IKG PUNJAB TECHNICAL UNIVERSITY

BACHELOR OF VOCATINAL-(B.VOC)

INTERIOR DESIGN

2022 SCHEME

1ST 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	

27th Dec 2022

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ.Exam (Hours)
		L	S	INT.	EXT.		
BVID 101-22	Interior Design-I	1	3	60	40	4	04+Ext Viva

Course Objective:

- To get the students interested in and to familiarize them with the basic concepts of Design.
- To develop the ability to translate principle of design into Design solution.

Syllabus:

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.

Course Outcomes:

Understand & 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.

Teaching Methodology

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.

Guidelines for Paper Setter

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 & Kitchen not less than 12.00 Sq.mts.) of an apartment and is expected to present the study through detailed measured drawings and sketches.

Evaluation Methodology

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.

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
4. Patterns in Nature- Peter Streens

	Course Name	Contact Hours		Total Marks		Credits	Univ. Exam (Hours)
		L	S	INT.	EXT.		
BVID102-22	**Technical Drawing - I**	**1**	**2**	**100**	**-**	3	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.		
BVID103-22	**Graphics-I**	**1**	**1**	**60**	**40**	**2**	03

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 Colors as a powerful tool of Graphic Communication.

Syllabus:

(Pencil as tool of drawing)

- Free hand line-work with different strokes/grades in pencil.
- Effect of light and shade on simple geometrical solids and staircase, etc.
- Freehand (proportionate) sketching of human figures, different types of vegetation, different transport modes and buildings etc.
- 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.)

(Rendering with color)

- Color Rendering of various scenes such as Mall entrance Scene, Hotel Lobby, café scene, etc.
- Live sketching – indoor and outdoor area

Course Outcomes:

- Gain a fundamental knowledge of perspective and proportions of different elements in interior design.
- Understanding the principles of Graphics.

Achieve a comprehensive understanding of presentation techniques.

Teaching Methodology

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.

Guidelines for Paper Setter

Total five questions are to be set and students are required to attempt three questions.

References:

1. **Graphic Illustrations in Black and White** by Jaccueline, Design Press, New York, 1991
2. **Architectural Rendering**, Crowe Philip- Rofovision S.A.Switzerland, 1991
3.**Rendering with Pen & Ink**, Robert W. Gill, Thames & Hudson London, 2008.

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ. Exam (Hours)
		L	P	INT.	EXT.		
BVID104-22	**Workshop - I**	**1**	**1**	**100**	**0**	**2**	**No exam – Internal Viva**

Course Objective: The students will gain basic hands-on experience and fundamental knowledge in carpentry and model making.

Syllabus:

- Types of timber, characteristics and sizes.
- Introduction to different tools for carpentry.
- Carpentry –Introducing the techniques of planning, chiseling & different types of timber joints Hotel Lobby, café scene, etc.
- Preparation of wooden base for model making
- 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)
- Form Work - Use of Clay, Brick and Soap for creating three dimensional forms in space.
- Brick Masonry – Small brick masonry construction models for understanding of various bonds, jallies etc.

Course Outcomes:

- Gain the basics knowledge of the carpentry tools and its joints.
- Attain skill to work with different materials for making model.

Teaching Methodology

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.

Guidelines for Paper Setter

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:

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.		
BVID105-22	**Construction and material lab-I**	**1**	**3**	**60**	**40**	**4**	**03**

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.		
BTHU101-18	**Communicative English**	**2**	**0**	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

Course Outcomes:

- Have proficiency in reading & listening, comprehension, writing and speaking skills.
- Understand spoken and written English language, particularly the language of their chosen technical field.
- Converse fluently.
- Produce clear and coherent texts on their own.

Guidelines for Paper Setter

One objective type compulsory question to be set covering the entire syllabus in addition to eight others. The students are requiring attempting total 05 questions

References:

Suggested Readings:

(i) Fundamentals of Technical Communication ,Meenakshi Raman & Sangeeta Sharma,Oxford university Press.
(ii) Effective business Communication,Asha Kaul, Prentice Hall of India.
(iii) Communication Skills For Engineers, Sunita Mishra & C. Mualikrishna, Pearson Education.
(iv) Effective Technical Communication, M. Ashraf Rizvi, McGraw Hill
(v) Remedial English Grammar. F.T. Wood. Macmillan.2007
(vi) On Writing Well. William Zinsser. Harper Resource Book. 2001
(vii) Study Writing. Liz Hamp-Lyons and Ben Heasly. Cambridge University Press. 2006
(Viii) Communication Skills. Sanjay Kumar and PushpLata. Oxford University Press. 2011.

