of dining tables and chairs.
  - Applying principles of ergonomics, circulation, and space optimization.
- **Market Survey:**
  - Conducting research on current furniture trends, popular materials, and pricing.
- **Visual Compilation:**
  - Creating a catalog of furniture cutouts for better visualization and understanding.

**Evaluation Criteria for Examination/ Question Paper Setting:**

Student must prepare model and portfolio, etc. based on the activities given in Part A & Part B during the course work. The model and portfolio shall be submitted at the institute for the viva-voce exam conducted at the institute level by Internal jury members appointed in consultation with the university from the approved panel list of examiners.

**Subject Code: BVID- 407-22**  
**Subject Name: Computer Application-IV**

Programme: B.Voc	L: 1 T:0 P:2
Semester: 4	Teaching Hours:13(L)+26(P)
Theory/Practical: Practical	Credits: 2
Internal Marks: 60	Percentage of Numerical/Design Problems: NA
External Marks: 40	Duration of End Semester Exam(ESE): Internal viva voce
Total Marks: 100	Elective Status: NA

**Prerequisites:** Computer Application-III

Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1.	Represent an interior design concept in a 3dimensional visual computer environment.
2.	Develop 3D representation of interior design project of residential and commercial.
3.	Explore other advance rendering softwares to represent their drawings.

**Detailed Contents:**

- Advance sketch up modeling environment using interface. Modeling furniture of residential and commercial spaces.
- Photo realistic rendering using Lighting, Texture, Background, Day light.
- Rendering of the view on Photoshop / V-ray / Revit / 3ds max (or any other software)

**Evaluation Criteria for Exam**

The evaluation of students shall be based on practical conducted based on a specific problem given to know the student's understanding of the computers in the field of Architecture.

**References:**

- Architectural Design with Sketch Up, Third Edition by Wiley
- V-Ray for Sketch Up, E-book Version 5 Ready
- Rendering in Sketch Up by Daniel Tal

**Note:** The assigned Faculty is required to provide updated references/E-resources related to the content of the subject.

**Subject Code: BVID- 408-22**  
**Subject Name: Marketing Management.**

Programme: B.Voc	L: 2 T:0 P:2
Semester: 4	Teaching Hours:26(L)
Theory/Practical: Theory	Credits: 2
Internal Marks: 60	Percentage of Numerical/Design Problems: NA
External Marks: 40	Duration of End Semester Exam(ESE): 3hours
Total Marks: 100	Elective Status: NA

Prerequisites: nil

Additional Material Allowed in ESE: NIL

**On Completion of the course, the student will have the ability to:**

CO#	Course Outcomes
1	Develop understanding of marketing concepts and its basics.
2	Develop strategies for product promotion and sale.
3	Understand the basic Concepts of Digital marketing and the road map for successful Digital marketing strategies.

**Detailed Contents:**

**UNIT-I: Marketing and Marketing Management**

- Introduction to Marketing and Marketing Management- Need, Objective, Marketing mix
- Various Marketing Concepts: production, product, selling, marketing and societal marketing, marketing environment: micro, macro environment.
- Consumer Markets and buying behavior - Market segmentation and targeting and positioning.

**UNIT – II: Product decisions**

- Product definition, new product development process, and product life cycle, positioning, branding, packaging and labeling decisions.
- Pricing decisions: importance, objectives, designing strategies, Pricing Techniques
- Product Promotion: promotion mix-introduction, importance, advantages and disadvantages of various components and factors affecting.

**UNIT – III: Digital Marketing**

- Fundamentals of Digital marketing & Its Significance, Traditional marketing Vs Digital Marketing, Evolution of Digital Marketing, Landscape.
- The Digital users in India, Digital marketing Strategy- Consumer Decision journey.

**UNIT – IV: Display advertising**

- Display advertising, Buying Models, different type of ad tools, Display advertising terminology.
- Types of display ads, different ad formats, Ad placement techniques, important ad terminology, Programmatic Digital Advertising.

**Evaluation Criteria for Exam / Question Paper Setting: -**

The examiner is required to set eight questions with minimum two from each unit. Students are required to attempt six questions with a minimum one from each unit.

**References:**

- Kotler, P., Keller, K.L. Koshy, A. and Jha, M., Marketing Management: A South Asian Perspective, Pearson Education.
- Etzel, M., Walker, B., Stanton, W. and Pandit, A Marketing Management, Tata McGraw Hill.
- Philip Kotler, MARKETING MANAGEMENT- ANALYSIS PLANNING AND CONTROL, Prentice Hall of India, New Delhi,
- D. Ryan, Marketing Strategies for Engaging the Digital Generation, D. Ryan.
- Kamat and Kamat-Himalaya, Digital Marketing –Kamat and Kamat-Himalaya

**Note:** The assigned faculty is required to provide updated references/ E-resources related to content of the subject.