Course Code	Course Name	Contact Hours		Total Marks		Credits	Univ. Exam (Hours)
		L	P	INT.	EXT.		
BTHU102-18	**Communicative Skill Laboratory**	**0**	**2**	**60**	**40**	**2**	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.		
HSMC122-18	**Human Values and Professional Ethics**	**1**	**1**	**40**	**60**	2	03

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 '1' and harmony in '1'
- Understanding the harmony of I with the Body: Sanyain and Health; correct appraisal of Physical needs, meaning of Prosperity in detail
- Programs to ensure sanyarn 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 d'sease.

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.		
BVID106-22	**Computer Application-I**	**1**	**2**	**60**	**40**	**2**	**No Exam- Internal Viva Voce**

Course Objective: To make students aware of the role and importance of Computers in the field of Interior Design.

Syllabus:

- 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
- 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
- Image processing: basic image sourcing, editing and insertion for desktop publishing in Adobe Photoshop or similar software.

Course Outcomes:

At the end of the course, the students will be able to understand basics of Computers Software, operating systems and operative languages.

Teaching Methodology

Emphasis should be laid on developing the skill of using MS Office in detail.

Guidelines for Paper Setter

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:

IKG PUNJAB TECHNICAL UNIVERSITY

BACHELOR OF VOCATINAL-(B.VOC) INTERIOR DESIGN

2022 SCHEME

2nd 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	Int : Ext		Hours
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
	Total		6	3	13	**22**		**18**	

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

Programme: B.Voc Interior Design	**L:** 1 **T:** 0 **S:** 4
Semester: 2	**Teaching Hours: 13(L)+52(S)**
Theory/Practical: Practical	**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)
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:

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

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, 1979.3Structure 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

Programme: B.Voc	**L:** 1 **T:** 0 **S:** 3
Semester: 2	**Teaching Hours:**
Theory/Practical: Practical	**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.	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 ofTimber 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 Joinerydetails)
- 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, Advantagesand 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

Programme: B.Voc	**L:** 1 **T:1 P:**0
Semester: 2	**Teaching Hours:26(L)**
Theory/Practical: Theory	**Credits:** 2
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: Basics of History
Additional Material Allowed in ESE: NIL
On Completion of the course, the student will have the ability to:

CO#	Course Outcomes
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 beginningsof 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

Programme: B.Voc	**L:** 1 **T:0 P:**2
Semester: 2	**Teaching Hours: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: 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:

CO#	Course Outcomes
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

Programme: B.Voc	**L:** 1 **T:1 P:**0
Semester: 2	**Teaching Hours:26(L)**
Theory/Practical: Theory	**Credits:** 2
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: 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 themto 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, Classificationand Characteristics.
- Definition, scope, importance of various terminology (Environment, Ecosystem, Energy flow in ecosystem,ecological pyramids, ecological succession etc.)
- Understanding of major Ecosystem, - Forest, Grassland, Deseret, Aquatic, Hill Area. Understanding ofBiodiversity (importance, issues & types of biodiversity)
- Resources - Forest, Water, Mineral, Energy, Land (Role & Importance of each resources as well asassociated 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 bio geographic 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, Clanderson Press Oxford (TB)
6. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumabai, 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

Programme: B.Voc	**L:** 1 **T:0 P:**2
Semester: 2	**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: 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:

CO#	Course Outcomes
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 andother 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 interiorplans.
- 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

Programme: B.Voc	**L:** 1 **T:1 P:**0
Semester: 2	**Teaching Hours:13(L)+13(T)**
Theory/Practical: Theory	**Credits:** 2
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: 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 anddecorative.
- **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
  LaminatesPaints
  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

Programme: B.Voc	**L:** 0 **T:0 P:**2
Semester: 2	**Teaching Hours:26(P)**
Theory/Practical: Practical	**Credits:** 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 VOCATINAL-(B.VOC) INTERIOR DESIGN
2022 SCHEME

3rd 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	Int: Ext		Hours
BVID- 301-22	Design Studio - III	Skill	1	0	4	05	60:40	**5**	04 + External Viva Voce
BVID- 302-22	Interior Building Construction & Materials-III	Skill	1	0	3	04	60:40	**4**	03
BVID- 303-22	History of Interior Design- II	Skill	2	1	0	03	40:60	**3**	03
BVID- 304-22	Interior Services	Skill	2	1	0	03	40:60	**3**	03
BVID- 305-22	Climate Responsive Indoor Environment control	Skill	2	1	0	03	40:60	**3**	03
BVID- 306-22	Computer Application-III	Skill	1	0	2	03	60:40	**2**	Int. Viva-Voce
BVID-307A/B-22	Elective -I (Product/Furniture Design)	Skill	2	1	0	03	40:60	**3**	03
BVID- 308-22	Mentoring & Professional Development - II	Generic	-	-	2	02	S/NS	**Non-credit**	Int. Viva-Voce
	Total		**11**	**4**	**11**	**26**		**23**	

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

Programme: 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 difft. 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 Desing
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	**Credits:** 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.